MA.K.AR.1.2:	Given a number from 0 to 10, find the different ways it can be represented as the sum of two numbers. **Clarifications:** *Clarification 1:* Instruction includes the exploration of finding possible pairs to make a sum using manipulatives, objects, drawings and expressions; and understanding how the different representations are related to each other.
MA.K.AR.1.3:	Solve addition and subtraction real-world problems using objects, drawings or equations to represent the problem. **Clarifications:** *Clarification 1:* Instruction includes understanding the context of the problem, as well as the quantities within the problem. *Clarification 2:* Students are not expected to independently read word problems. *Clarification 3:* Addition and subtraction are limited to sums within 10 and related subtraction facts. Refer to Situations Involving Operations with Numbers (Appendix A).
MA.K.AR.2.1:	Explain why addition or subtraction equations are true using objects or drawings. **Clarifications:** *Clarification 1:* Instruction focuses on the understanding of the equal sign. *Clarification 2:* Problem types are limited to an equation with two or three terms. The sum or difference can be on either side of the equal sign. *Clarification 3:* Addition and subtraction are limited to sums within 20 and related subtraction facts.
MA.K.DP.1.1:	Collect and sort objects into categories and compare the categories by counting the objects in each category. Report the results verbally, with a written numeral or with drawings. **Clarifications:** *Clarification 1:* Instruction focuses on supporting work in counting. *Clarification 2:* Instruction includes geometric figures that can be categorized using their defining attributes. *Clarification 3:* Within this benchmark, it is not the expectation for students to construct formal representations or graphs on their own.
MA.K.GR.1.1:	Identify two- and three-dimensional figures regardless of their size or orientation. Figures are limited to circles, triangles, rectangles, squares, spheres, cubes, cones and cylinders. **Clarifications:** *Clarification 1:* Instruction includes a wide variety of circles, triangles, rectangles, squares, spheres, cubes, cones and cylinders. *Clarification 2:* Instruction includes a variety of non-examples that lack one or more defining attributes. *Clarification 3:* Two-dimensional figures can be either filled, outlined or both.
MA.K.GR.1.2:	Compare two-dimensional figures based on their similarities, differences and positions. Sort two-dimensional figures based on their similarities and differences. Figures are limited to circles, triangles, rectangles and squares. **Clarifications:** *Clarification 1:* Instruction includes exploring figures in a variety of sizes and orientations. *Clarification 2:* Instruction focuses on using informal language to describe relative positions and the similarities or differences between figures when comparing and sorting.
MA.K.GR.1.3:	Compare three-dimensional figures based on their similarities, differences and positions. Sort three-dimensional figures based on their similarities and differences. Figures are limited to spheres, cubes, cones and cylinders. **Clarifications:** *Clarification 1:* Instruction includes exploring figures in a variety of sizes and orientations. *Clarification 2:* Instruction focuses on using informal language to describe relative positions and the similarities or differences between figures when comparing and sorting.
MA.K.GR.1.4:	Find real-world objects that can be modeled by a given two- or three-dimensional figure. Figures are limited to circles, triangles, rectangles, squares, spheres, cubes, cones and cylinders.
MA.K.GR.1.5:	Combine two-dimensional figures to form a given composite figure. Figures used to form a composite shape are limited to triangles, rectangles and squares. **Clarifications:** *Clarification 1:* This benchmark is intended to develop the understanding of spatial relationships.
MA.K.M.1.1:	Identify the attributes of a single object that can be measured such as length, volume or weight. **Clarifications:** *Clarification 1:* Within this benchmark, measuring is not required.
MA.K.M.1.2:	Directly compare two objects that have an attribute which can be measured in common. Express the comparison using language to describe the difference. **Clarifications:** *Clarification 1:* To directly compare length, objects are placed next to each other with one end of each object lined up to determine which one is longer. *Clarification 2:* Language to compare length includes short, shorter, long, longer, tall, taller, high or higher. Language to compare volume includes has more, has less, holds more, holds less, more full, less full, full, empty, takes up more space or takes up less space. Language to compare weight includes heavy, heavier, light, lighter, weighs more or weighs less.
MA.K.M.1.3:	Express the length of an object, up to 20 units long, as a whole number of lengths by laying non-standard objects end to end with no gaps or overlaps. **Clarifications:** *Clarification 1:* Non-standard units of measurement are units that are not typically used, such as paper clips or colored tiles. To measure with non-standard units, students lay multiple copies of the same object end to end with no gaps or overlaps. The length is shown by the number of objects needed.
	Given a group of up to 20 objects, count the number of objects in that group and represent the number of objects with a written numeral. State the number of objects in a rearrangement of that group without recounting.

MA.K.NSO.1.1:	**Clarifications:** *Clarification 1:* Instruction focuses on developing an understanding of cardinality and one-to-one correspondence. *Clarification 2:* Instruction includes counting objects and pictures presented in a line, rectangular array, circle or scattered arrangement. Objects presented in a scattered arrangement are limited to 10. *Clarification 3:* Within this benchmark, the expectation is not to write the number in word form.
MA.K.NSO.1.2:	Given a number from 0 to 20, count out that many objects. **Clarifications:** *Clarification 1:* Instruction includes giving a number verbally or with a written numeral.
MA.K.NSO.1.3:	Identify positions of objects within a sequence using the words "first," "second," "third," "fourth" or "fifth." **Clarifications:** *Clarification 1:* Instruction includes the understanding that rearranging a group of objects does not change the total number of objects but may change the order of an object in that group.
MA.K.NSO.1.4:	Compare the number of objects from 0 to 20 in two groups using the terms less than, equal to or greater than. **Clarifications:** *Clarification 1:* Instruction focuses on matching, counting and the connection to addition and subtraction. *Clarification 2:* Within this benchmark, the expectation is not to use the relational symbols =,> or <.
MA.K.NSO.2.1:	Recite the number names to 100 by ones and by tens. Starting at a given number, count forward within 100 and backward within 20. **Clarifications:** *Clarification 1:* When counting forward by ones, students are to say the number names in the standard order and understand that each successive number refers to a quantity that is one larger. When counting backward, students are to understand that each succeeding number in the count sequence refers to a quantity that is one less. *Clarification 2:* Within this benchmark, the expectation is to recognize and count to 100 by the end of Kindergarten.
MA.K.NSO.2.2:	Represent whole numbers from 10 to 20, using a unit of ten and a group of ones, with objects, drawings and expressions or equations.
MA.K.NSO.2.3:	Locate, order and compare numbers from 0 to 20 using the number line and terms less than, equal to or greater than. **Clarifications:** *Clarification 1:* Within this benchmark, the expectation is not to use the relational symbols =,> or <. *Clarification 2:* When comparing numbers from 0 to 20, both numbers are plotted on the same number line. *Clarification 3:* When locating numbers on the number line, the expectation includes filling in a missing number by counting from left to right on the number line.
MA.K.NSO.3.1:	Explore addition of two whole numbers from 0 to 10, and related subtraction facts. **Clarifications:** *Clarification 1:* Instruction includes objects, fingers, drawings, number lines and equations. *Clarification 2:* Instruction focuses on the connection that addition is "putting together" or "counting on" and that subtraction is "taking apart" or "taking from." Refer to Situations Involving Operations with Numbers (Appendix A). *Clarification 3:* Within this benchmark, it is the expectation that one problem can be represented in multiple ways and understanding how the different representations are related to each other.
MA.K.NSO.3.2:	Add two one-digit whole numbers with sums from 0 to 10 and subtract using related facts with procedural reliability. **Clarifications:** *Clarification 1:* Instruction focuses on helping a student choose a method they can use reliably
MA.K12.MTR.1.1:	Mathematicians who participate in effortful learning both individually and with others: • Analyze the problem in a way that makes sense given the task. • Ask questions that will help with solving the task. • Build perseverance by modifying methods as needed while solving a challenging task. • Stay engaged and maintain a positive mindset when working to solve tasks. • Help and support each other when attempting a new method or approach. **Clarifications:** Teachers who encourage students to participate actively in effortful learning both individually and with others: • Cultivate a community of growth mindset learners. • Foster perseverance in students by choosing tasks that are challenging. • Develop students' ability to analyze and problem solve. • Recognize students' effort when solving challenging problems.
MA.K12.MTR.2.1:	Demonstrate understanding by representing problems in multiple ways. Mathematicians who demonstrate understanding by representing problems in multiple ways: • Build understanding through modeling and using manipulatives. • Represent solutions to problems in multiple ways using objects, drawings, tables, graphs and equations. • Progress from modeling problems with objects and drawings to using algorithms and equations. • Express connections between concepts and representations. • Choose a representation based on the given context or purpose. **Clarifications:** Teachers who encourage students to demonstrate understanding by representing problems in multiple ways: • Help students make connections between concepts and representations. • Provide opportunities for students to use manipulatives when investigating concepts. • Guide students from concrete to pictorial to abstract representations as understanding progresses. • Show students that various representations can have different purposes and can be useful in different situations.

MA.K12.MTR.3.1:	Complete tasks with mathematical fluency. Mathematicians who complete tasks with mathematical fluency: • Select efficient and appropriate methods for solving problems within the given context. • Maintain flexibility and accuracy while performing procedures and mental calculations. • Complete tasks accurately and with confidence. • Adapt procedures to apply them to a new context. • Use feedback to improve efficiency when performing calculations. **Clarifications:** Teachers who encourage students to complete tasks with mathematical fluency: • Provide students with the flexibility to solve problems by selecting a procedure that allows them to solve efficiently and accurately. • Offer multiple opportunities for students to practice efficient and generalizable methods. • Provide opportunities for students to reflect on the method they used and determine if a more efficient method could have been used.
MA.K12.MTR.4.1:	Engage in discussions that reflect on the mathematical thinking of self and others. Mathematicians who engage in discussions that reflect on the mathematical thinking of self and others: • Communicate mathematical ideas, vocabulary and methods effectively. • Analyze the mathematical thinking of others. • Compare the efficiency of a method to those expressed by others. • Recognize errors and suggest how to correctly solve the task. • Justify results by explaining methods and processes. • Construct possible arguments based on evidence. **Clarifications:** Teachers who encourage students to engage in discussions that reflect on the mathematical thinking of self and others: • Establish a culture in which students ask questions of the teacher and their peers, and error is an opportunity for learning. • Create opportunities for students to discuss their thinking with peers. • Select, sequence and present student work to advance and deepen understanding of correct and increasingly efficient methods. • Develop students' ability to justify methods and compare their responses to the responses of their peers.
MA.K12.MTR.5.1:	Use patterns and structure to help understand and connect mathematical concepts. Mathematicians who use patterns and structure to help understand and connect mathematical concepts: • Focus on relevant details within a problem. • Create plans and procedures to logically order events, steps or ideas to solve problems. • Decompose a complex problem into manageable parts. • Relate previously learned concepts to new concepts. • Look for similarities among problems. • Connect solutions of problems to more complicated large-scale situations. **Clarifications:** Teachers who encourage students to use patterns and structure to help understand and connect mathematical concepts: • Help students recognize the patterns in the world around them and connect these patterns to mathematical concepts. • Support students to develop generalizations based on the similarities found among problems. • Provide opportunities for students to create plans and procedures to solve problems. • Develop students' ability to construct relationships between their current understanding and more sophisticated ways of thinking.
MA.K12.MTR.6.1:	Assess the reasonableness of solutions. Mathematicians who assess the reasonableness of solutions: • Estimate to discover possible solutions. • Use benchmark quantities to determine if a solution makes sense. • Check calculations when solving problems. • Verify possible solutions by explaining the methods used. • Evaluate results based on the given context. **Clarifications:** Teachers who encourage students to assess the reasonableness of solutions: • Have students estimate or predict solutions prior to solving. • Prompt students to continually ask, "Does this solution make sense? How do you know?" • Reinforce that students check their work as they progress within and after a task. • Strengthen students' ability to verify solutions through justifications.
MA.K12.MTR.7.1:	Apply mathematics to real-world contexts. Mathematicians who apply mathematics to real-world contexts: • Connect mathematical concepts to everyday experiences. • Use models and methods to understand, represent and solve problems. • Perform investigations to gather data or determine if a method is appropriate. • Redesign models and methods to improve accuracy or efficiency. **Clarifications:** Teachers who encourage students to apply mathematics to real-world contexts: • Provide opportunities for students to create models, both concrete and abstract, and perform investigations. • Challenge students to question the accuracy of their models and methods. • Support students as they validate conclusions by comparing them to the given situation. • Indicate how various concepts can be applied to other disciplines.
	Cite evidence to explain and justify reasoning.

ELA.K12.EE.1.1:	**Clarifications:** K-1 Students include textual evidence in their oral communication with guidance and support from adults. The evidence can consist of details from the text without naming the text. During 1st grade, students learn how to incorporate the evidence in their writing. 2-3 Students include relevant textual evidence in their written and oral communication. Students should name the text when they refer to it. In 3rd grade, students should use a combination of direct and indirect citations. 4-5 Students continue with previous skills and reference comments made by speakers and peers. Students cite texts that they've directly quoted, paraphrased, or used for information. When writing, students will use the form of citation dictated by the instructor or the style guide referenced by the instructor. 6-8 Students continue with previous skills and use a style guide to create a proper citation. 9-12 Students continue with previous skills and should be aware of existing style guides and the ways in which they differ.
ELA.K12.EE.2.1:	Read and comprehend grade-level complex texts proficiently. **Clarifications:** See Text Complexity for grade-level complexity bands and a text complexity rubric.
ELA.K12.EE.3.1:	Make inferences to support comprehension. **Clarifications:** Students will make inferences before the words infer or inference are introduced. Kindergarten students will answer questions like "Why is the girl smiling?" or make predictions about what will happen based on the title page. Students will use the terms and apply them in 2nd grade and beyond.
ELA.K12.EE.4.1:	Use appropriate collaborative techniques and active listening skills when engaging in discussions in a variety of situations. **Clarifications:** In kindergarten, students learn to listen to one another respectfully. In grades 1-2, students build upon these skills by justifying what they are thinking. For example: "I think _____ because _____." The collaborative conversations are becoming academic conversations. In grades 3-12, students engage in academic conversations discussing claims and justifying their reasoning, refining and applying skills. Students build on ideas, propel the conversation, and support claims and counterclaims with evidence.
ELA.K12.EE.5.1:	Use the accepted rules governing a specific format to create quality work. **Clarifications:** Students will incorporate skills learned into work products to produce quality work. For students to incorporate these skills appropriately, they must receive instruction. A 3rd grade student creating a poster board display must have instruction in how to effectively present information to do quality work.
ELA.K12.EE.6.1:	Use appropriate voice and tone when speaking or writing. **Clarifications:** In kindergarten and 1st grade, students learn the difference between formal and informal language. For example, the way we talk to our friends differs from the way we speak to adults. In 2nd grade and beyond, students practice appropriate social and academic language to discuss texts.
ELD.K12.ELL.MA.1:	English language learners communicate information, ideas and concepts necessary for academic success in the content area of Mathematics.

General Course Information and Notes

VERSION DESCRIPTION

This course supports students who need additional instruction in foundational mathematics skills as it relates to core instruction. Instruction will use explicit, systematic, and sequential approaches to mathematics instruction addressing all strands including number sense & operations, fractions, algebraic reasoning, geometric reasoning, measurement and data analysis & probability. Teachers will use the listed benchmarks that correspond to each students' needs.

Effective instruction matches instruction to the need of the students in the group and provides multiple opportunities to practice the skill and receive feedback. The additional time allotted for this course is in addition to core instruction. The intervention includes materials and strategies designed to supplement core instruction.

GENERAL NOTES

Florida's Benchmarks for Excellent Student Thinking (B.E.S.T.) Standards
This course includes Florida's B.E.S.T. ELA Expectations (EE) and Mathematical Thinking and Reasoning Standards (MTRs) for students. Florida educators should intentionally embed these standards within the content and their instruction as applicable. For guidance on the implementation of the EEs and MTRs, please visit cpalms.org/Standards/BEST_Standards.aspx and select the appropriate B.E.S.T. Standards package.

English Language Development ELD Standards Special Notes Section:
Teachers are required to provide listening, speaking, reading and writing instruction that allows English language learners (ELL) to communicate information, ideas and concepts for academic success in the content area of Mathematics. For the given level of English language proficiency and with visual, graphic, or interactive support, students will interact with grade level words, expressions, sentences and discourse to process or produce language necessary for academic success. The ELD standard should specify a relevant content area concept or topic of study chosen by curriculum developers and teachers which maximizes an ELL's need for communication and social skills. To access an ELL supporting document which delineates performance definitions and descriptors, please click on the following link: cpalms.org/uploads/docs/standards/eld/MA.pdf

GENERAL INFORMATION

Course Number: 5012005

Course Path: Section: Grades PreK to 12 Education Courses > **Grade Group:** Grades PreK to 5 Education Courses > **Subject:** Mathematics > **SubSubject:** General Mathematics >

Abbreviated Title: FDN SKILLS MATH K-2

Course Length: Multiple (M) - Course length can vary

Course Attributes:

- Class Size Core Required

Course Type: Elective Course

Course Level: 1

Course Status: Course Approved

Grade Level(s): K,1,2

Educator Certifications

Elementary Education (Elementary Grades 1-6)
Elementary Education (Grades K-6)
Primary Education (K-3)
Prekindergarten/Primary Education (Age 3 through Grade 3)
Early Childhood Education (Early Childhood)
Mathematics (Elementary Grades 1-6)

Foundational Skills in Mathematics 3-5 (#5012015) 2022 - And Beyond

Course Standards

Name	Description
MA.3.AR.1.1:	Apply the distributive property to multiply a one-digit number and two-digit number. Apply properties of multiplication to find a product of one-digit whole numbers. **Clarifications:** *Clarification 1:* Within this benchmark, the expectation is to apply the associative and commutative properties of multiplication, the distributive property and name the properties. Refer to K-12 Glossary (Appendix C). *Clarification 2:* Within the benchmark, the expectation is to utilize parentheses. *Clarification 3:* Multiplication for products of three or more numbers is limited to factors within 12. Refer to Properties of Operations, Equality and Inequality (Appendix D).
MA.3.AR.1.2:	Solve one- and two-step real-world problems involving any of four operations with whole numbers. **Clarifications:** *Clarification 1:* Instruction includes understanding the context of the problem, as well as the quantities within the problem. *Clarification 2:* Multiplication is limited to factors within 12 and related division facts. Refer to Situations Involving Operations with Numbers (Appendix A).
MA.3.AR.2.1:	Restate a division problem as a missing factor problem using the relationship between multiplication and division. **Clarifications:** *Clarification 1:* Multiplication is limited to factors within 12 and related division facts. *Clarification 2:* Within this benchmark, the symbolic representation of the missing factor uses any symbol or a letter.
MA.3.AR.2.2:	Determine and explain whether an equation involving multiplication or division is true or false. **Clarifications:** *Clarification 1:* Instruction extends the understanding of the meaning of the equal sign to multiplication and division. *Clarification 2:* Problem types are limited to an equation with three or four terms. The product or quotient can be on either side of the equal sign. *Clarification 3:* Multiplication is limited to factors within 12 and related division facts.
MA.3.AR.2.3:	Determine the unknown whole number in a multiplication or division equation, relating three whole numbers, with the unknown in any position. **Clarifications:** *Clarification 1:* Instruction extends the development of algebraic thinking skills where the symbolic representation of the unknown uses any symbol or a letter. *Clarification 2:* Problems include the unknown on either side of the equal sign. *Clarification 3:* Multiplication is limited to factors within 12 and related division facts. Refer to Situations Involving Operations with Numbers (Appendix A).
MA.3.AR.3.1:	Determine and explain whether a whole number from 1 to 1,000 is even or odd. **Clarifications:** *Clarification 1:* Instruction includes determining and explaining using place value and recognizing patterns.
MA.3.AR.3.2:	Determine whether a whole number from 1 to 144 is a multiple of a given one-digit number. **Clarifications:** *Clarification 1:* Instruction includes determining if a number is a multiple of a given number by using multiplication or division.
MA.3.AR.3.3:	Identify, create and extend numerical patterns. **Clarifications:** *Clarification 1:* The expectation is to use ordinal numbers (1st, 2nd, 3rd, ...) to describe the position of a number within a sequence. *Clarification 2:* Problem types include patterns involving addition, subtraction, multiplication or division of whole numbers.
MA.3.DP.1.1:	Collect and represent numerical and categorical data with whole-number values using tables, scaled pictographs, scaled bar graphs or line plots. Use appropriate titles, labels and units. **Clarifications:** *Clarification 1:* Within this benchmark, the expectation is to complete a representation or construct a representation from a data set. *Clarification 2:* Instruction includes the connection between multiplication and the number of data points represented by a bar in scaled bar graph or a scaled column in a pictograph. *Clarification 3:* Data displays are represented both horizontally and vertically.
	Interpret data with whole-number values represented with tables, scaled pictographs, circle graphs, scaled bar graphs or line plots by solving one- and two-step problems.

MA.3.DP.1.2:	**Clarifications:** *Clarification 1:* Problems include the use of data in informal comparisons between two data sets in the same units. *Clarification 2:* Data displays can be represented both horizontally and vertically. *Clarification 3:* Circle graphs are limited to showing the total values in each category.
MA.3.FR.1.1:	Represent and interpret unit fractions in the form 1/n as the quantity formed by one part when a whole is partitioned into n equal parts. **Clarifications:** *Clarification 1:* This benchmark emphasizes conceptual understanding through the use of manipulatives or visual models. *Clarification 2:* Instruction focuses on representing a unit fraction as part of a whole, part of a set, a point on a number line, a visual model or in fractional notation. *Clarification 3:* Denominators are limited to 2, 3, 4, 5, 6, 8, 10 and 12.
MA.3.FR.1.2:	Represent and interpret fractions, including fractions greater than one, in the form of $\frac{m}{n}$ as multiples of a unit fraction. **Clarifications:** *Clarification 1:* Instruction emphasizes conceptual understanding through the use of manipulatives or visual models, including circle graphs, to represent fractions. *Clarification 2:* Denominators are limited to 2, 3, 4, 5, 6, 8, 10 and 12.
MA.3.FR.1.3:	Read and write fractions, including fractions greater than one, using standard form, numeral-word form and word form. **Clarifications:** *Clarification 1:* Instruction focuses on making connections to reading and writing numbers to develop the understanding that fractions are numbers and to support algebraic thinking in later grades. *Clarification 2:* Denominators are limited to 2, 3, 4, 5, 6, 8, 10 and 12.
MA.3.FR.2.1:	Plot, order and compare fractional numbers with the same numerator or the same denominator. **Clarifications:** *Clarification 1:* Instruction includes making connections between using a ruler and plotting and ordering fractions on a number line. *Clarification 2:* When comparing fractions, instruction includes an appropriately scaled number line and using reasoning about their size. *Clarification 3:* Fractions include fractions greater than one, including mixed numbers, with denominators limited to 2, 3, 4, 5, 6, 8, 10 and 12.
MA.3.FR.2.2:	Identify equivalent fractions and explain why they are equivalent. **Clarifications:** *Clarification 1:* Instruction includes identifying equivalent fractions and explaining why they are equivalent using manipulatives, drawings, and number lines. *Clarification 2:* Within this benchmark, the expectation is not to generate equivalent fractions. *Clarification 3:* Fractions are limited to fractions less than or equal to one with denominators of 2, 3, 4, 5, 6, 8, 10 and 12. Number lines must be given and scaled appropriately.
MA.3.GR.1.1:	Describe and draw points, lines, line segments, rays, intersecting lines, perpendicular lines and parallel lines. Identify these in two-dimensional figures. **Clarifications:** *Clarification 1:* Instruction includes mathematical and real-world context for identifying points, lines, line segments, rays, intersecting lines, perpendicular lines and parallel lines. *Clarification 2:* When working with perpendicular lines, right angles can be called square angles or square corners.
MA.3.GR.1.2:	Identify and draw quadrilaterals based on their defining attributes. Quadrilaterals include parallelograms, rhombi, rectangles, squares and trapezoids. **Clarifications:** *Clarification 1:* Instruction includes a variety of quadrilaterals and a variety of non-examples that lack one or more defining attributes when identifying quadrilaterals. *Clarification 2:* Quadrilaterals will be filled, outlined or both when identifying. *Clarification 3:* Drawing representations must be reasonably accurate.
MA.3.GR.1.3:	Draw line(s) of symmetry in a two-dimensional figure and identify line-symmetric two-dimensional figures. **Clarifications:** *Clarification 1:* Instruction develops the understanding that there could be no line of symmetry, exactly one line of symmetry or more than one line of symmetry. *Clarification 2:* Instruction includes folding paper along a line of symmetry so that both halves match exactly to confirm line-symmetric figures.
MA.3.GR.2.1:	Explore area as an attribute of a two-dimensional figure by covering the figure with unit squares without gaps or overlaps. Find areas of rectangles by counting unit squares. **Clarifications:** *Clarification 1:* Instruction emphasizes the conceptual understanding that area is an attribute that can be measured for a two-dimensional figure. The measurement unit for area is the area of a unit square, which is a square with side length of 1 unit. *Clarification 2:* Two-dimensional figures cannot exceed 12 units by 12 units and responses include the appropriate units in word form (e.g., square centimeter or sq.cm.).
MA.3.GR.2.2:	Find the area of a rectangle with whole-number side lengths using a visual model and a multiplication formula. **Clarifications:** *Clarification 1:* Instruction includes covering the figure with unit squares, a rectangular array or applying a formula. *Clarification 2:* Two-dimensional figures cannot exceed 12 units by 12 units and responses include the appropriate units in word form.
	Solve mathematical and real-world problems involving the perimeter and area of rectangles with whole-number side lengths using a visual model and a

	formula.
MA.3.GR.2.3:	**Clarifications:** *Clarification 1:* Within this benchmark, the expectation is not to find unknown side lengths. *Clarification 2:* Two-dimensional figures cannot exceed 12 units by 12 units and responses include the appropriate units in word form.
MA.3.GR.2.4:	Solve mathematical and real-world problems involving the perimeter and area of composite figures composed of non-overlapping rectangles with whole-number side lengths. **Clarifications:** *Clarification 1:* Composite figures must be composed of non-overlapping rectangles. *Clarification 2:* Each rectangle within the composite figure cannot exceed 12 units by 12 units and responses include the appropriate units in word form.
MA.3.M.1.1:	Select and use appropriate tools to measure the length of an object, the volume of liquid within a beaker and temperature. **Clarifications:** *Clarification 1:* Instruction focuses on identifying measurement on a linear scale, making the connection to the number line. *Clarification 2:* When measuring the length, limited to the nearest centimeter and half or quarter inch. *Clarification 3:* When measuring the temperature, limited to the nearest degree. *Clarification 4:* When measuring the volume of liquid, limited to nearest milliliter and half or quarter cup.
MA.3.M.1.2:	Solve real-world problems involving any of the four operations with whole-number lengths, masses, weights, temperatures or liquid volumes. **Clarifications:** *Clarification 1:* Within this benchmark, it is the expectation that responses include appropriate units. *Clarification 2:* Problem types are not expected to include measurement conversions. *Clarification 3:* Instruction includes the comparison of attributes measured in the same units. *Clarification 4:* Units are limited to yards, feet, inches; meters, centimeters; pounds, ounces; kilograms, grams; degrees Fahrenheit, degrees Celsius; gallons, quarts, pints, cups; and liters, milliliters.
MA.3.M.2.1:	Using analog and digital clocks tell and write time to the nearest minute using a.m. and p.m. appropriately. **Clarifications:** *Clarification 1:* Within this benchmark, the expectation is not to understand military time.
MA.3.M.2.2:	Solve one- and two-step real-world problems involving elapsed time. **Clarifications:** *Clarification 1:* Within this benchmark, the expectation is not to include crossing between a.m. and p.m.
MA.3.NSO.1.1:	Read and write numbers from 0 to 10,000 using standard form, expanded form and word form.
MA.3.NSO.1.2:	Compose and decompose four-digit numbers in multiple ways using thousands, hundreds, tens and ones. Demonstrate each composition or decomposition using objects, drawings and expressions or equations.
MA.3.NSO.1.3:	Plot, order and compare whole numbers up to 10,000. **Clarifications:** *Clarification 1:* When comparing numbers, instruction includes using an appropriately scaled number line and using place values of the thousands, hundreds, tens and ones digits. *Clarification 2:* Number lines, scaled by 50s, 100s or 1,000s, must be provided and can be a representation of any range of numbers. *Clarification 3:* Within this benchmark, the expectation is to use symbols (<, > or =).
MA.3.NSO.1.4:	Round whole numbers from 0 to 1,000 to the nearest 10 or 100.
MA.3.NSO.2.1:	Add and subtract multi-digit whole numbers including using a standard algorithm with procedural fluency.
MA.3.NSO.2.2:	Explore multiplication of two whole numbers with products from 0 to 144, and related division facts. **Clarifications:** *Clarification 1:* Instruction includes equal groups, arrays, area models and equations. *Clarification 2:* Within the benchmark, it is the expectation that one problem can be represented in multiple ways and understanding how the different representations are related to each other. *Clarification 3:* Factors and divisors are limited to up to 12.
MA.3.NSO.2.3:	Multiply a one-digit whole number by a multiple of 10, up to 90, or a multiple of 100, up to 900, with procedural reliability. **Clarifications:** *Clarification 1:* When multiplying one-digit numbers by multiples of 10 or 100, instruction focuses on methods that are based on place value.
MA.3.NSO.2.4:	Multiply two whole numbers from 0 to 12 and divide using related facts with procedural reliability. **Clarifications:** *Clarification 1:* Instruction focuses on helping a student choose a method they can use reliably.
MA.4.AR.1.1:	Solve real-world problems involving multiplication and division of whole numbers including problems in which remainders must be interpreted within the context. **Clarifications:** *Clarification 1:* Problems involving multiplication include multiplicative comparisons. Refer to Situations Involving Operations with Numbers (Appendix A). *Clarification 2:* Depending on the context, the solution of a division problem with a remainder may be the whole number part of the quotient, the whole number part of the quotient with the remainder, the whole number part of the quotient plus 1, or the remainder. *Clarification 3:* Multiplication is limited to products of up to 3 digits by 2 digits. Division is limited to up to 4 digits divided by 1 digit.

MA.4.AR.1.2:	Solve real-world problems involving addition and subtraction of fractions with like denominators, including mixed numbers and fractions greater than one. **Clarifications:** *Clarification 1:* Problems include creating real-world situations based on an equation or representing a real-world problem with a visual model or equation. *Clarification 2:* Fractions within problems must reference the same whole. *Clarification 3:* Within this benchmark, the expectation is not to simplify or use lowest terms. *Clarification 4:* Denominators limited to 2, 3, 4, 5, 6, 8, 10, 12, 16 and 100.
MA.4.AR.1.3:	Solve real-world problems involving multiplication of a fraction by a whole number or a whole number by a fraction. **Clarifications:** *Clarification 1:* Problems include creating real-world situations based on an equation or representing a real-world problem with a visual model or equation. *Clarification 2:* Fractions within problems must reference the same whole. *Clarification 3:* Within this benchmark, the expectation is not to simplify or use lowest terms. *Clarification 4:* Fractions limited to fractions less than one with denominators of 2, 3, 4, 5, 6, 8, 10, 12, 16 and 100.
MA.4.AR.2.1:	Determine and explain whether an equation involving any of the four operations with whole numbers is true or false. **Clarifications:** *Clarification 1:* Multiplication is limited to whole number factors within 12 and related division facts.
MA.4.AR.2.2:	Given a mathematical or real-world context, write an equation involving multiplication or division to determine the unknown whole number with the unknown in any position. **Clarifications:** *Clarification 1:* Instruction extends the development of algebraic thinking skills where the symbolic representation of the unknown uses a letter. *Clarification 2:* Problems include the unknown on either side of the equal sign. *Clarification 3:* Multiplication is limited to factors within 12 and related division facts.
MA.4.AR.3.1:	Determine factor pairs for a whole number from 0 to 144. Determine whether a whole number from 0 to 144 is prime, composite or neither. **Clarifications:** *Clarification 1:* Instruction includes the connection to the relationship between multiplication and division and patterns with divisibility rules. *Clarification 2:* The numbers 0 and 1 are neither prime nor composite.
MA.4.AR.3.2:	Generate, describe and extend a numerical pattern that follows a given rule. **Clarifications:** *Clarification 1:* Instruction includes patterns within a mathematical or real-world context.
MA.4.DP.1.1:	Collect and represent numerical data, including fractional values, using tables, stem-and-leaf plots or line plots. **Clarifications:** *Clarification 1:* Denominators are limited to 2, 3, 4, 5, 6, 8, 10, 12, 16 and 100.
MA.4.DP.1.2:	Determine the mode, median or range to interpret numerical data including fractional values, represented with tables, stem-and-leaf plots or line plots. **Clarifications:** *Clarification 1:* Instruction includes interpreting data within a real-world context. *Clarification 2:* Instruction includes recognizing that data sets can have one mode, no mode or more than one mode. *Clarification 3:* Within this benchmark, data sets are limited to an odd number when calculating the median. *Clarification 4:* Denominators are limited to 2, 3, 4, 5, 6, 8, 10, 12, 16 and 100.
MA.4.DP.1.3:	Solve real-world problems involving numerical data. **Clarifications:** *Clarification 1:* Instruction includes using any of the four operations to solve problems. C *Clarification 2:* Data involving fractions with like denominators are limited to 2, 3, 4, 5, 6, 8, 10, 12, 16 and 100. Fractions can be greater than one. *Clarification 3:* Data involving decimals are limited to hundredths.
MA.4.FR.1.1:	Model and express a fraction, including mixed numbers and fractions greater than one, with the denominator 10 as an equivalent fraction with the denominator 100. **Clarifications:** *Clarification 1:* Instruction emphasizes conceptual understanding through the use of manipulatives, visual models, number lines or equations.
MA.4.FR.1.2:	Use decimal notation to represent fractions with denominators of 10 or 100, including mixed numbers and fractions greater than 1, and use fractional notation with denominators of 10 or 100 to represent decimals. **Clarifications:** *Clarification 1:* Instruction emphasizes conceptual understanding through the use of manipulatives visual models, number lines or equations. *Clarification 2:* Instruction includes the understanding that a decimal and fraction that are equivalent represent the same point on the number line and that fractions with denominators of 10 or powers of 10 may be called decimal fractions.
MA.4.FR.1.3:	Identify and generate equivalent fractions, including fractions greater than one. Describe how the numerator and denominator are affected when the equivalent fraction is created. **Clarifications:** *Clarification 1:* Instruction includes the use of manipulatives, visual models, number lines or equations.

	Clarification 2: Instruction includes recognizing how the numerator and denominator are affected when equivalent fractions are generated.
MA.4.FR.1.4:	Plot, order and compare fractions, including mixed numbers and fractions greater than one, with different numerators and different denominators. **Clarifications:** *Clarification 1:* When comparing fractions, instruction includes using an appropriately scaled number line and using reasoning about their size. *Clarification 2:* Within this benchmark, the expectation is to be able to use benchmark quantities, such as 0, $\frac{1}{4}$, $\frac{1}{2}$, $\frac{3}{4}$ and 1, to compare fractions. *Clarification 3:* Denominators are limited to 2, 3, 4, 5, 6, 8, 10, 12, 16 and 100. *Clarification 4:* Within this benchmark, the expectation is to use symbols (<, > or =).
MA.4.FR.2.1:	Decompose a fraction, including mixed numbers and fractions greater than one, into a sum of fractions with the same denominator in multiple ways. Demonstrate each decomposition with objects, drawings and equations. **Clarifications:** *Clarification 1:* Denominators are limited to 2, 3, 4, 5, 6, 8, 10, 12, 16 and 100.
MA.4.FR.2.2:	Add and subtract fractions with like denominators, including mixed numbers and fractions greater than one, with procedural reliability. **Clarifications:** *Clarification 1:* Instruction includes the use of word form, manipulatives, drawings, the properties of operations or number lines. *Clarification 2:* Within this benchmark, the expectation is not to simplify or use lowest terms. *Clarification 3:* Denominators are limited to 2, 3, 4, 5, 6, 8, 10, 12, 16 and 100.
MA.4.FR.2.3:	Explore the addition of a fraction with denominator of 10 to a fraction with denominator of 100 using equivalent fractions. **Clarifications:** *Clarification 1:* Instruction includes the use of visual models. *Clarification 2:* Within this benchmark, the expectation is not to simplify or use lowest terms.
MA.4.FR.2.4:	Extend previous understanding of multiplication to explore the multiplication of a fraction by a whole number or a whole number by a fraction. **Clarifications:** *Clarification 1:* Instruction includes the use of visual models or number lines and the connection to the commutative property of multiplication. Refer to Properties of Operation, Equality and Inequality (Appendix D). *Clarification 2:* Within this benchmark, the expectation is not to simplify or use lowest terms. *Clarification 3:* Fractions multiplied by a whole number are limited to less than 1. All denominators are limited to 2, 3, 4, 5, 6, 8, 10, 12, 16, 100.
MA.4.GR.1.1:	Informally explore angles as an attribute of two-dimensional figures. Identify and classify angles as acute, right, obtuse, straight or reflex. **Clarifications:** *Clarification 1:* Instruction includes classifying angles using benchmark angles of 90° and 180° in two-dimensional figures. *Clarification 2:* When identifying angles, the expectation includes two-dimensional figures and real-world pictures.
MA.4.GR.1.2:	Estimate angle measures. Using a protractor, measure angles in whole-number degrees and draw angles of specified measure in whole-number degrees. Demonstrate that angle measure is additive. **Clarifications:** *Clarification 1:* Instruction includes measuring given angles and drawing angles using protractors. *Clarification 2:* Instruction includes estimating angle measures using benchmark angles (30°, 45°, 60°, 90° and 180°). *Clarification 3:* Instruction focuses on the understanding that angles can be decomposed into non-overlapping angles whose measures sum to the measure of the original angle.
MA.4.GR.1.3:	Solve real-world and mathematical problems involving unknown whole-number angle measures. Write an equation to represent the unknown. **Clarifications:** *Clarification 1:* Instruction includes the connection to angle measure as being additive.
MA.4.GR.2.1:	Solve perimeter and area mathematical and real-world problems, including problems with unknown sides, for rectangles with whole-number side lengths. **Clarifications:** *Clarification 1:* Instruction extends the development of algebraic thinking where the symbolic representation of the unknown uses a letter. *Clarification 2:* Problems involving multiplication are limited to products of up to 3 digits by 2 digits. Problems involving division are limited to up to 4 digits divided by 1 digit. *Clarification 3:* Responses include the appropriate units in word form.
MA.4.GR.2.2:	Solve problems involving rectangles with the same perimeter and different areas or with the same area and different perimeters. **Clarifications:** *Clarification 1:* Instruction focuses on the conceptual understanding of the relationship between perimeter and area. *Clarification 2:* Within this benchmark, rectangles are limited to having whole-number side lengths. *Clarification 3:* Problems involving multiplication are limited to products of up to 3 digits by 2 digits. Problems involving division are limited to up to 4 digits divided by 1 digit. *Clarification 4:* Responses include the appropriate units in word form.
MA.4.M.1.1:	Select and use appropriate tools to measure attributes of objects. **Clarifications:** *Clarification 1:* Attributes include length, volume, weight, mass and temperature. *Clarification 2:* Instruction includes digital measurements and scales that are not linear in appearance.

	Clarification 3: When recording measurements, use fractions and decimals where appropriate.
MA.4.M.1.2:	Convert within a single system of measurement using the units: yards, feet, inches; kilometers, meters, centimeters, millimeters; pounds, ounces; kilograms, grams; gallons, quarts, pints, cups; liter, milliliter; and hours, minutes, seconds. **Clarifications:** *Clarification 1:* Instruction includes the understanding of how to convert from smaller to larger units or from larger to smaller units. *Clarification 2:* Within the benchmark, the expectation is not to convert from grams to kilograms, meters to kilometers or milliliters to liters. *Clarification 3:* Problems involving fractions are limited to denominators of 2, 3, 4, 5, 6, 8, 10, 12, 16 and 100.
MA.4.M.2.1:	Solve two-step real-world problems involving distances and intervals of time using any combination of the four operations. **Clarifications:** *Clarification 1:* Problems involving fractions will include addition and subtraction with like denominators and multiplication of a fraction by a whole number or a whole number by a fraction. *Clarification 2:* Problems involving fractions are limited to denominators of 2, 3, 4, 5, 6, 8, 10, 12, 16 and 100. *Clarification 3:* Within the benchmark, the expectation is not to use decimals.
MA.4.M.2.2:	Solve one- and two-step addition and subtraction real-world problems involving money using decimal notation.
MA.4.NSO.1.1:	Express how the value of a digit in a multi-digit whole number changes if the digit moves one place to the left or right.
MA.4.NSO.1.2:	Read and write multi-digit whole numbers from 0 to 1,000,000 using standard form, expanded form and word form.
MA.4.NSO.1.3:	Plot, order and compare multi-digit whole numbers up to 1,000,000. **Clarifications:** *Clarification 1:* When comparing numbers, instruction includes using an appropriately scaled number line and using place values of the hundred thousands, ten thousands, thousands, hundreds, tens and ones digits. *Clarification 2:* Scaled number lines must be provided and can be a representation of any range of numbers. *Clarification 3:* Within this benchmark, the expectation is to use symbols (<, > or =).
MA.4.NSO.1.4:	Round whole numbers from 0 to 10,000 to the nearest 10, 100 or 1,000.
MA.4.NSO.1.5:	Plot, order and compare decimals up to the hundredths. **Clarifications:** *Clarification 1:* When comparing numbers, instruction includes using an appropriately scaled number line and using place values of the ones, tenths and hundredths digits. *Clarification 2:* Within the benchmark, the expectation is to explain the reasoning for the comparison and use symbols (<, > or =). *Clarification 3:* Scaled number lines must be provided and can be a representation of any range of numbers.
MA.4.NSO.2.1:	Recall multiplication facts with factors up to 12 and related division facts with automaticity.
MA.4.NSO.2.2:	Multiply two whole numbers, up to three digits by up to two digits, with procedural reliability. **Clarifications:** *Clarification 1:* Instruction focuses on helping a student choose a method they can use reliably. *Clarification 2:* Instruction includes the use of models or equations based on place value and the distributive property.
MA.4.NSO.2.3:	Multiply two whole numbers, each up to two digits, including using a standard algorithm with procedural fluency.
MA.4.NSO.2.4:	Divide a whole number up to four digits by a one-digit whole number with procedural reliability. Represent remainders as fractional parts of the divisor. **Clarifications:** *Clarification 1:* Instruction focuses on helping a student choose a method they can use reliably. *Clarification 2:* Instruction includes the use of models based on place value, properties of operations or the relationship between multiplication and division.
MA.4.NSO.2.5:	Explore the multiplication and division of multi-digit whole numbers using estimation, rounding and place value. **Clarifications:** *Clarification 1:* Instruction focuses on previous understanding of multiplication with multiples of 10 and 100, and seeing division as a missing factor problem. *Clarification 2:* Estimating quotients builds the foundation for division using a standard algorithm. *Clarification 3:* When estimating the division of whole numbers, dividends are limited to up to four digits and divisors are limited to up to two digits.
MA.4.NSO.2.6:	Identify the number that is one-tenth more, one-tenth less, one-hundredth more and one-hundredth less than a given number.
MA.4.NSO.2.7:	Explore the addition and subtraction of multi-digit numbers with decimals to the hundredths. **Clarifications:** *Clarification 1:* Instruction includes the connection to money and the use of manipulatives and models based on place value.
MA.5.AR.1.1:	Solve multi-step real-world problems involving any combination of the four operations with whole numbers, including problems in which remainders must be interpreted within the context. **Clarifications:** *Clarification 1:* Depending on the context, the solution of a division problem with a remainder may be the whole number part of the quotient, the whole number part of the quotient with the remainder, the whole number part of the quotient plus 1, or the remainder.
MA.5.AR.1.2:	Solve real-world problems involving the addition, subtraction or multiplication of fractions, including mixed numbers and fractions greater than 1. **Clarifications:** *Clarification 1:* Instruction includes the use of visual models and equations to represent the problem.
MA.5.AR.1.3:	Solve real-world problems involving division of a unit fraction by a whole number and a whole number by a unit fraction. **Clarifications:**

	Clarification 1: Instruction includes the use of visual models and equations to represent the problem.
MA.5.AR.2.1:	Translate written real-world and mathematical descriptions into numerical expressions and numerical expressions into written mathematical descriptions. **Clarifications:** *Clarification 1:* Expressions are limited to any combination of the arithmetic operations, including parentheses, with whole numbers, decimals and fractions. *Clarification 2:* Within this benchmark, the expectation is not to include exponents or nested grouping symbols.
MA.5.AR.2.2:	Evaluate multi-step numerical expressions using order of operations. **Clarifications:** *Clarification 1:* Multi-step expressions are limited to any combination of arithmetic operations, including parentheses, with whole numbers, decimals and fractions. *Clarification 2:* Within this benchmark, the expectation is not to include exponents or nested grouping symbols. *Clarification 3:* Decimals are limited to hundredths. Expressions cannot include division of a fraction by a fraction.
MA.5.AR.2.3:	Determine and explain whether an equation involving any of the four operations is true or false. **Clarifications:** *Clarification 1:* Problem types include equations that include parenthesis but not nested parentheses. *Clarification 2:* Instruction focuses on the connection between properties of equality and order of operations.
MA.5.AR.2.4:	Given a mathematical or real-world context, write an equation involving any of the four operations to determine the unknown whole number with the unknown in any position. **Clarifications:** *Clarification 1:* Instruction extends the development of algebraic thinking where the unknown letter is recognized as a variable. *Clarification 2:* Problems include the unknown and different operations on either side of the equal sign
MA.5.AR.3.1:	Given a numerical pattern, identify and write a rule that can describe the pattern as an expression. **Clarifications:** *Clarification 1:* Rules are limited to one or two operations using whole numbers.
MA.5.AR.3.2:	Given a rule for a numerical pattern, use a two-column table to record the inputs and outputs. **Clarifications:** *Clarification 1:* Instruction builds a foundation for proportional and linear relationships in later grades. *Clarification 2:* Rules are limited to one or two operations using whole numbers.
MA.5.DP.1.1:	Collect and represent numerical data, including fractional and decimal values, using tables, line graphs or line plots. **Clarifications:** *Clarification 1:* Within this benchmark, the expectation is for an estimation of fractional and decimal heights on line graphs. *Clarification 2:* Decimal values are limited to hundredths. Denominators are limited to 1, 2, 3 and 4. Fractions can be greater than one.
MA.5.DP.1.2:	Interpret numerical data, with whole-number values, represented with tables or line plots by determining the mean, mode, median or range. **Clarifications:** *Clarification 1:* Instruction includes interpreting the mean in real-world problems as a leveling out, a balance point or an equal share.
MA.5.FR.1.1:	Given a mathematical or real-world problem, represent the division of two whole numbers as a fraction. **Clarifications:** *Clarification 1:* Instruction includes making a connection between fractions and division by understanding that fractions can also represent division of a numerator by a denominator. *Clarification 2:* Within this benchmark, the expectation is not to simplify or use lowest terms. *Clarification 3:* Fractions can include fractions greater than one.
MA.5.FR.2.1:	Add and subtract fractions with unlike denominators, including mixed numbers and fractions greater than 1, with procedural reliability. **Clarifications:** *Clarification 1:* Instruction includes the use of estimation, manipulatives, drawings or the properties of operations. *Clarification 2:* Instruction builds on the understanding from previous grades of factors up to 12 and their multiples.
MA.5.FR.2.2:	Extend previous understanding of multiplication to multiply a fraction by a fraction, including mixed numbers and fractions greater than 1, with procedural reliability. **Clarifications:** *Clarification 1:* Instruction includes the use of manipulatives, drawings or the properties of operations. *Clarification 2:* Denominators limited to whole numbers up to 20.
MA.5.FR.2.3:	When multiplying a given number by a fraction less than 1 or a fraction greater than 1, predict and explain the relative size of the product to the given number without calculating. **Clarifications:** *Clarification 1:* Instruction focuses on the connection to decimals, estimation and assessing the reasonableness of an answer.
MA.5.FR.2.4:	Extend previous understanding of division to explore the division of a unit fraction by a whole number and a whole number by a unit fraction. **Clarifications:** *Clarification 1:* Instruction includes the use of manipulatives, drawings or the properties of operations. *Clarification 2:* Refer to Situations Involving Operations with Numbers (Appendix A).
	Classify triangles or quadrilaterals into different categories based on shared defining attributes. Explain why a triangle or quadrilateral would or would not belong to a category.

MA.5.GR.1.1:	**Clarifications:** *Clarification 1:* Triangles include scalene, isosceles, equilateral, acute, obtuse and right; quadrilaterals include parallelograms, rhombi, rectangles, squares and trapezoids.
MA.5.GR.1.2:	Identify and classify three-dimensional figures into categories based on their defining attributes. Figures are limited to right pyramids, right prisms, right circular cylinders, right circular cones and spheres. **Clarifications:** *Clarification 1:* Defining attributes include the number and shape of faces, number and shape of bases, whether or not there is an apex, curved or straight edges and curved or flat faces.
MA.5.GR.2.1:	Find the perimeter and area of a rectangle with fractional or decimal side lengths using visual models and formulas. **Clarifications:** *Clarification 1:* Instruction includes finding the area of a rectangle with fractional side lengths by tiling it with squares having unit fraction side lengths and showing that the area is the same as would be found by multiplying the side lengths. *Clarification 2:* Responses include the appropriate units in word form.
MA.5.GR.3.1:	Explore volume as an attribute of three-dimensional figures by packing them with unit cubes without gaps. Find the volume of a right rectangular prism with whole-number side lengths by counting unit cubes. **Clarifications:** *Clarification 1:* Instruction emphasizes the conceptual understanding that volume is an attribute that can be measured for a three-dimensional figure. The measurement unit for volume is the volume of a unit cube, which is a cube with edge length of 1 unit.
MA.5.GR.3.2:	Find the volume of a right rectangular prism with whole-number side lengths using a visual model and a formula. **Clarifications:** *Clarification 1:* Instruction includes finding the volume of right rectangular prisms by packing the figure with unit cubes, using a visual model or applying a multiplication formula. *Clarification 2:* Right rectangular prisms cannot exceed two-digit edge lengths and responses include the appropriate units in word form.
MA.5.GR.3.3:	Solve real-world problems involving the volume of right rectangular prisms, including problems with an unknown edge length, with whole-number edge lengths using a visual model or a formula. Write an equation with a variable for the unknown to represent the problem. **Clarifications:** *Clarification 1:* Instruction progresses from right rectangular prisms to composite figures composed of right rectangular prisms. *Clarification 2:* When finding the volume of composite figures composed of right rectangular prisms, recognize volume as additive by adding the volume of non-overlapping parts. *Clarification 3:* Responses include the appropriate units in word form.
MA.5.GR.4.1:	Identify the origin and axes in the coordinate system. Plot and label ordered pairs in the first quadrant of the coordinate plane. **Clarifications:** *Clarification 1:* Instruction includes the connection between two-column tables and coordinates on a coordinate plane. *Clarification 2:* Instruction focuses on the connection of the number line to the x- and y-axis. *Clarification 3:* Coordinate planes include axes scaled by whole numbers. Ordered pairs contain only whole numbers.
MA.5.GR.4.2:	Represent mathematical and real-world problems by plotting points in the first quadrant of the coordinate plane and interpret coordinate values of points in the context of the situation. **Clarifications:** *Clarification 1:* Coordinate planes include axes scaled by whole numbers. Ordered pairs contain only whole numbers.
MA.5.M.1.1:	Solve multi-step real-world problems that involve converting measurement units to equivalent measurements within a single system of measurement. **Clarifications:** *Clarification 1:* Within the benchmark, the expectation is not to memorize the conversions. *Clarification 2:* Conversions include length, time, volume and capacity represented as whole numbers, fractions and decimals.
MA.5.M.2.1:	Solve multi-step real-world problems involving money using decimal notation.
MA.5.NSO.1.1:	Express how the value of a digit in a multi-digit number with decimals to the thousandths changes if the digit moves one or more places to the left or right.
MA.5.NSO.1.2:	Read and write multi-digit numbers with decimals to the thousandths using standard form, word form and expanded form.
MA.5.NSO.1.3:	Compose and decompose multi-digit numbers with decimals to the thousandths in multiple ways using the values of the digits in each place. Demonstrate the compositions or decompositions using objects, drawings and expressions or equations.
MA.5.NSO.1.4:	Plot, order and compare multi-digit numbers with decimals up to the thousandths. **Clarifications:** *Clarification 1:* When comparing numbers, instruction includes using an appropriately scaled number line and using place values of digits. *Clarification 2:* Scaled number lines must be provided and can be a representation of any range of numbers. *Clarification 3:* Within this benchmark, the expectation is to use symbols (<, > or =).
MA.5.NSO.1.5:	Round multi-digit numbers with decimals to the thousandths to the nearest hundredth, tenth or whole number.
MA.5.NSO.2.1:	Multiply multi-digit whole numbers including using a standard algorithm with procedural fluency.
MA.5.NSO.2.2:	Divide multi-digit whole numbers, up to five digits by two digits, including using a standard algorithm with procedural fluency. Represent remainders as fractions. **Clarifications:** *Clarification 1:* Within this benchmark, the expectation is not to use simplest form for fractions.
MA.5.NSO.2.3:	Add and subtract multi-digit numbers with decimals to the thousandths, including using a standard algorithm with procedural fluency.
	Explore the multiplication and division of multi-digit numbers with decimals to the hundredths using estimation, rounding and place value. **Clarifications:**

MA.5.NSO.2.4:	*Clarification 1:* Estimating quotients builds the foundation for division using a standard algorithm. *Clarification 2:* Instruction includes the use of models based on place value and the properties of operations.
MA.5.NSO.2.5:	Multiply and divide a multi-digit number with decimals to the tenths by one-tenth and one-hundredth with procedural reliability. **Clarifications:** *Clarification 1:* Instruction focuses on the place value of the digit when multiplying or dividing.
MA.K12.MTR.1.1:	Mathematicians who participate in effortful learning both individually and with others: • Analyze the problem in a way that makes sense given the task. • Ask questions that will help with solving the task. • Build perseverance by modifying methods as needed while solving a challenging task. • Stay engaged and maintain a positive mindset when working to solve tasks. • Help and support each other when attempting a new method or approach. **Clarifications:** Teachers who encourage students to participate actively in effortful learning both individually and with others: • Cultivate a community of growth mindset learners. • Foster perseverance in students by choosing tasks that are challenging. • Develop students' ability to analyze and problem solve. • Recognize students' effort when solving challenging problems.
MA.K12.MTR.2.1:	Demonstrate understanding by representing problems in multiple ways. Mathematicians who demonstrate understanding by representing problems in multiple ways: • Build understanding through modeling and using manipulatives. • Represent solutions to problems in multiple ways using objects, drawings, tables, graphs and equations. • Progress from modeling problems with objects and drawings to using algorithms and equations. • Express connections between concepts and representations. • Choose a representation based on the given context or purpose. **Clarifications:** Teachers who encourage students to demonstrate understanding by representing problems in multiple ways: • Help students make connections between concepts and representations. • Provide opportunities for students to use manipulatives when investigating concepts. • Guide students from concrete to pictorial to abstract representations as understanding progresses. • Show students that various representations can have different purposes and can be useful in different situations.
MA.K12.MTR.3.1:	Complete tasks with mathematical fluency. Mathematicians who complete tasks with mathematical fluency: • Select efficient and appropriate methods for solving problems within the given context. • Maintain flexibility and accuracy while performing procedures and mental calculations. • Complete tasks accurately and with confidence. • Adapt procedures to apply them to a new context. • Use feedback to improve efficiency when performing calculations. **Clarifications:** Teachers who encourage students to complete tasks with mathematical fluency: • Provide students with the flexibility to solve problems by selecting a procedure that allows them to solve efficiently and accurately. • Offer multiple opportunities for students to practice efficient and generalizable methods. • Provide opportunities for students to reflect on the method they used and determine if a more efficient method could have been used.
MA.K12.MTR.4.1:	Engage in discussions that reflect on the mathematical thinking of self and others. Mathematicians who engage in discussions that reflect on the mathematical thinking of self and others: • Communicate mathematical ideas, vocabulary and methods effectively. • Analyze the mathematical thinking of others. • Compare the efficiency of a method to those expressed by others. • Recognize errors and suggest how to correctly solve the task. • Justify results by explaining methods and processes. • Construct possible arguments based on evidence. **Clarifications:** Teachers who encourage students to engage in discussions that reflect on the mathematical thinking of self and others: • Establish a culture in which students ask questions of the teacher and their peers, and error is an opportunity for learning. • Create opportunities for students to discuss their thinking with peers. • Select, sequence and present student work to advance and deepen understanding of correct and increasingly efficient methods. • Develop students' ability to justify methods and compare their responses to the responses of their peers.
MA.K12.MTR.5.1:	Use patterns and structure to help understand and connect mathematical concepts. Mathematicians who use patterns and structure to help understand and connect mathematical concepts: • Focus on relevant details within a problem. • Create plans and procedures to logically order events, steps or ideas to solve problems. • Decompose a complex problem into manageable parts. • Relate previously learned concepts to new concepts. • Look for similarities among problems. • Connect solutions of problems to more complicated large-scale situations. **Clarifications:**

	Teachers who encourage students to use patterns and structure to help understand and connect mathematical concepts: • Help students recognize the patterns in the world around them and connect these patterns to mathematical concepts. • Support students to develop generalizations based on the similarities found among problems. • Provide opportunities for students to create plans and procedures to solve problems. • Develop students' ability to construct relationships between their current understanding and more sophisticated ways of thinking.
MA.K12.MTR.6.1:	Assess the reasonableness of solutions. Mathematicians who assess the reasonableness of solutions: • Estimate to discover possible solutions. • Use benchmark quantities to determine if a solution makes sense. • Check calculations when solving problems. • Verify possible solutions by explaining the methods used. • Evaluate results based on the given context. **Clarifications:** Teachers who encourage students to assess the reasonableness of solutions: • Have students estimate or predict solutions prior to solving. • Prompt students to continually ask, "Does this solution make sense? How do you know?" • Reinforce that students check their work as they progress within and after a task. • Strengthen students' ability to verify solutions through justifications.
MA.K12.MTR.7.1:	Apply mathematics to real-world contexts. Mathematicians who apply mathematics to real-world contexts: • Connect mathematical concepts to everyday experiences. • Use models and methods to understand, represent and solve problems. • Perform investigations to gather data or determine if a method is appropriate. • Redesign models and methods to improve accuracy or efficiency. **Clarifications:** Teachers who encourage students to apply mathematics to real-world contexts: • Provide opportunities for students to create models, both concrete and abstract, and perform investigations. • Challenge students to question the accuracy of their models and methods. • Support students as they validate conclusions by comparing them to the given situation. • Indicate how various concepts can be applied to other disciplines.
ELA.K12.EE.1.1:	Cite evidence to explain and justify reasoning. **Clarifications:** K-1 Students include textual evidence in their oral communication with guidance and support from adults. The evidence can consist of details from the text without naming the text. During 1st grade, students learn how to incorporate the evidence in their writing. 2-3 Students include relevant textual evidence in their written and oral communication. Students should name the text when they refer to it. In 3rd grade, students should use a combination of direct and indirect citations. 4-5 Students continue with previous skills and reference comments made by speakers and peers. Students cite texts that they've directly quoted, paraphrased, or used for information. When writing, students will use the form of citation dictated by the instructor or the style guide referenced by the instructor. 6-8 Students continue with previous skills and use a style guide to create a proper citation. 9-12 Students continue with previous skills and should be aware of existing style guides and the ways in which they differ.
ELA.K12.EE.2.1:	Read and comprehend grade-level complex texts proficiently. **Clarifications:** See Text Complexity for grade-level complexity bands and a text complexity rubric.
ELA.K12.EE.3.1:	Make inferences to support comprehension. **Clarifications:** Students will make inferences before the words infer or inference are introduced. Kindergarten students will answer questions like "Why is the girl smiling?" or make predictions about what will happen based on the title page. Students will use the terms and apply them in 2nd grade and beyond.
ELA.K12.EE.4.1:	Use appropriate collaborative techniques and active listening skills when engaging in discussions in a variety of situations. **Clarifications:** In kindergarten, students learn to listen to one another respectfully. In grades 1-2, students build upon these skills by justifying what they are thinking. For example: "I think _____ because _____." The collaborative conversations are becoming academic conversations. In grades 3-12, students engage in academic conversations discussing claims and justifying their reasoning, refining and applying skills. Students build on ideas, propel the conversation, and support claims and counterclaims with evidence.
ELA.K12.EE.5.1:	Use the accepted rules governing a specific format to create quality work. **Clarifications:** Students will incorporate skills learned into work products to produce quality work. For students to incorporate these skills appropriately, they must receive instruction. A 3rd grade student creating a poster board display must have instruction in how to effectively present information to do quality work.
ELA.K12.EE.6.1:	Use appropriate voice and tone when speaking or writing. **Clarifications:** In kindergarten and 1st grade, students learn the difference between formal and informal language. For example, the way we talk to our friends differs from the way we speak to adults. In 2nd grade and beyond, students practice appropriate social and academic language to discuss texts.

General Course Information and Notes

VERSION DESCRIPTION

This course supports students who need additional instruction in foundational mathematics skills as it relates to core instruction. Instruction will use explicit, systematic, and sequential approaches to mathematics instruction addressing all domains including number sense & operations, fractions, algebraic reasoning, geometric reasoning, measurement and data analysis & probability. Teachers will use the listed standards that correspond to each students' needs.

Effective instruction matches instruction to the need of the students in the group and provides multiple opportunities to practice the skill and receive feedback. The additional time allotted for this course is in addition to core instruction. The intervention includes materials and strategies designed to supplement core instruction.

GENERAL NOTES

Florida's Benchmarks for Excellent Student Thinking (B.E.S.T.) Standards
This course includes Florida's B.E.S.T. ELA Expectations (EE) and Mathematical Thinking and Reasoning Standards (MTRs) for students. Florida educators should intentionally embed these standards within the content and their instruction as applicable. For guidance on the implementation of the EEs and MTRs, please visit cpalms.org/Standards/BEST_Standards.aspx and select the appropriate B.E.S.T. Standards package.

English Language Development ELD Standards Special Notes Section:
Teachers are required to provide listening, speaking, reading and writing instruction that allows English language learners (ELL) to communicate information, ideas and concepts for academic success in the content area of Mathematics. For the given level of English language proficiency and with visual, graphic, or interactive support, students will interact with grade-level words, expressions, sentences and discourse to process or produce language necessary for academic success. The ELD standard should specify a relevant content area concept or topic of study chosen by curriculum developers and teachers which maximizes an ELL's need for communication and social skills. To access an ELL supporting document which delineates performance definitions and descriptors, please click on the following link: cpalms.org/uploads/docs/standards/eld/MA.pdf

GENERAL INFORMATION

Course Number: 5012015

Course Path: Section: Grades PreK to 12 Education Courses > **Grade Group:** Grades PreK to 5 Education Courses > **Subject:** Mathematics > **SubSubject:** General Mathematics >
Abbreviated Title: FDN SKILLS MATH 3-5
Course Length: Multiple (M) - Course length can vary
Course Attributes:
- Class Size Core Required

Course Type: Elective Course

Course Level: 1

Course Status: Course Approved

Educator Certifications

Elementary Education (Elementary Grades 1-6)
Elementary Education (Grades K-6)
Mathematics (Elementary Grades 1-6)

Grade Kindergarten Mathematics (#5012020) 2022 - And Beyond

Course Standards

Name	Description
MA.K.AR.1.1:	For any number from 1 to 9, find the number that makes 10 when added to the given number. **Clarifications:** *Clarification 1:* Instruction includes creating a ten using manipulatives, number lines, models and drawings.
MA.K.AR.1.2:	Given a number from 0 to 10, find the different ways it can be represented as the sum of two numbers. **Clarifications:** *Clarification 1:* Instruction includes the exploration of finding possible pairs to make a sum using manipulatives, objects, drawings and expressions; and understanding how the different representations are related to each other.
MA.K.AR.1.3:	Solve addition and subtraction real-world problems using objects, drawings or equations to represent the problem. **Clarifications:** *Clarification 1:* Instruction includes understanding the context of the problem, as well as the quantities within the problem. *Clarification 2:* Students are not expected to independently read word problems. *Clarification 3:* Addition and subtraction are limited to sums within 10 and related subtraction facts. Refer to Situations Involving Operations with Numbers (Appendix A).
MA.K.AR.2.1:	Explain why addition or subtraction equations are true using objects or drawings. **Clarifications:** *Clarification 1:* Instruction focuses on the understanding of the equal sign. *Clarification 2:* Problem types are limited to an equation with two or three terms. The sum or difference can be on either side of the equal sign. *Clarification 3:* Addition and subtraction are limited to sums within 20 and related subtraction facts.
MA.K.DP.1.1:	Collect and sort objects into categories and compare the categories by counting the objects in each category. Report the results verbally, with a written numeral or with drawings. **Clarifications:** *Clarification 1:* Instruction focuses on supporting work in counting. *Clarification 2:* Instruction includes geometric figures that can be categorized using their defining attributes. *Clarification 3:* Within this benchmark, it is not the expectation for students to construct formal representations or graphs on their own.
MA.K.GR.1.1:	Identify two- and three-dimensional figures regardless of their size or orientation. Figures are limited to circles, triangles, rectangles, squares, spheres, cubes, cones and cylinders. **Clarifications:** *Clarification 1:* Instruction includes a wide variety of circles, triangles, rectangles, squares, spheres, cubes, cones and cylinders. *Clarification 2:* Instruction includes a variety of non-examples that lack one or more defining attributes. *Clarification 3:* Two-dimensional figures can be either filled, outlined or both.
MA.K.GR.1.2:	Compare two-dimensional figures based on their similarities, differences and positions. Sort two-dimensional figures based on their similarities and differences. Figures are limited to circles, triangles, rectangles and squares. **Clarifications:** *Clarification 1:* Instruction includes exploring figures in a variety of sizes and orientations. *Clarification 2:* Instruction focuses on using informal language to describe relative positions and the similarities or differences between figures when comparing and sorting.
MA.K.GR.1.3:	Compare three-dimensional figures based on their similarities, differences and positions. Sort three-dimensional figures based on their similarities and differences. Figures are limited to spheres, cubes, cones and cylinders. **Clarifications:** *Clarification 1:* Instruction includes exploring figures in a variety of sizes and orientations. *Clarification 2:* Instruction focuses on using informal language to describe relative positions and the similarities or differences between figures when comparing and sorting.
MA.K.GR.1.4:	Find real-world objects that can be modeled by a given two- or three-dimensional figure. Figures are limited to circles, triangles, rectangles, squares, spheres, cubes, cones and cylinders.
MA.K.GR.1.5:	Combine two-dimensional figures to form a given composite figure. Figures used to form a composite shape are limited to triangles, rectangles and squares. **Clarifications:** *Clarification 1:* This benchmark is intended to develop the understanding of spatial relationships.
MA.K.M.1.1:	Identify the attributes of a single object that can be measured such as length, volume or weight. **Clarifications:** *Clarification 1:* Within this benchmark, measuring is not required.
	Directly compare two objects that have an attribute which can be measured in common. Express the comparison using language to describe the difference. **Clarifications:**

MA.K.M.1.2:	*Clarification 1:* To directly compare length, objects are placed next to each other with one end of each object lined up to determine which one is longer. *Clarification 2:* Language to compare length includes short, shorter, long, longer, tall, taller, high or higher. Language to compare volume includes has more, has less, holds more, holds less, more full, less full, full, empty, takes up more space or takes up less space. Language to compare weight includes heavy, heavier, light, lighter, weighs more or weighs less.
MA.K.M.1.3:	Express the length of an object, up to 20 units long, as a whole number of lengths by laying non-standard objects end to end with no gaps or overlaps. **Clarifications:** *Clarification 1:* Non-standard units of measurement are units that are not typically used, such as paper clips or colored tiles. To measure with non-standard units, students lay multiple copies of the same object end to end with no gaps or overlaps. The length is shown by the number of objects needed.
MA.K.NSO.1.1:	Given a group of up to 20 objects, count the number of objects in that group and represent the number of objects with a written numeral. State the number of objects in a rearrangement of that group without recounting. **Clarifications:** *Clarification 1:* Instruction focuses on developing an understanding of cardinality and one-to-one correspondence. *Clarification 2:* Instruction includes counting objects and pictures presented in a line, rectangular array, circle or scattered arrangement. Objects presented in a scattered arrangement are limited to 10. *Clarification 3:* Within this benchmark, the expectation is not to write the number in word form.
MA.K.NSO.1.2:	Given a number from 0 to 20, count out that many objects. **Clarifications:** *Clarification 1:* Instruction includes giving a number verbally or with a written numeral.
MA.K.NSO.1.3:	Identify positions of objects within a sequence using the words "first," "second," "third," "fourth" or "fifth." **Clarifications:** *Clarification 1:* Instruction includes the understanding that rearranging a group of objects does not change the total number of objects but may change the order of an object in that group.
MA.K.NSO.1.4:	Compare the number of objects from 0 to 20 in two groups using the terms less than, equal to or greater than. **Clarifications:** *Clarification 1:* Instruction focuses on matching, counting and the connection to addition and subtraction. *Clarification 2:* Within this benchmark, the expectation is not to use the relational symbols =,> or <.
MA.K.NSO.2.1:	Recite the number names to 100 by ones and by tens. Starting at a given number, count forward within 100 and backward within 20. **Clarifications:** *Clarification 1:* When counting forward by ones, students are to say the number names in the standard order and understand that each successive number refers to a quantity that is one larger. When counting backward, students are to understand that each succeeding number in the count sequence refers to a quantity that is one less. *Clarification 2:* Within this benchmark, the expectation is to recognize and count to 100 by the end of Kindergarten.
MA.K.NSO.2.2:	Represent whole numbers from 10 to 20, using a unit of ten and a group of ones, with objects, drawings and expressions or equations.
MA.K.NSO.2.3:	Locate, order and compare numbers from 0 to 20 using the number line and terms less than, equal to or greater than. **Clarifications:** *Clarification 1:* Within this benchmark, the expectation is not to use the relational symbols =,> or <. *Clarification 2:* When comparing numbers from 0 to 20, both numbers are plotted on the same number line. *Clarification 3:* When locating numbers on the number line, the expectation includes filling in a missing number by counting from left to right on the number line.
MA.K.NSO.3.1:	Explore addition of two whole numbers from 0 to 10, and related subtraction facts. **Clarifications:** *Clarification 1:* Instruction includes objects, fingers, drawings, number lines and equations. *Clarification 2:* Instruction focuses on the connection that addition is "putting together" or "counting on" and that subtraction is "taking apart" or "taking from." Refer to Situations Involving Operations with Numbers (Appendix A). *Clarification 3:* Within this benchmark, it is the expectation that one problem can be represented in multiple ways and understanding how the different representations are related to each other.
MA.K.NSO.3.2:	Add two one-digit whole numbers with sums from 0 to 10 and subtract using related facts with procedural reliability. **Clarifications:** *Clarification 1:* Instruction focuses on helping a student choose a method they can use reliably
MA.K12.MTR.1.1:	Mathematicians who participate in effortful learning both individually and with others: • Analyze the problem in a way that makes sense given the task. • Ask questions that will help with solving the task. • Build perseverance by modifying methods as needed while solving a challenging task. • Stay engaged and maintain a positive mindset when working to solve tasks. • Help and support each other when attempting a new method or approach. **Clarifications:** Teachers who encourage students to participate actively in effortful learning both individually and with others: • Cultivate a community of growth mindset learners. • Foster perseverance in students by choosing tasks that are challenging. • Develop students' ability to analyze and problem solve. • Recognize students' effort when solving challenging problems.

Demonstrate understanding by representing problems in multiple ways.
Mathematicians who demonstrate understanding by representing problems in multiple ways:

- Build understanding through modeling and using manipulatives.
- Represent solutions to problems in multiple ways using objects, drawings, tables, graphs and equations.
- Progress from modeling problems with objects and drawings to using algorithms and equations.
- Express connections between concepts and representations.

MA.K12.MTR.2.1:

- Choose a representation based on the given context or purpose.

Clarifications:
Teachers who encourage students to demonstrate understanding by representing problems in multiple ways:

- Help students make connections between concepts and representations.
- Provide opportunities for students to use manipulatives when investigating concepts.
- Guide students from concrete to pictorial to abstract representations as understanding progresses.
- Show students that various representations can have different purposes and can be useful in different situations.

Complete tasks with mathematical fluency.
Mathematicians who complete tasks with mathematical fluency:

- Select efficient and appropriate methods for solving problems within the given context.
- Maintain flexibility and accuracy while performing procedures and mental calculations.
- Complete tasks accurately and with confidence.
- Adapt procedures to apply them to a new context.

MA.K12.MTR.3.1:

- Use feedback to improve efficiency when performing calculations.

Clarifications:
Teachers who encourage students to complete tasks with mathematical fluency:

- Provide students with the flexibility to solve problems by selecting a procedure that allows them to solve efficiently and accurately.
- Offer multiple opportunities for students to practice efficient and generalizable methods.
- Provide opportunities for students to reflect on the method they used and determine if a more efficient method could have been used.

Engage in discussions that reflect on the mathematical thinking of self and others.
Mathematicians who engage in discussions that reflect on the mathematical thinking of self and others:

- Communicate mathematical ideas, vocabulary and methods effectively.
- Analyze the mathematical thinking of others.
- Compare the efficiency of a method to those expressed by others.
- Recognize errors and suggest how to correctly solve the task.
- Justify results by explaining methods and processes.

MA.K12.MTR.4.1:

- Construct possible arguments based on evidence.

Clarifications:
Teachers who encourage students to engage in discussions that reflect on the mathematical thinking of self and others:

- Establish a culture in which students ask questions of the teacher and their peers, and error is an opportunity for learning.
- Create opportunities for students to discuss their thinking with peers.
- Select, sequence and present student work to advance and deepen understanding of correct and increasingly efficient methods.
- Develop students' ability to justify methods and compare their responses to the responses of their peers.

Use patterns and structure to help understand and connect mathematical concepts.
Mathematicians who use patterns and structure to help understand and connect mathematical concepts:

- Focus on relevant details within a problem.
- Create plans and procedures to logically order events, steps or ideas to solve problems.
- Decompose a complex problem into manageable parts.
- Relate previously learned concepts to new concepts.
- Look for similarities among problems.

MA.K12.MTR.5.1:

- Connect solutions of problems to more complicated large-scale situations.

Clarifications:
Teachers who encourage students to use patterns and structure to help understand and connect mathematical concepts:

- Help students recognize the patterns in the world around them and connect these patterns to mathematical concepts.
- Support students to develop generalizations based on the similarities found among problems.
- Provide opportunities for students to create plans and procedures to solve problems.
- Develop students' ability to construct relationships between their current understanding and more sophisticated ways of thinking.

Assess the reasonableness of solutions.
Mathematicians who assess the reasonableness of solutions:

- Estimate to discover possible solutions.
- Use benchmark quantities to determine if a solution makes sense.
- Check calculations when solving problems.
- Verify possible solutions by explaining the methods used.

MA.K12.MTR.6.1:

- Evaluate results based on the given context.

Clarifications:
Teachers who encourage students to assess the reasonableness of solutions:

- Have students estimate or predict solutions prior to solving.
- Prompt students to continually ask, "Does this solution make sense? How do you know?"
- Reinforce that students check their work as they progress within and after a task.
- Strengthen students' ability to verify solutions through justifications.

MA.K12.MTR.7.1:	Apply mathematics to real-world contexts. Mathematicians who apply mathematics to real-world contexts: • Connect mathematical concepts to everyday experiences. • Use models and methods to understand, represent and solve problems. • Perform investigations to gather data or determine if a method is appropriate. • Redesign models and methods to improve accuracy or efficiency. **Clarifications:** Teachers who encourage students to apply mathematics to real-world contexts: • Provide opportunities for students to create models, both concrete and abstract, and perform investigations. • Challenge students to question the accuracy of their models and methods. • Support students as they validate conclusions by comparing them to the given situation. • Indicate how various concepts can be applied to other disciplines.
ELA.K12.EE.1.1:	Cite evidence to explain and justify reasoning. **Clarifications:** K-1 Students include textual evidence in their oral communication with guidance and support from adults. The evidence can consist of details from the text without naming the text. During 1st grade, students learn how to incorporate the evidence in their writing. 2-3 Students include relevant textual evidence in their written and oral communication. Students should name the text when they refer to it. In 3rd grade, students should use a combination of direct and indirect citations. 4-5 Students continue with previous skills and reference comments made by speakers and peers. Students cite texts that they've directly quoted, paraphrased, or used for information. When writing, students will use the form of citation dictated by the instructor or the style guide referenced by the instructor. 6-8 Students continue with previous skills and use a style guide to create a proper citation. 9-12 Students continue with previous skills and should be aware of existing style guides and the ways in which they differ.
ELA.K12.EE.2.1:	Read and comprehend grade-level complex texts proficiently. **Clarifications:** See Text Complexity for grade-level complexity bands and a text complexity rubric.
ELA.K12.EE.3.1:	Make inferences to support comprehension. **Clarifications:** Students will make inferences before the words infer or inference are introduced. Kindergarten students will answer questions like "Why is the girl smiling?" or make predictions about what will happen based on the title page. Students will use the terms and apply them in 2nd grade and beyond.
ELA.K12.EE.4.1:	Use appropriate collaborative techniques and active listening skills when engaging in discussions in a variety of situations. **Clarifications:** In kindergarten, students learn to listen to one another respectfully. In grades 1-2, students build upon these skills by justifying what they are thinking. For example: "I think _____ because _____." The collaborative conversations are becoming academic conversations. In grades 3-12, students engage in academic conversations discussing claims and justifying their reasoning, refining and applying skills. Students build on ideas, propel the conversation, and support claims and counterclaims with evidence.
ELA.K12.EE.5.1:	Use the accepted rules governing a specific format to create quality work. **Clarifications:** Students will incorporate skills learned into work products to produce quality work. For students to incorporate these skills appropriately, they must receive instruction. A 3rd grade student creating a poster board display must have instruction in how to effectively present information to do quality work.
ELA.K12.EE.6.1:	Use appropriate voice and tone when speaking or writing. **Clarifications:** In kindergarten and 1st grade, students learn the difference between formal and informal language. For example, the way we talk to our friends differs from the way we speak to adults. In 2nd grade and beyond, students practice appropriate social and academic language to discuss texts.
ELD.K12.ELL.MA.1:	English language learners communicate information, ideas and concepts necessary for academic success in the content area of Mathematics.
ELD.K12.ELL.SI.1:	English language learners communicate for social and instructional purposes within the school setting.

General Course Information and Notes

VERSION DESCRIPTION

The benchmarks in this course are mastery goals that students are expected to attain by the end of the year. To build mastery, students will continue to review and apply earlier grade-level benchmarks and expectations.

GENERAL NOTES

In Kindergarten, instructional time will emphasize three areas: (1) developing an understanding of counting to represent the total number of objects in a set and to order the objects within a set; (2) developing an understanding of addition and subtraction and the relationship of these operations to counting and (3) measuring, comparing and

categorizing objects according to various attributes, including their two- and three-dimensional shapes.

Curricular content for all subjects must integrate critical-thinking, problem-solving, and workforce-literacy skills; communication, reading, and writing skills; mathematics skills; collaboration skills; contextual and applied-learning skills; technology-literacy skills; information and media-literacy skills; and civic-engagement skills.

English Language Development ELD Standards Special Notes Section:
Teachers are required to provide listening, speaking, reading and writing instruction that allows English language learners (ELL) to communicate information, ideas and concepts for academic success in the content area of Mathematics. For the given level of English language proficiency and with visual, graphic, or interactive support, students will interact with grade level words, expressions, sentences and discourse to process or produce language necessary for academic success. The ELD standard should specify a relevant content area concept or topic of study chosen by curriculum developers and teachers which maximizes an ELL's need for communication and social skills. To access an ELL supporting document which delineates performance definitions and descriptors, please click on the following link: cpalms.org/uploads/docs/standards/eld/MA.pdf

GENERAL INFORMATION

Course Number: 5012020

Course Path: Section: Grades PreK to 12 Education Courses > **Grade Group:** Grades PreK to 5 Education Courses > **Subject:** Mathematics > **SubSubject:** General Mathematics >

Abbreviated Title: GRADE K MATH

Course Length: Year (Y)

Course Type: Core Academic Course

Course Level: 2

Course Status: Draft - Course Pending Approval

Educator Certifications

Prekindergarten/Primary Education (Age 3 through Grade 3)
Elementary Education (Elementary Grades 1-6)
Primary Education (K-3)
Early Childhood Education (Early Childhood)
Elementary Education (Grades K-6)

Grade One Mathematics (#5012030) 2022 - And Beyond

Course Standards

Name	Description
MA.1.AR.1.1:	Apply properties of addition to find a sum of three or more whole numbers. **Clarifications:** *Clarification 1:* Within this benchmark, the expectation is to apply the associative and commutative properties of addition. It is not the expectation to name the properties or use parentheses. Refer to Properties of Operations, Equality and Inequality (Appendix D). *Clarification 2:* Instruction includes emphasis on using the properties to make a ten when adding three or more numbers. *Clarification 3:* Addition is limited to sums within 20.
MA.1.AR.1.2:	Solve addition and subtraction real-world problems using objects, drawings or equations to represent the problem. **Clarifications:** *Clarification 1:* Instruction includes understanding the context of the problem, as well as the quantities within the problem. *Clarification 2:* Students are not expected to independently read word problems. *Clarification 3:* Addition and subtraction are limited to sums within 20 and related subtraction facts. Refer to Situations Involving Operations with Numbers (Appendix A).
MA.1.AR.2.1:	Restate a subtraction problem as a missing addend problem using the relationship between addition and subtraction. **Clarifications:** *Clarification 1:* Addition and subtraction are limited to sums within 20 and related subtraction facts.
MA.1.AR.2.2:	Determine and explain if equations involving addition or subtraction are true or false. **Clarifications:** *Clarification 1:* Instruction focuses on understanding of the equal sign. *Clarification 2:* Problem types are limited to an equation with no more than four terms. The sum or difference can be on either side of the equal sign. *Clarification 3:* Addition and subtraction are limited to sums within 20 and related subtraction facts.
MA.1.AR.2.3:	Determine the unknown whole number in an addition or subtraction equation, relating three whole numbers, with the unknown in any position. **Clarifications:** *Clarification 1:* Instruction begins the development of algebraic thinking skills where the symbolic representation of the unknown uses any symbol other than a letter. *Clarification 2:* Problems include the unknown on either side of the equal sign. *Clarification 3:* Addition and subtraction are limited to sums within 20 and related subtraction facts. Refer to Situations Involving Operations with Numbers (Appendix A).
MA.1.DP.1.1:	Collect data into categories and represent the results using tally marks or pictographs. **Clarifications:** *Clarification 1:* Instruction includes connecting tally marks to counting by 5s. *Clarification 2:* Data sets include geometric figures that are categorized using their defining attributes and data from the classroom or school. *Clarification 3:* Pictographs are limited to single-unit scales.
MA.1.DP.1.2:	Interpret data represented with tally marks or pictographs by calculating the total number of data points and comparing the totals of different categories. **Clarifications:** *Clarification 1:* Instruction focuses on the connection to addition and subtraction when calculating the total and comparing, respectively.
MA.1.FR.1.1:	Partition circles and rectangles into two and four equal-sized parts. Name the parts of the whole using appropriate language including halves or fourths. **Clarifications:** *Clarification 1:* This benchmark does not require writing the equal sized parts as a fraction with a numerator and denominator.
MA.1.GR.1.1:	Identify, compare and sort two- and three-dimensional figures based on their defining attributes. Figures are limited to circles, semi-circles, triangles, rectangles, squares, trapezoids, hexagons, spheres, cubes, rectangular prisms, cones and cylinders. **Clarifications:** *Clarification 1:* Instruction focuses on the defining attributes of a figure: whether it is closed or not; number of vertices, sides, edges or faces; and if it contains straight, curved or equal length sides or edges. *Clarification 2:* Instruction includes figures given in a variety of sizes, orientations and non-examples that lack one or more defining attributes. *Clarification 3:* Within this benchmark, the expectation is not to sort a combination of two- and three-dimensional figures at the same time or to define the attributes of trapezoids. *Clarification 4:* Instruction includes using formal and informal language to describe the defining attributes of figures when comparing and sorting.
MA.1.GR.1.2:	Sketch two-dimensional figures when given defining attributes. Figures are limited to triangles, rectangles, squares and hexagons.
	Compose and decompose two- and three-dimensional figures. Figures are limited to semi-circles, triangles, rectangles, squares, trapezoids, hexagons, cubes, rectangular prisms, cones and cylinders. **Clarifications:**

MA.1.GR.1.3:	*Clarification 1:* Instruction focuses on the understanding of spatial relationships relating to part-whole, and on the connection to breaking apart numbers and putting them back together. *Clarification 2:* Composite figures are composed without gaps or overlaps. *Clarification 3:* Within this benchmark, it is not the expectation to compose two- and three- dimensional figures at the same time.
MA.1.GR.1.4:	Given a real-world object, identify parts that are modeled by two- and three-dimensional figures. Figures are limited to semi-circles, triangles, rectangles, squares and hexagons, spheres, cubes, rectangular prisms, cones and cylinders.
MA.1.M.1.1:	Estimate the length of an object to the nearest inch. Measure the length of an object to the nearest inch or centimeter. **Clarifications:** *Clarification 1:* Instruction emphasizes measuring from the zero point of the ruler. The markings on the ruler indicate the unit of length by marking equal distances with no gaps or overlaps. *Clarification 2:* When estimating length, the expectation is to give a reasonable number of inches for the length of a given object.
MA.1.M.1.2:	Compare and order the length of up to three objects using direct and indirect comparison. **Clarifications:** *Clarification 1:* When directly comparing objects, the objects can be placed side by side or they can be separately measured in the same units and the measurements can be compared. *Clarification 2:* Two objects can be compared indirectly by directly comparing them to a third object.
MA.1.M.2.1:	Using analog and digital clocks, tell and write time in hours and half-hours. **Clarifications:** *Clarification 1:* Within this benchmark, the expectation is not to understand military time or to use a.m. or p.m. *Clarification 2:* Instruction includes the connection to partitioning circles into halves and to semi-circles.
MA.1.M.2.2:	Identify pennies, nickels, dimes and quarters, and express their values using the ¢ symbol. State how many of each coin equal a dollar. **Clarifications:** *Clarification 1:* Instruction includes the recognition of both sides of a coin. *Clarification 2:* Within this benchmark, the expectation is not to use decimal values.
MA.1.M.2.3:	Find the value of combinations of pennies, nickels and dimes up to one dollar, and the value of combinations of one, five and ten dollar bills up to $100. Use the ¢ and $ symbols appropriately. **Clarifications:** *Clarification 1:* Instruction includes the identification of a one, five and ten-dollar bill and the computation of the value of combinations of pennies, nickels and dimes or one, five and ten dollar bills. *Clarification 2:* Instruction focuses on the connection to place value and skip counting. *Clarification 3:* Within this benchmark, the expectation is not to use decimal values or to find the value of a combination of coins and dollars.
MA.1.NSO.1.1:	Starting at a given number, count forward and backwards within 120 by ones. Skip count by 2s to 20 and by 5s to 100. **Clarifications:** *Clarification 1:* Instruction focuses on the connection to addition as "counting on" and subtraction as "counting back". *Clarification 2:*Instruction also focuses on the recognition of patterns within skip counting which helps build a foundation for multiplication in later grades. *Clarification 3:* Instruction includes recognizing counting sequences using visual charts, such as a 120 chart, to emphasize base 10 place value.
MA.1.NSO.1.2:	Read numbers from 0 to 100 written in standard form, expanded form and word form. Write numbers from 0 to 100 using standard form and expanded form. **Clarifications:** The number seventy-five written in standard form is 75 and in expanded form is 70 + 5.
MA.1.NSO.1.3:	Compose and decompose two-digit numbers in multiple ways using tens and ones. Demonstrate each composition or decomposition with objects, drawings and expressions or equations.
MA.1.NSO.1.4:	Plot, order and compare whole numbers up to 100. **Clarifications:** *Clarification 1:* When comparing numbers, instruction includes using a number line and using place values of the tens and ones digits. *Clarification 2:* Within this benchmark, the expectation is to use terms (e.g., less than, greater than, between or equal to) and symbols (<, > or =).
MA.1.NSO.2.1:	Recall addition facts with sums to 10 and related subtraction facts with automaticity.
MA.1.NSO.2.2:	Add two whole numbers with sums from 0 to 20, and subtract using related facts with procedural reliability. **Clarifications:** *Clarification 1:* Instruction focuses on helping a student choose a method they can use reliably. *Clarification 2:* Instruction includes situations involving adding to, putting together, comparing and taking from.
MA.1.NSO.2.3:	Identify the number that is one more, one less, ten more and ten less than a given two-digit number.
MA.1.NSO.2.4:	Explore the addition of a two-digit number and a one-digit number with sums to 100. **Clarifications:** *Clarification 1:* Instruction focuses on combining ones and tens and composing new tens from ones, when needed. *Clarification 2:* Instruction includes the use of manipulatives, number lines, drawings or models.
MA.1.NSO.2.5:	Explore subtraction of a one-digit number from a two-digit number. **Clarifications:** *Clarification 1:* Instruction focuses on utilizing the number line as a tool for subtraction through "counting on" or "counting back". The process of

	counting on highlights subtraction as a missing addend problem. *Clarification 2:* Instruction includes the use of manipulatives, drawings or equations to decompose tens and regroup ones, when needed.
MA.K12.MTR.1.1:	Mathematicians who participate in effortful learning both individually and with others: • Analyze the problem in a way that makes sense given the task. • Ask questions that will help with solving the task. • Build perseverance by modifying methods as needed while solving a challenging task. • Stay engaged and maintain a positive mindset when working to solve tasks. • Help and support each other when attempting a new method or approach. **Clarifications:** Teachers who encourage students to participate actively in effortful learning both individually and with others: • Cultivate a community of growth mindset learners. • Foster perseverance in students by choosing tasks that are challenging. • Develop students' ability to analyze and problem solve. • Recognize students' effort when solving challenging problems.
MA.K12.MTR.2.1:	Demonstrate understanding by representing problems in multiple ways. Mathematicians who demonstrate understanding by representing problems in multiple ways: • Build understanding through modeling and using manipulatives. • Represent solutions to problems in multiple ways using objects, drawings, tables, graphs and equations. • Progress from modeling problems with objects and drawings to using algorithms and equations. • Express connections between concepts and representations. • Choose a representation based on the given context or purpose. **Clarifications:** Teachers who encourage students to demonstrate understanding by representing problems in multiple ways: • Help students make connections between concepts and representations. • Provide opportunities for students to use manipulatives when investigating concepts. • Guide students from concrete to pictorial to abstract representations as understanding progresses. • Show students that various representations can have different purposes and can be useful in different situations.
MA.K12.MTR.3.1:	Complete tasks with mathematical fluency. Mathematicians who complete tasks with mathematical fluency: • Select efficient and appropriate methods for solving problems within the given context. • Maintain flexibility and accuracy while performing procedures and mental calculations. • Complete tasks accurately and with confidence. • Adapt procedures to apply them to a new context. • Use feedback to improve efficiency when performing calculations. **Clarifications:** Teachers who encourage students to complete tasks with mathematical fluency: • Provide students with the flexibility to solve problems by selecting a procedure that allows them to solve efficiently and accurately. • Offer multiple opportunities for students to practice efficient and generalizable methods. • Provide opportunities for students to reflect on the method they used and determine if a more efficient method could have been used.
MA.K12.MTR.4.1:	Engage in discussions that reflect on the mathematical thinking of self and others. Mathematicians who engage in discussions that reflect on the mathematical thinking of self and others: • Communicate mathematical ideas, vocabulary and methods effectively. • Analyze the mathematical thinking of others. • Compare the efficiency of a method to those expressed by others. • Recognize errors and suggest how to correctly solve the task. • Justify results by explaining methods and processes. • Construct possible arguments based on evidence. **Clarifications:** Teachers who encourage students to engage in discussions that reflect on the mathematical thinking of self and others: • Establish a culture in which students ask questions of the teacher and their peers, and error is an opportunity for learning. • Create opportunities for students to discuss their thinking with peers. • Select, sequence and present student work to advance and deepen understanding of correct and increasingly efficient methods. • Develop students' ability to justify methods and compare their responses to the responses of their peers.
MA.K12.MTR.5.1:	Use patterns and structure to help understand and connect mathematical concepts. Mathematicians who use patterns and structure to help understand and connect mathematical concepts: • Focus on relevant details within a problem. • Create plans and procedures to logically order events, steps or ideas to solve problems. • Decompose a complex problem into manageable parts. • Relate previously learned concepts to new concepts. • Look for similarities among problems. • Connect solutions of problems to more complicated large-scale situations. **Clarifications:** Teachers who encourage students to use patterns and structure to help understand and connect mathematical concepts: • Help students recognize the patterns in the world around them and connect these patterns to mathematical concepts. • Support students to develop generalizations based on the similarities found among problems. • Provide opportunities for students to create plans and procedures to solve problems.

	• Develop students' ability to construct relationships between their current understanding and more sophisticated ways of thinking.
MA.K12.MTR.6.1:	Assess the reasonableness of solutions. Mathematicians who assess the reasonableness of solutions: • Estimate to discover possible solutions. • Use benchmark quantities to determine if a solution makes sense. • Check calculations when solving problems. • Verify possible solutions by explaining the methods used. • Evaluate results based on the given context. **Clarifications:** Teachers who encourage students to assess the reasonableness of solutions: • Have students estimate or predict solutions prior to solving. • Prompt students to continually ask, "Does this solution make sense? How do you know?" • Reinforce that students check their work as they progress within and after a task. • Strengthen students' ability to verify solutions through justifications.
MA.K12.MTR.7.1:	Apply mathematics to real-world contexts. Mathematicians who apply mathematics to real-world contexts: • Connect mathematical concepts to everyday experiences. • Use models and methods to understand, represent and solve problems. • Perform investigations to gather data or determine if a method is appropriate. • Redesign models and methods to improve accuracy or efficiency. **Clarifications:** Teachers who encourage students to apply mathematics to real-world contexts: • Provide opportunities for students to create models, both concrete and abstract, and perform investigations. • Challenge students to question the accuracy of their models and methods. • Support students as they validate conclusions by comparing them to the given situation. • Indicate how various concepts can be applied to other disciplines.
ELA.K12.EE.1.1:	Cite evidence to explain and justify reasoning. **Clarifications:** K-1 Students include textual evidence in their oral communication with guidance and support from adults. The evidence can consist of details from the text without naming the text. During 1st grade, students learn how to incorporate the evidence in their writing. 2-3 Students include relevant textual evidence in their written and oral communication. Students should name the text when they refer to it. In 3rd grade, students should use a combination of direct and indirect citations. 4-5 Students continue with previous skills and reference comments made by speakers and peers. Students cite texts that they've directly quoted, paraphrased, or used for information. When writing, students will use the form of citation dictated by the instructor or the style guide referenced by the instructor. 6-8 Students continue with previous skills and use a style guide to create a proper citation. 9-12 Students continue with previous skills and should be aware of existing style guides and the ways in which they differ.
ELA.K12.EE.2.1:	Read and comprehend grade-level complex texts proficiently. **Clarifications:** See Text Complexity for grade-level complexity bands and a text complexity rubric.
ELA.K12.EE.3.1:	Make inferences to support comprehension. **Clarifications:** Students will make inferences before the words infer or inference are introduced. Kindergarten students will answer questions like "Why is the girl smiling?" or make predictions about what will happen based on the title page. Students will use the terms and apply them in 2nd grade and beyond.
ELA.K12.EE.4.1:	Use appropriate collaborative techniques and active listening skills when engaging in discussions in a variety of situations. **Clarifications:** In kindergarten, students learn to listen to one another respectfully. In grades 1-2, students build upon these skills by justifying what they are thinking. For example: "I think _____ because _____." The collaborative conversations are becoming academic conversations. In grades 3-12, students engage in academic conversations discussing claims and justifying their reasoning, refining and applying skills. Students build on ideas, propel the conversation, and support claims and counterclaims with evidence.
ELA.K12.EE.5.1:	Use the accepted rules governing a specific format to create quality work. **Clarifications:** Students will incorporate skills learned into work products to produce quality work. For students to incorporate these skills appropriately, they must receive instruction. A 3rd grade student creating a poster board display must have instruction in how to effectively present information to do quality work.
ELA.K12.EE.6.1:	Use appropriate voice and tone when speaking or writing. **Clarifications:** In kindergarten and 1st grade, students learn the difference between formal and informal language. For example, the way we talk to our friends differs from the way we speak to adults. In 2nd grade and beyond, students practice appropriate social and academic language to discuss texts.
ELD.K12.ELL.MA.1:	English language learners communicate information, ideas and concepts necessary for academic success in the content area of Mathematics.
ELD.K12.ELL.SI.1:	English language learners communicate for social and instructional purposes within the school setting.

General Course Information and Notes

VERSION DESCRIPTION

The benchmarks in this course are mastery goals that students are expected to attain by the end of the year. To build mastery, students will continue to review and apply earlier grade-level benchmarks and expectations.

GENERAL NOTES

In grade 1, instructional time will emphasize four areas: (1) understanding the place value of tens and ones within two-digit whole numbers; (2) extending understanding of addition and subtraction and the relationship between them; (3) developing an understanding of measurement of physical objects, money and time and (4) categorizing, composing and decomposing geometric figures.

Curricular content for all subjects must integrate critical-thinking, problem-solving, and workforce-literacy skills; communication, reading, and writing skills; mathematics skills; collaboration skills; contextual and applied-learning skills; technology-literacy skills; information and media-literacy skills; and civic-engagement skills.

English Language Development ELD Standards Special Notes Section:
Teachers are required to provide listening, speaking, reading and writing instruction that allows English language learners (ELL) to communicate information, ideas and concepts for academic success in the content area of Mathematics. For the given level of English language proficiency and with visual, graphic, or interactive support, students will interact with grade level words, expressions, sentences and discourse to process or produce language necessary for academic success. The ELD standard should specify a relevant content area concept or topic of study chosen by curriculum developers and teachers which maximizes an ELL's need for communication and social skills. To access an ELL supporting document which delineates performance definitions and descriptors, please click on the following link: cpalms.org/uploads/docs/standards/eld/MA.pdf

GENERAL INFORMATION

Course Number: 5012030

Course Path: Section: Grades PreK to 12 Education Courses > **Grade Group:** Grades PreK to 5 Education Courses > **Subject:** Mathematics > **SubSubject:** General Mathematics >
Abbreviated Title: GRADE ONE MATH
Course Length: Year (Y)

Course Type: Core Academic Course
Course Status: Draft - Course Pending Approval

Educator Certifications

Prekindergarten/Primary Education (Age 3 through Grade 3)
Elementary Education (Elementary Grades 1-6)
Primary Education (K-3)
Mathematics (Elementary Grades 1-6)
Elementary Education (Grades K-6)

Grade Two Mathematics (#5012040) 2022 - And Beyond

Course Standards

Name	Description
MA.2.AR.1.1:	Solve one- and two-step addition and subtraction real-world problems. **Clarifications:** *Clarification 1:* Instruction includes understanding the context of the problem, as well as the quantities within the problem. *Clarification 2:* Problems include creating real-world situations based on an equation. *Clarification 3:* Addition and subtraction are limited to sums up to 100 and related differences. Refer to Situations Involving Operations with Numbers (Appendix A).
MA.2.AR.2.1:	Determine and explain whether equations involving addition and subtraction are true or false. **Clarifications:** *Clarification 1:* Instruction focuses on understanding of the equal sign. *Clarification 2:* Problem types are limited to an equation with three or four terms. The sum or difference can be on either side of the equal sign. *Clarification 3:* Addition and subtraction are limited to sums up to 100 and related differences.
MA.2.AR.2.2:	Determine the unknown whole number in an addition or subtraction equation, relating three or four whole numbers, with the unknown in any position. **Clarifications:** *Clarification 1:* Instruction extends the development of algebraic thinking skills where the symbolic representation of the unknown uses any symbol other than a letter. *Clarification 2:* Problems include having the unknown on either side of the equal sign. *Clarification 3:* Addition and subtraction are limited to sums up to 100 and related differences. Refer to Situations Involving Operations with Numbers (Appendix A).
MA.2.AR.3.1:	Represent an even number using two equal groups or two equal addends. Represent an odd number using two equal groups with one left over or two equal addends plus 1. **Clarifications:** *Clarification 1:* Instruction focuses on the connection of recognizing even and odd numbers using skip counting, arrays and patterns in the ones place. *Clarification 2:* Addends are limited to whole numbers less than or equal to 12.
MA.2.AR.3.2:	Use repeated addition to find the total number of objects in a collection of equal groups. Represent the total number of objects using rectangular arrays and equations. **Clarifications:** *Clarification 1:* Instruction includes making a connection between arrays and repeated addition, which builds a foundation for multiplication. *Clarification 2:* The total number of objects is limited to 25.
MA.2.DP.1.1:	Collect, categorize and represent data using tally marks, tables, pictographs or bar graphs. Use appropriate titles, labels and units. **Clarifications:** *Clarification 1:* Data displays can be represented both horizontally and vertically. Scales on graphs are limited to ones, fives or tens.
MA.2.DP.1.2:	Interpret data represented with tally marks, tables, pictographs or bar graphs including solving addition and subtraction problems. **Clarifications:** *Clarification 1:* Addition and subtraction problems are limited to whole numbers with sums within 100 and related differences. *Clarification 2:* Data displays can be represented both horizontally and vertically. Scales on graphs are limited to ones, fives or tens.
MA.2.FR.1.1:	Partition circles and rectangles into two, three or four equal-sized parts. Name the parts using appropriate language, and describe the whole as two halves, three thirds or four fourths. **Clarifications:** *Clarification 1:* Within this benchmark, the expectation is not to write the equal-sized parts as a fraction with a numerator and denominator. *Clarification 2:* Problems include mathematical and real-world context.
MA.2.FR.1.2:	Partition rectangles into two, three or four equal-sized parts in two different ways showing that equal-sized parts of the same whole may have different shapes.
MA.2.GR.1.1:	Identify and draw two-dimensional figures based on their defining attributes. Figures are limited to triangles, rectangles, squares, pentagons, hexagons and octagons. **Clarifications:** *Clarification 1:* Within this benchmark, the expectation includes the use of rulers and straight edges.
MA.2.GR.1.2:	Categorize two-dimensional figures based on the number and length of sides, number of vertices, whether they are closed or not and whether the edges are curved or straight. **Clarifications:** *Clarification 1:* Instruction focuses on using formal and informal language to describe defining attributes when categorizing.

MA.2.GR.1.3:	Identify line(s) of symmetry for a two-dimensional figure. **Clarifications:** *Clarification 1:* Instruction focuses on the connection between partitioning two-dimensional figures and symmetry. *Clarification 2:* Problem types include being given an image and determining whether a given line is a line of symmetry or not.
MA.2.GR.2.1:	Explore perimeter as an attribute of a figure by placing unit segments along the boundary without gaps or overlaps. Find perimeters of rectangles by counting unit segments. **Clarifications:** *Clarification 1:* Instruction emphasizes the conceptual understanding that perimeter is an attribute that can be measured for a two-dimensional figure. *Clarification 2:* Instruction includes real-world objects, such as picture frames or desktops.
MA.2.GR.2.2:	Find the perimeter of a polygon with whole-number side lengths. Polygons are limited to triangles, rectangles, squares and pentagons. **Clarifications:** *Clarification 1:* Instruction includes the connection to the associative and commutative properties of addition. Refer to Properties of Operations, Equality and Inequality (Appendix D). *Clarification 2:* Within this benchmark, the expectation is not to use a formula to find perimeter. *Clarification 3:* Instruction includes cases where the side lengths are given or measured to the nearest unit. *Clarification 4:* Perimeter cannot exceed 100 units and responses include the appropriate units.
MA.2.M.1.1:	Estimate and measure the length of an object to the nearest inch, foot, yard, centimeter or meter by selecting and using an appropriate tool. **Clarifications:** *Clarification 1:* Instruction includes seeing rulers and tape measures as number lines. *Clarification 2:* Instruction focuses on recognizing that when an object is measured in two different units, fewer of the larger units are required. When comparing measurements of the same object in different units, measurement conversions are not expected. *Clarification 3:* When estimating the size of an object, a comparison with an object of known size can be used.
MA.2.M.1.2:	Measure the lengths of two objects using the same unit and determine the difference between their measurements. **Clarifications:** *Clarification 1:* Within this benchmark, the expectation is to measure objects to the nearest inch, foot, yard, centimeter or meter.
MA.2.M.1.3:	Solve one- and two-step real-world measurement problems involving addition and subtraction of lengths given in the same units. **Clarifications:** *Clarification 1:* Addition and subtraction problems are limited to sums within 100 and related differences.
MA.2.M.2.1:	Using analog and digital clocks, tell and write time to the nearest five minutes using a.m. and p.m. appropriately. Express portions of an hour using the fractional terms half an hour, half past, quarter of an hour, quarter after and quarter til. **Clarifications:** *Clarification 1:* Instruction includes the connection to partitioning of circles and to the number line. *Clarification 2:* Within this benchmark, the expectation is not to understand military time
MA.2.M.2.2:	Solve one- and two-step addition and subtraction real-world problems involving either dollar bills within $100 or coins within 100¢ using $ and ¢ symbols appropriately. **Clarifications:** *Clarification 1:* Within this benchmark, the expectation is not to use decimal values. *Clarification 2:* Addition and subtraction problems are limited to sums within 100 and related differences. Refer to Situations Involving Operations with Numbers (Appendix A).
MA.2.NSO.1.1:	Read and write numbers from 0 to 1,000 using standard form, expanded form and word form.
MA.2.NSO.1.2:	Compose and decompose three-digit numbers in multiple ways using hundreds, tens and ones. Demonstrate each composition or decomposition with objects, drawings and expressions or equations.
MA.2.NSO.1.3:	Plot, order and compare whole numbers up to 1,000. **Clarifications:** *Clarification 1:* When comparing numbers, instruction includes using a number line and using place values of the hundreds, tens and ones digits. *Clarification 2:* Within this benchmark, the expectation is to use terms (e.g., less than, greater than, between or equal to) and symbols (<, > or =).
MA.2.NSO.1.4:	Round whole numbers from 0 to 100 to the nearest 10. **Clarifications:** *Clarification 1:* Within the benchmark, the expectation is to understand that rounding is a process that produces a number with a similar value that is less precise but easier to use.
MA.2.NSO.2.1:	Recall addition facts with sums to 20 and related subtraction facts with automaticity.
MA.2.NSO.2.2:	Identify the number that is ten more, ten less, one hundred more and one hundred less than a given three-digit number.
MA.2.NSO.2.3:	Add two whole numbers with sums up to 100 with procedural reliability. Subtract a whole number from a whole number, each no larger than 100, with procedural reliability. **Clarifications:** *Clarification 1:* Instruction focuses on helping a student choose a method they can use reliably.
MA.2.NSO.2.4:	Explore the addition of two whole numbers with sums up to 1,000. Explore the subtraction of a whole number from a whole number, each no larger than 1,000. **Clarifications:** *Clarification 1:* Instruction includes the use of manipulatives, number lines, drawings or properties of operations or place value. *Clarification 2:* Instruction focuses on composing and decomposing ones, tens and hundreds when needed.

MA.K12.MTR.1.1:

Mathematicians who participate in effortful learning both individually and with others:

- Analyze the problem in a way that makes sense given the task.
- Ask questions that will help with solving the task.
- Build perseverance by modifying methods as needed while solving a challenging task.
- Stay engaged and maintain a positive mindset when working to solve tasks.
- Help and support each other when attempting a new method or approach.

Clarifications:

Teachers who encourage students to participate actively in effortful learning both individually and with others:

- Cultivate a community of growth mindset learners.
- Foster perseverance in students by choosing tasks that are challenging.
- Develop students' ability to analyze and problem solve.
- Recognize students' effort when solving challenging problems.

MA.K12.MTR.2.1:

Demonstrate understanding by representing problems in multiple ways.

Mathematicians who demonstrate understanding by representing problems in multiple ways:

- Build understanding through modeling and using manipulatives.
- Represent solutions to problems in multiple ways using objects, drawings, tables, graphs and equations.
- Progress from modeling problems with objects and drawings to using algorithms and equations.
- Express connections between concepts and representations.
- Choose a representation based on the given context or purpose.

Clarifications:

Teachers who encourage students to demonstrate understanding by representing problems in multiple ways:

- Help students make connections between concepts and representations.
- Provide opportunities for students to use manipulatives when investigating concepts.
- Guide students from concrete to pictorial to abstract representations as understanding progresses.
- Show students that various representations can have different purposes and can be useful in different situations.

MA.K12.MTR.3.1:

Complete tasks with mathematical fluency.

Mathematicians who complete tasks with mathematical fluency:

- Select efficient and appropriate methods for solving problems within the given context.
- Maintain flexibility and accuracy while performing procedures and mental calculations.
- Complete tasks accurately and with confidence.
- Adapt procedures to apply them to a new context.
- Use feedback to improve efficiency when performing calculations.

Clarifications:

Teachers who encourage students to complete tasks with mathematical fluency:

- Provide students with the flexibility to solve problems by selecting a procedure that allows them to solve efficiently and accurately.
- Offer multiple opportunities for students to practice efficient and generalizable methods.
- Provide opportunities for students to reflect on the method they used and determine if a more efficient method could have been used.

MA.K12.MTR.4.1:

Engage in discussions that reflect on the mathematical thinking of self and others.

Mathematicians who engage in discussions that reflect on the mathematical thinking of self and others:

- Communicate mathematical ideas, vocabulary and methods effectively.
- Analyze the mathematical thinking of others.
- Compare the efficiency of a method to those expressed by others.
- Recognize errors and suggest how to correctly solve the task.
- Justify results by explaining methods and processes.
- Construct possible arguments based on evidence.

Clarifications:

Teachers who encourage students to engage in discussions that reflect on the mathematical thinking of self and others:

- Establish a culture in which students ask questions of the teacher and their peers, and error is an opportunity for learning.
- Create opportunities for students to discuss their thinking with peers.
- Select, sequence and present student work to advance and deepen understanding of correct and increasingly efficient methods.
- Develop students' ability to justify methods and compare their responses to the responses of their peers.

MA.K12.MTR.5.1:

Use patterns and structure to help understand and connect mathematical concepts.

Mathematicians who use patterns and structure to help understand and connect mathematical concepts:

- Focus on relevant details within a problem.
- Create plans and procedures to logically order events, steps or ideas to solve problems.
- Decompose a complex problem into manageable parts.
- Relate previously learned concepts to new concepts.
- Look for similarities among problems.
- Connect solutions of problems to more complicated large-scale situations.

Clarifications:

Teachers who encourage students to use patterns and structure to help understand and connect mathematical concepts:

- Help students recognize the patterns in the world around them and connect these patterns to mathematical concepts.
- Support students to develop generalizations based on the similarities found among problems.
- Provide opportunities for students to create plans and procedures to solve problems.
- Develop students' ability to construct relationships between their current understanding and more sophisticated ways of thinking.

MA.K12.MTR.6.1:	Assess the reasonableness of solutions. Mathematicians who assess the reasonableness of solutions: • Estimate to discover possible solutions. • Use benchmark quantities to determine if a solution makes sense. • Check calculations when solving problems. • Verify possible solutions by explaining the methods used. • Evaluate results based on the given context. **Clarifications:** Teachers who encourage students to assess the reasonableness of solutions: • Have students estimate or predict solutions prior to solving. • Prompt students to continually ask, "Does this solution make sense? How do you know?" • Reinforce that students check their work as they progress within and after a task. • Strengthen students' ability to verify solutions through justifications.
MA.K12.MTR.7.1:	Apply mathematics to real-world contexts. Mathematicians who apply mathematics to real-world contexts: • Connect mathematical concepts to everyday experiences. • Use models and methods to understand, represent and solve problems. • Perform investigations to gather data or determine if a method is appropriate. • Redesign models and methods to improve accuracy or efficiency. **Clarifications:** Teachers who encourage students to apply mathematics to real-world contexts: • Provide opportunities for students to create models, both concrete and abstract, and perform investigations. • Challenge students to question the accuracy of their models and methods. • Support students as they validate conclusions by comparing them to the given situation. • Indicate how various concepts can be applied to other disciplines.
ELA.K12.EE.1.1:	Cite evidence to explain and justify reasoning. **Clarifications:** K-1 Students include textual evidence in their oral communication with guidance and support from adults. The evidence can consist of details from the text without naming the text. During 1st grade, students learn how to incorporate the evidence in their writing. 2-3 Students include relevant textual evidence in their written and oral communication. Students should name the text when they refer to it. In 3rd grade, students should use a combination of direct and indirect citations. 4-5 Students continue with previous skills and reference comments made by speakers and peers. Students cite texts that they've directly quoted, paraphrased, or used for information. When writing, students will use the form of citation dictated by the instructor or the style guide referenced by the instructor. 6-8 Students continue with previous skills and use a style guide to create a proper citation. 9-12 Students continue with previous skills and should be aware of existing style guides and the ways in which they differ.
ELA.K12.EE.2.1:	Read and comprehend grade-level complex texts proficiently. **Clarifications:** See Text Complexity for grade-level complexity bands and a text complexity rubric.
ELA.K12.EE.3.1:	Make inferences to support comprehension. **Clarifications:** Students will make inferences before the words infer or inference are introduced. Kindergarten students will answer questions like "Why is the girl smiling?" or make predictions about what will happen based on the title page. Students will use the terms and apply them in 2nd grade and beyond.
ELA.K12.EE.4.1:	Use appropriate collaborative techniques and active listening skills when engaging in discussions in a variety of situations. **Clarifications:** In kindergarten, students learn to listen to one another respectfully. In grades 1-2, students build upon these skills by justifying what they are thinking. For example: "I think _____ because _____." The collaborative conversations are becoming academic conversations. In grades 3-12, students engage in academic conversations discussing claims and justifying their reasoning, refining and applying skills. Students build on ideas, propel the conversation, and support claims and counterclaims with evidence.
ELA.K12.EE.5.1:	Use the accepted rules governing a specific format to create quality work. **Clarifications:** Students will incorporate skills learned into work products to produce quality work. For students to incorporate these skills appropriately, they must receive instruction. A 3rd grade student creating a poster board display must have instruction in how to effectively present information to do quality work.
ELA.K12.EE.6.1:	Use appropriate voice and tone when speaking or writing. **Clarifications:** In kindergarten and 1st grade, students learn the difference between formal and informal language. For example, the way we talk to our friends differs from the way we speak to adults. In 2nd grade and beyond, students practice appropriate social and academic language to discuss texts.
ELD.K12.ELL.MA.1:	English language learners communicate information, ideas and concepts necessary for academic success in the content area of Mathematics.
ELD.K12.ELL.SI.1:	English language learners communicate for social and instructional purposes within the school setting.

General Course Information and Notes

VERSION DESCRIPTION

The benchmarks in this course are mastery goals that students are expected to attain by the end of the year. To build mastery, students will continue to review and apply earlier grade-level benchmarks and expectations.

GENERAL NOTES

In grade 2, instructional time will emphasize four areas: (1) extending understanding of place value in three-digit numbers; (2) building fluency and algebraic reasoning with addition and subtraction; (3) extending understanding of measurement of objects, time and the perimeter of geometric figures and (4) developing spatial reasoning with number representations and two-dimensional figures.

Curricular content for all subjects must integrate critical-thinking, problem-solving, and workforce-literacy skills; communication, reading, and writing skills; mathematics skills; collaboration skills; contextual and applied-learning skills; technology-literacy skills; information and media-literacy skills; and civic-engagement skills.

English Language Development ELD Standards Special Notes Section:
Teachers are required to provide listening, speaking, reading and writing instruction that allows English language learners (ELL) to communicate information, ideas and concepts for academic success in the content area of Mathematics. For the given level of English language proficiency and with visual, graphic, or interactive support, students will interact with grade level words, expressions, sentences and discourse to process or produce language necessary for academic success. The ELD standard should specify a relevant content area concept or topic of study chosen by curriculum developers and teachers which maximizes an ELL's need for communication and social skills. To access an ELL supporting document which delineates performance definitions and descriptors, please click on the following link:
cpalms.org/uploads/docs/standards/eld/MA.pdf

GENERAL INFORMATION

Course Number: 5012040

Course Path: Section: Grades PreK to 12 Education Courses > **Grade Group:** Grades PreK to 5 Education Courses > **Subject:** Mathematics > **SubSubject:** General Mathematics >
Abbreviated Title: GRADE TWO MATH
Course Length: Year (Y)

Course Type: Core Academic Course

Course Level: 2

Course Status: Draft - Course Pending Approval

Educator Certifications

Prekindergarten/Primary Education (Age 3 through Grade 3)
Elementary Education (Elementary Grades 1-6)
Primary Education (K-3)
Mathematics (Elementary Grades 1-6)
Elementary Education (Grades K-6)

Grade Three Mathematics (#5012050) 2022 - And Beyond

Course Standards

Name	Description
MA.3.AR.1.1:	Apply the distributive property to multiply a one-digit number and two-digit number. Apply properties of multiplication to find a product of one-digit whole numbers. **Clarifications:** *Clarification 1:* Within this benchmark, the expectation is to apply the associative and commutative properties of multiplication, the distributive property and name the properties. Refer to K-12 Glossary (Appendix C). *Clarification 2:* Within the benchmark, the expectation is to utilize parentheses. *Clarification 3:* Multiplication for products of three or more numbers is limited to factors within 12. Refer to Properties of Operations, Equality and Inequality (Appendix D).
MA.3.AR.1.2:	Solve one- and two-step real-world problems involving any of four operations with whole numbers. **Clarifications:** *Clarification 1:* Instruction includes understanding the context of the problem, as well as the quantities within the problem. *Clarification 2:* Multiplication is limited to factors within 12 and related division facts. Refer to Situations Involving Operations with Numbers (Appendix A).
MA.3.AR.2.1:	Restate a division problem as a missing factor problem using the relationship between multiplication and division. **Clarifications:** *Clarification 1:* Multiplication is limited to factors within 12 and related division facts. *Clarification 2:* Within this benchmark, the symbolic representation of the missing factor uses any symbol or a letter.
MA.3.AR.2.2:	Determine and explain whether an equation involving multiplication or division is true or false. **Clarifications:** *Clarification 1:* Instruction extends the understanding of the meaning of the equal sign to multiplication and division. *Clarification 2:* Problem types are limited to an equation with three or four terms. The product or quotient can be on either side of the equal sign. *Clarification 3:* Multiplication is limited to factors within 12 and related division facts.
MA.3.AR.2.3:	Determine the unknown whole number in a multiplication or division equation, relating three whole numbers, with the unknown in any position. **Clarifications:** *Clarification 1:* Instruction extends the development of algebraic thinking skills where the symbolic representation of the unknown uses any symbol or a letter. *Clarification 2:* Problems include the unknown on either side of the equal sign. *Clarification 3:* Multiplication is limited to factors within 12 and related division facts. Refer to Situations Involving Operations with Numbers (Appendix A).
MA.3.AR.3.1:	Determine and explain whether a whole number from 1 to 1,000 is even or odd. **Clarifications:** *Clarification 1:* Instruction includes determining and explaining using place value and recognizing patterns.
MA.3.AR.3.2:	Determine whether a whole number from 1 to 144 is a multiple of a given one-digit number. **Clarifications:** *Clarification 1:* Instruction includes determining if a number is a multiple of a given number by using multiplication or division.
MA.3.AR.3.3:	Identify, create and extend numerical patterns. **Clarifications:** *Clarification 1:* The expectation is to use ordinal numbers (1st, 2nd, 3rd, …) to describe the position of a number within a sequence. *Clarification 2:* Problem types include patterns involving addition, subtraction, multiplication or division of whole numbers.
MA.3.DP.1.1:	Collect and represent numerical and categorical data with whole-number values using tables, scaled pictographs, scaled bar graphs or line plots. Use appropriate titles, labels and units. **Clarifications:** *Clarification 1:* Within this benchmark, the expectation is to complete a representation or construct a representation from a data set. *Clarification 2:* Instruction includes the connection between multiplication and the number of data points represented by a bar in scaled bar graph or a scaled column in a pictograph. *Clarification 3:* Data displays are represented both horizontally and vertically.
MA.3.DP.1.2:	Interpret data with whole-number values represented with tables, scaled pictographs, circle graphs, scaled bar graphs or line plots by solving one- and two-step problems. **Clarifications:** *Clarification 1:* Problems include the use of data in informal comparisons between two data sets in the same units. *Clarification 2:* Data displays can be represented both horizontally and vertically.

	Clarification 3: Circle graphs are limited to showing the total values in each category.
MA.3.FR.1.2:	Represent and interpret fractions, including fractions greater than one, in the form of $\frac{m}{n}$ as multiples of a unit fraction. **Clarifications:** *Clarification 1:* Instruction emphasizes conceptual understanding through the use of manipulatives or visual models, including circle graphs, to represent fractions. *Clarification 2:* Denominators are limited to 2, 3, 4, 5, 6, 8, 10 and 12.
MA.3.FR.1.3:	Read and write fractions, including fractions greater than one, using standard form, numeral-word form and word form. **Clarifications:** *Clarification 1:* Instruction focuses on making connections to reading and writing numbers to develop the understanding that fractions are numbers and to support algebraic thinking in later grades. *Clarification 2:* Denominators are limited to 2, 3, 4, 5, 6, 8, 10 and 12.
MA.3.FR.2.1:	Plot, order and compare fractional numbers with the same numerator or the same denominator. **Clarifications:** *Clarification 1:* Instruction includes making connections between using a ruler and plotting and ordering fractions on a number line. *Clarification 2:* When comparing fractions, instruction includes an appropriately scaled number line and using reasoning about their size. *Clarification 3:* Fractions include fractions greater than one, including mixed numbers, with denominators limited to 2, 3, 4, 5, 6, 8, 10 and 12.
MA.3.FR.2.2:	Identify equivalent fractions and explain why they are equivalent. **Clarifications:** *Clarification 1:* Instruction includes identifying equivalent fractions and explaining why they are equivalent using manipulatives, drawings, and number lines. *Clarification 2:* Within this benchmark, the expectation is not to generate equivalent fractions. *Clarification 3:* Fractions are limited to fractions less than or equal to one with denominators of 2, 3, 4, 5, 6, 8, 10 and 12. Number lines must be given and scaled appropriately.
MA.3.GR.1.1:	Describe and draw points, lines, line segments, rays, intersecting lines, perpendicular lines and parallel lines. Identify these in two-dimensional figures. **Clarifications:** *Clarification 1:* Instruction includes mathematical and real-world context for identifying points, lines, line segments, rays, intersecting lines, perpendicular lines and parallel lines. *Clarification 2:* When working with perpendicular lines, right angles can be called square angles or square corners.
MA.3.GR.1.2:	Identify and draw quadrilaterals based on their defining attributes. Quadrilaterals include parallelograms, rhombi, rectangles, squares and trapezoids. **Clarifications:** *Clarification 1:* Instruction includes a variety of quadrilaterals and a variety of non-examples that lack one or more defining attributes when identifying quadrilaterals. *Clarification 2:* Quadrilaterals will be filled, outlined or both when identifying. *Clarification 3:* Drawing representations must be reasonably accurate.
MA.3.GR.1.3:	Draw line(s) of symmetry in a two-dimensional figure and identify line-symmetric two-dimensional figures. **Clarifications:** *Clarification 1:* Instruction develops the understanding that there could be no line of symmetry, exactly one line of symmetry or more than one line of symmetry. *Clarification 2:* Instruction includes folding paper along a line of symmetry so that both halves match exactly to confirm line-symmetric figures.
MA.3.GR.2.1:	Explore area as an attribute of a two-dimensional figure by covering the figure with unit squares without gaps or overlaps. Find areas of rectangles by counting unit squares. **Clarifications:** *Clarification 1:* Instruction emphasizes the conceptual understanding that area is an attribute that can be measured for a two-dimensional figure. The measurement unit for area is the area of a unit square, which is a square with side length of 1 unit. *Clarification 2:* Two-dimensional figures cannot exceed 12 units by 12 units and responses include the appropriate units in word form (e.g., square centimeter or sq.cm.).
MA.3.GR.2.2:	Find the area of a rectangle with whole-number side lengths using a visual model and a multiplication formula. **Clarifications:** *Clarification 1:* Instruction includes covering the figure with unit squares, a rectangular array or applying a formula. *Clarification 2:* Two-dimensional figures cannot exceed 12 units by 12 units and responses include the appropriate units in word form.
MA.3.GR.2.3:	Solve mathematical and real-world problems involving the perimeter and area of rectangles with whole-number side lengths using a visual model and a formula. **Clarifications:** *Clarification 1:* Within this benchmark, the expectation is not to find unknown side lengths. *Clarification 2:* Two-dimensional figures cannot exceed 12 units by 12 units and responses include the appropriate units in word form.
MA.3.GR.2.4:	Solve mathematical and real-world problems involving the perimeter and area of composite figures composed of non-overlapping rectangles with whole-number side lengths. **Clarifications:** *Clarification 1:* Composite figures must be composed of non-overlapping rectangles. *Clarification 2:* Each rectangle within the composite figure cannot exceed 12 units by 12 units and responses include the appropriate units in word form.

MA.3.M.1.1:	Select and use appropriate tools to measure the length of an object, the volume of liquid within a beaker and temperature. **Clarifications:** *Clarification 1:* Instruction focuses on identifying measurement on a linear scale, making the connection to the number line. *Clarification 2:* When measuring the length, limited to the nearest centimeter and half or quarter inch. *Clarification 3:* When measuring the temperature, limited to the nearest degree. *Clarification 4:* When measuring the volume of liquid, limited to nearest milliliter and half or quarter cup.
MA.3.M.1.2:	Solve real-world problems involving any of the four operations with whole-number lengths, masses, weights, temperatures or liquid volumes. **Clarifications:** *Clarification 1:* Within this benchmark, it is the expectation that responses include appropriate units. *Clarification 2:* Problem types are not expected to include measurement conversions. *Clarification 3:* Instruction includes the comparison of attributes measured in the same units. *Clarification 4:* Units are limited to yards, feet, inches; meters, centimeters; pounds, ounces; kilograms, grams; degrees Fahrenheit, degrees Celsius; gallons, quarts, pints, cups; and liters, milliliters.
MA.3.M.2.1:	Using analog and digital clocks tell and write time to the nearest minute using a.m. and p.m. appropriately. **Clarifications:** *Clarification 1:* Within this benchmark, the expectation is not to understand military time.
MA.3.M.2.2:	Solve one- and two-step real-world problems involving elapsed time. **Clarifications:** *Clarification 1:* Within this benchmark, the expectation is not to include crossing between a.m. and p.m.
MA.3.NSO.1.1:	Read and write numbers from 0 to 10,000 using standard form, expanded form and word form.
MA.3.NSO.1.2:	Compose and decompose four-digit numbers in multiple ways using thousands, hundreds, tens and ones. Demonstrate each composition or decomposition using objects, drawings and expressions or equations.
MA.3.NSO.1.3:	Plot, order and compare whole numbers up to 10,000. **Clarifications:** *Clarification 1:* When comparing numbers, instruction includes using an appropriately scaled number line and using place values of the thousands, hundreds, tens and ones digits. *Clarification 2:* Number lines, scaled by 50s, 100s or 1,000s, must be provided and can be a representation of any range of numbers. *Clarification 3:* Within this benchmark, the expectation is to use symbols (<, > or =).
MA.3.NSO.1.4:	Round whole numbers from 0 to 1,000 to the nearest 10 or 100.
MA.3.NSO.2.1:	Add and subtract multi-digit whole numbers including using a standard algorithm with procedural fluency.
MA.3.NSO.2.2:	Explore multiplication of two whole numbers with products from 0 to 144, and related division facts. **Clarifications:** *Clarification 1:* Instruction includes equal groups, arrays, area models and equations. *Clarification 2:* Within the benchmark, it is the expectation that one problem can be represented in multiple ways and understanding how the different representations are related to each other. *Clarification 3:* Factors and divisors are limited to up to 12.
MA.3.NSO.2.3:	Multiply a one-digit whole number by a multiple of 10, up to 90, or a multiple of 100, up to 900, with procedural reliability. **Clarifications:** *Clarification 1:* When multiplying one-digit numbers by multiples of 10 or 100, instruction focuses on methods that are based on place value.
MA.3.NSO.2.4:	Multiply two whole numbers from 0 to 12 and divide using related facts with procedural reliability. **Clarifications:** *Clarification 1:* Instruction focuses on helping a student choose a method they can use reliably.
MA.K12.MTR.1.1:	Mathematicians who participate in effortful learning both individually and with others: • Analyze the problem in a way that makes sense given the task. • Ask questions that will help with solving the task. • Build perseverance by modifying methods as needed while solving a challenging task. • Stay engaged and maintain a positive mindset when working to solve tasks. • Help and support each other when attempting a new method or approach. **Clarifications:** Teachers who encourage students to participate actively in effortful learning both individually and with others: • Cultivate a community of growth mindset learners. • Foster perseverance in students by choosing tasks that are challenging. • Develop students' ability to analyze and problem solve. • Recognize students' effort when solving challenging problems.
MA.K12.MTR.2.1:	Demonstrate understanding by representing problems in multiple ways. Mathematicians who demonstrate understanding by representing problems in multiple ways: • Build understanding through modeling and using manipulatives. • Represent solutions to problems in multiple ways using objects, drawings, tables, graphs and equations. • Progress from modeling problems with objects and drawings to using algorithms and equations. • Express connections between concepts and representations. • Choose a representation based on the given context or purpose.

Clarifications:
Teachers who encourage students to demonstrate understanding by representing problems in multiple ways:

- Help students make connections between concepts and representations.
- Provide opportunities for students to use manipulatives when investigating concepts.
- Guide students from concrete to pictorial to abstract representations as understanding progresses.
- Show students that various representations can have different purposes and can be useful in different situations.

MA.K12.MTR.3.1:

Complete tasks with mathematical fluency.
Mathematicians who complete tasks with mathematical fluency:

- Select efficient and appropriate methods for solving problems within the given context.
- Maintain flexibility and accuracy while performing procedures and mental calculations.
- Complete tasks accurately and with confidence.
- Adapt procedures to apply them to a new context.
- Use feedback to improve efficiency when performing calculations.

Clarifications:
Teachers who encourage students to complete tasks with mathematical fluency:

- Provide students with the flexibility to solve problems by selecting a procedure that allows them to solve efficiently and accurately.
- Offer multiple opportunities for students to practice efficient and generalizable methods.
- Provide opportunities for students to reflect on the method they used and determine if a more efficient method could have been used.

MA.K12.MTR.4.1:

Engage in discussions that reflect on the mathematical thinking of self and others.
Mathematicians who engage in discussions that reflect on the mathematical thinking of self and others:

- Communicate mathematical ideas, vocabulary and methods effectively.
- Analyze the mathematical thinking of others.
- Compare the efficiency of a method to those expressed by others.
- Recognize errors and suggest how to correctly solve the task.
- Justify results by explaining methods and processes.
- Construct possible arguments based on evidence.

Clarifications:
Teachers who encourage students to engage in discussions that reflect on the mathematical thinking of self and others:

- Establish a culture in which students ask questions of the teacher and their peers, and error is an opportunity for learning.
- Create opportunities for students to discuss their thinking with peers.
- Select, sequence and present student work to advance and deepen understanding of correct and increasingly efficient methods.
- Develop students' ability to justify methods and compare their responses to the responses of their peers.

MA.K12.MTR.5.1:

Use patterns and structure to help understand and connect mathematical concepts.
Mathematicians who use patterns and structure to help understand and connect mathematical concepts:

- Focus on relevant details within a problem.
- Create plans and procedures to logically order events, steps or ideas to solve problems.
- Decompose a complex problem into manageable parts.
- Relate previously learned concepts to new concepts.
- Look for similarities among problems.
- Connect solutions of problems to more complicated large-scale situations.

Clarifications:
Teachers who encourage students to use patterns and structure to help understand and connect mathematical concepts:

- Help students recognize the patterns in the world around them and connect these patterns to mathematical concepts.
- Support students to develop generalizations based on the similarities found among problems.
- Provide opportunities for students to create plans and procedures to solve problems.
- Develop students' ability to construct relationships between their current understanding and more sophisticated ways of thinking.

MA.K12.MTR.6.1:

Assess the reasonableness of solutions.
Mathematicians who assess the reasonableness of solutions:

- Estimate to discover possible solutions.
- Use benchmark quantities to determine if a solution makes sense.
- Check calculations when solving problems.
- Verify possible solutions by explaining the methods used.
- Evaluate results based on the given context.

Clarifications:
Teachers who encourage students to assess the reasonableness of solutions:

- Have students estimate or predict solutions prior to solving.
- Prompt students to continually ask, "Does this solution make sense? How do you know?"
- Reinforce that students check their work as they progress within and after a task.
- Strengthen students' ability to verify solutions through justifications.

MA.K12.MTR.7.1:

Apply mathematics to real-world contexts.
Mathematicians who apply mathematics to real-world contexts:

- Connect mathematical concepts to everyday experiences.
- Use models and methods to understand, represent and solve problems.
- Perform investigations to gather data or determine if a method is appropriate. • Redesign models and methods to improve accuracy or efficiency.

Clarifications:

	Teachers who encourage students to apply mathematics to real-world contexts: • Provide opportunities for students to create models, both concrete and abstract, and perform investigations. • Challenge students to question the accuracy of their models and methods. • Support students as they validate conclusions by comparing them to the given situation. • Indicate how various concepts can be applied to other disciplines.
ELA.K12.EE.1.1:	Cite evidence to explain and justify reasoning. **Clarifications:** K-1 Students include textual evidence in their oral communication with guidance and support from adults. The evidence can consist of details from the text without naming the text. During 1st grade, students learn how to incorporate the evidence in their writing. 2-3 Students include relevant textual evidence in their written and oral communication. Students should name the text when they refer to it. In 3rd grade, students should use a combination of direct and indirect citations. 4-5 Students continue with previous skills and reference comments made by speakers and peers. Students cite texts that they've directly quoted, paraphrased, or used for information. When writing, students will use the form of citation dictated by the instructor or the style guide referenced by the instructor. 6-8 Students continue with previous skills and use a style guide to create a proper citation. 9-12 Students continue with previous skills and should be aware of existing style guides and the ways in which they differ.
ELA.K12.EE.2.1:	Read and comprehend grade-level complex texts proficiently. **Clarifications:** See Text Complexity for grade-level complexity bands and a text complexity rubric.
ELA.K12.EE.3.1:	Make inferences to support comprehension. **Clarifications:** Students will make inferences before the words infer or inference are introduced. Kindergarten students will answer questions like "Why is the girl smiling?" or make predictions about what will happen based on the title page. Students will use the terms and apply them in 2nd grade and beyond.
ELA.K12.EE.4.1:	Use appropriate collaborative techniques and active listening skills when engaging in discussions in a variety of situations. **Clarifications:** In kindergarten, students learn to listen to one another respectfully. In grades 1-2, students build upon these skills by justifying what they are thinking. For example: "I think _____ because _____." The collaborative conversations are becoming academic conversations. In grades 3-12, students engage in academic conversations discussing claims and justifying their reasoning, refining and applying skills. Students build on ideas, propel the conversation, and support claims and counterclaims with evidence.
ELA.K12.EE.5.1:	Use the accepted rules governing a specific format to create quality work. **Clarifications:** Students will incorporate skills learned into work products to produce quality work. For students to incorporate these skills appropriately, they must receive instruction. A 3rd grade student creating a poster board display must have instruction in how to effectively present information to do quality work.
ELA.K12.EE.6.1:	Use appropriate voice and tone when speaking or writing. **Clarifications:** In kindergarten and 1st grade, students learn the difference between formal and informal language. For example, the way we talk to our friends differs from the way we speak to adults. In 2nd grade and beyond, students practice appropriate social and academic language to discuss texts.
ELD.K12.ELL.MA.1:	English language learners communicate information, ideas and concepts necessary for academic success in the content area of Mathematics.
ELD.K12.ELL.SI.1:	English language learners communicate for social and instructional purposes within the school setting.

General Course Information and Notes

VERSION DESCRIPTION

The benchmarks in this course are mastery goals that students are expected to attain by the end of the year. To build mastery, students will continue to review and apply earlier grade-level benchmarks and expectations.

GENERAL NOTES

In grade 3, instructional time will emphasize four areas: (1) adding and subtracting multi-digit whole numbers, including using a standard algorithm; (2) building an understanding of multiplication and division, the relationship between them and the connection to area of rectangles; (3) developing an understanding of fractions and (4) extending geometric reasoning to lines and attributes of quadrilaterals.

Curricular content for all subjects must integrate critical-thinking, problem-solving, and workforce-literacy skills; communication, reading, and writing skills; mathematics skills; collaboration skills; contextual and applied-learning skills; technology-literacy skills; information and media-literacy skills; and civic-engagement skills.

English Language Development ELD Standards Special Notes Section:
Teachers are required to provide listening, speaking, reading and writing instruction that allows English language learners (ELL) to communicate information, ideas and concepts for academic success in the content area of Mathematics. For the given level of English language proficiency and with visual, graphic, or interactive support, students will interact with grade level words, expressions, sentences and discourse to process or produce language necessary for academic success. The ELD standard should

specify a relevant content area concept or topic of study chosen by curriculum developers and teachers which maximizes an ELL's need for communication and social skills. To access an ELL supporting document which delineates performance definitions and descriptors, please click on the following link: cpalms.org/uploads/docs/standards/eld/MA.pdf

GENERAL INFORMATION

Course Number: 5012050

Course Path: Section: Grades PreK to 12 Education Courses > **Grade Group:** Grades PreK to 5 Education Courses > **Subject:** Mathematics > **SubSubject:** General Mathematics >

Abbreviated Title: GRADE THREE MATH

Course Length: Year (Y)

Course Type: Core Academic Course

Course Level: 2

Course Status: Draft - Course Pending Approval

Educator Certifications

Prekindergarten/Primary Education (Age 3 through Grade 3)
Elementary Education (Elementary Grades 1-6)
Primary Education (K-3)
Mathematics (Elementary Grades 1-6)
Elementary Education (Grades K-6)

Grade Four Mathematics (#5012060) 2022 - And Beyond

Course Standards

Name	Description
MA.4.AR.1.1:	Solve real-world problems involving multiplication and division of whole numbers including problems in which remainders must be interpreted within the context. **Clarifications:** *Clarification 1:* Problems involving multiplication include multiplicative comparisons. Refer to Situations Involving Operations with Numbers (Appendix A). *Clarification 2:* Depending on the context, the solution of a division problem with a remainder may be the whole number part of the quotient, the whole number part of the quotient with the remainder, the whole number part of the quotient plus 1, or the remainder. *Clarification 3:* Multiplication is limited to products of up to 3 digits by 2 digits. Division is limited to up to 4 digits divided by 1 digit.
MA.4.AR.1.2:	Solve real-world problems involving addition and subtraction of fractions with like denominators, including mixed numbers and fractions greater than one. **Clarifications:** *Clarification 1:* Problems include creating real-world situations based on an equation or representing a real-world problem with a visual model or equation. *Clarification 2:* Fractions within problems must reference the same whole. *Clarification 3:* Within this benchmark, the expectation is not to simplify or use lowest terms. *Clarification 4:* Denominators limited to 2, 3, 4, 5, 6, 8, 10, 12, 16 and 100.
MA.4.AR.1.3:	Solve real-world problems involving multiplication of a fraction by a whole number or a whole number by a fraction. **Clarifications:** *Clarification 1:* Problems include creating real-world situations based on an equation or representing a real-world problem with a visual model or equation. *Clarification 2:* Fractions within problems must reference the same whole. *Clarification 3:* Within this benchmark, the expectation is not to simplify or use lowest terms. *Clarification 4:* Fractions limited to fractions less than one with denominators of 2, 3, 4, 5, 6, 8, 10, 12, 16 and 100.
MA.4.AR.2.1:	Determine and explain whether an equation involving any of the four operations with whole numbers is true or false. **Clarifications:** *Clarification 1:* Multiplication is limited to whole number factors within 12 and related division facts.
MA.4.AR.2.2:	Given a mathematical or real-world context, write an equation involving multiplication or division to determine the unknown whole number with the unknown in any position. **Clarifications:** *Clarification 1:* Instruction extends the development of algebraic thinking skills where the symbolic representation of the unknown uses a letter. *Clarification 2:* Problems include the unknown on either side of the equal sign. *Clarification 3:* Multiplication is limited to factors within 12 and related division facts.
MA.4.AR.3.1:	Determine factor pairs for a whole number from 0 to 144. Determine whether a whole number from 0 to 144 is prime, composite or neither. **Clarifications:** *Clarification 1:* Instruction includes the connection to the relationship between multiplication and division and patterns with divisibility rules. *Clarification 2:* The numbers 0 and 1 are neither prime nor composite.
MA.4.AR.3.2:	Generate, describe and extend a numerical pattern that follows a given rule. **Clarifications:** *Clarification 1:* Instruction includes patterns within a mathematical or real-world context.
MA.4.DP.1.1:	Collect and represent numerical data, including fractional values, using tables, stem-and-leaf plots or line plots. **Clarifications:** *Clarification 1:* Denominators are limited to 2, 3, 4, 5, 6, 8, 10, 12, 16 and 100.
MA.4.DP.1.2:	Determine the mode, median or range to interpret numerical data including fractional values, represented with tables, stem-and-leaf plots or line plots. **Clarifications:** *Clarification 1:* Instruction includes interpreting data within a real-world context. *Clarification 2:* Instruction includes recognizing that data sets can have one mode, no mode or more than one mode. *Clarification 3:* Within this benchmark, data sets are limited to an odd number when calculating the median. *Clarification 4:* Denominators are limited to 2, 3, 4, 5, 6, 8, 10, 12, 16 and 100.
	Solve real-world problems involving numerical data. **Clarifications:**

MA.4.DP.1.3:	*Clarification 1:* Instruction includes using any of the four operations to solve problems. C *Clarification 2:* Data involving fractions with like denominators are limited to 2, 3, 4, 5, 6, 8, 10, 12, 16 and 100. Fractions can be greater than one. *Clarification 3:* Data involving decimals are limited to hundredths.
MA.4.FR.1.1:	Model and express a fraction, including mixed numbers and fractions greater than one, with the denominator 10 as an equivalent fraction with the denominator 100. **Clarifications:** *Clarification 1:* Instruction emphasizes conceptual understanding through the use of manipulatives, visual models, number lines or equations.
MA.4.FR.1.2:	Use decimal notation to represent fractions with denominators of 10 or 100, including mixed numbers and fractions greater than 1, and use fractional notation with denominators of 10 or 100 to represent decimals. **Clarifications:** *Clarification 1:* Instruction emphasizes conceptual understanding through the use of manipulatives visual models, number lines or equations. *Clarification 2:* Instruction includes the understanding that a decimal and fraction that are equivalent represent the same point on the number line and that fractions with denominators of 10 or powers of 10 may be called decimal fractions.
MA.4.FR.1.3:	Identify and generate equivalent fractions, including fractions greater than one. Describe how the numerator and denominator are affected when the equivalent fraction is created. **Clarifications:** *Clarification 1:* Instruction includes the use of manipulatives, visual models, number lines or equations. *Clarification 2:* Instruction includes recognizing how the numerator and denominator are affected when equivalent fractions are generated.
MA.4.FR.1.4:	Plot, order and compare fractions, including mixed numbers and fractions greater than one, with different numerators and different denominators. **Clarifications:** *Clarification 1:* When comparing fractions, instruction includes using an appropriately scaled number line and using reasoning about their size. *Clarification 2:* Within this benchmark, the expectation is to be able to use benchmark quantities, such as 0, $\frac{1}{4}$, $\frac{1}{2}$, $\frac{3}{4}$ and 1, to compare fractions. *Clarification 3:* Denominators are limited to 2, 3, 4, 5, 6, 8, 10, 12, 16 and 100. *Clarification 4:* Within this benchmark, the expectation is to use symbols (<, > or =).
MA.4.FR.2.1:	Decompose a fraction, including mixed numbers and fractions greater than one, into a sum of fractions with the same denominator in multiple ways. Demonstrate each decomposition with objects, drawings and equations. **Clarifications:** *Clarification 1:* Denominators are limited to 2, 3, 4, 5, 6, 8, 10, 12, 16 and 100.
MA.4.FR.2.2:	Add and subtract fractions with like denominators, including mixed numbers and fractions greater than one, with procedural reliability. **Clarifications:** *Clarification 1:* Instruction includes the use of word form, manipulatives, drawings, the properties of operations or number lines. *Clarification 2:* Within this benchmark, the expectation is not to simplify or use lowest terms. *Clarification 3:* Denominators are limited to 2, 3, 4, 5, 6, 8, 10, 12, 16 and 100.
MA.4.FR.2.3:	Explore the addition of a fraction with denominator of 10 to a fraction with denominator of 100 using equivalent fractions. **Clarifications:** *Clarification 1:* Instruction includes the use of visual models. *Clarification 2:* Within this benchmark, the expectation is not to simplify or use lowest terms.
MA.4.FR.2.4:	Extend previous understanding of multiplication to explore the multiplication of a fraction by a whole number or a whole number by a fraction. **Clarifications:** *Clarification 1:* Instruction includes the use of visual models or number lines and the connection to the commutative property of multiplication. Refer to Properties of Operation, Equality and Inequality (Appendix D). *Clarification 2:* Within this benchmark, the expectation is not to simplify or use lowest terms. *Clarification 3:* Fractions multiplied by a whole number are limited to less than 1. All denominators are limited to 2, 3, 4, 5, 6, 8, 10, 12, 16, 100.
MA.4.GR.1.1:	Informally explore angles as an attribute of two-dimensional figures. Identify and classify angles as acute, right, obtuse, straight or reflex. **Clarifications:** *Clarification 1:* Instruction includes classifying angles using benchmark angles of 90° and 180° in two-dimensional figures. *Clarification 2:* When identifying angles, the expectation includes two-dimensional figures and real-world pictures.
MA.4.GR.1.2:	Estimate angle measures. Using a protractor, measure angles in whole-number degrees and draw angles of specified measure in whole-number degrees. Demonstrate that angle measure is additive. **Clarifications:** *Clarification 1:* Instruction includes measuring given angles and drawing angles using protractors. *Clarification 2:* Instruction includes estimating angle measures using benchmark angles (30°, 45°, 60°, 90° and 180°). *Clarification 3:* Instruction focuses on the understanding that angles can be decomposed into non-overlapping angles whose measures sum to the measure of the original angle.
MA.4.GR.1.3:	Solve real-world and mathematical problems involving unknown whole-number angle measures. Write an equation to represent the unknown. **Clarifications:** *Clarification 1:* Instruction includes the connection to angle measure as being additive.

MA.4.GR.2.1:	Solve perimeter and area mathematical and real-world problems, including problems with unknown sides, for rectangles with whole-number side lengths. **Clarifications:** *Clarification 1:* Instruction extends the development of algebraic thinking where the symbolic representation of the unknown uses a letter. *Clarification 2:* Problems involving multiplication are limited to products of up to 3 digits by 2 digits. Problems involving division are limited to up to 4 digits divided by 1 digit. *Clarification 3:* Responses include the appropriate units in word form.
MA.4.GR.2.2:	Solve problems involving rectangles with the same perimeter and different areas or with the same area and different perimeters. **Clarifications:** *Clarification 1:* Instruction focuses on the conceptual understanding of the relationship between perimeter and area. *Clarification 2:* Within this benchmark, rectangles are limited to having whole-number side lengths. *Clarification 3:* Problems involving multiplication are limited to products of up to 3 digits by 2 digits. Problems involving division are limited to up to 4 digits divided by 1 digit. *Clarification 4:* Responses include the appropriate units in word form.
MA.4.M.1.1:	Select and use appropriate tools to measure attributes of objects. **Clarifications:** *Clarification 1:* Attributes include length, volume, weight, mass and temperature. *Clarification 2:* Instruction includes digital measurements and scales that are not linear in appearance. *Clarification 3:* When recording measurements, use fractions and decimals where appropriate.
MA.4.M.1.2:	Convert within a single system of measurement using the units: yards, feet, inches; kilometers, meters, centimeters, millimeters; pounds, ounces; kilograms, grams; gallons, quarts, pints, cups; liter, milliliter; and hours, minutes, seconds. **Clarifications:** *Clarification 1:* Instruction includes the understanding of how to convert from smaller to larger units or from larger to smaller units. *Clarification 2:* Within the benchmark, the expectation is not to convert from grams to kilograms, meters to kilometers or milliliters to liters. *Clarification 3:* Problems involving fractions are limited to denominators of 2, 3, 4, 5, 6, 8, 10, 12, 16 and 100.
MA.4.M.2.1:	Solve two-step real-world problems involving distances and intervals of time using any combination of the four operations. **Clarifications:** *Clarification 1:* Problems involving fractions will include addition and subtraction with like denominators and multiplication of a fraction by a whole number or a whole number by a fraction. *Clarification 2:* Problems involving fractions are limited to denominators of 2, 3, 4, 5, 6, 8, 10, 12, 16 and 100. *Clarification 3:* Within the benchmark, the expectation is not to use decimals.
MA.4.M.2.2:	Solve one- and two-step addition and subtraction real-world problems involving money using decimal notation.
MA.4.NSO.1.1:	Express how the value of a digit in a multi-digit whole number changes if the digit moves one place to the left or right.
MA.4.NSO.1.2:	Read and write multi-digit whole numbers from 0 to 1,000,000 using standard form, expanded form and word form.
MA.4.NSO.1.3:	Plot, order and compare multi-digit whole numbers up to 1,000,000. **Clarifications:** *Clarification 1:* When comparing numbers, instruction includes using an appropriately scaled number line and using place values of the hundred thousands, ten thousands, thousands, hundreds, tens and ones digits. *Clarification 2:* Scaled number lines must be provided and can be a representation of any range of numbers. *Clarification 3:* Within this benchmark, the expectation is to use symbols (<, > or =).
MA.4.NSO.1.4:	Round whole numbers from 0 to 10,000 to the nearest 10, 100 or 1,000.
MA.4.NSO.1.5:	Plot, order and compare decimals up to the hundredths. **Clarifications:** *Clarification 1:* When comparing numbers, instruction includes using an appropriately scaled number line and using place values of the ones, tenths and hundredths digits. *Clarification 2:* Within the benchmark, the expectation is to explain the reasoning for the comparison and use symbols (<, > or =). *Clarification 3:* Scaled number lines must be provided and can be a representation of any range of numbers.
MA.4.NSO.2.1:	Recall multiplication facts with factors up to 12 and related division facts with automaticity.
MA.4.NSO.2.2:	Multiply two whole numbers, up to three digits by up to two digits, with procedural reliability. **Clarifications:** *Clarification 1:* Instruction focuses on helping a student choose a method they can use reliably. *Clarification 2:* Instruction includes the use of models or equations based on place value and the distributive property.
MA.4.NSO.2.3:	Multiply two whole numbers, each up to two digits, including using a standard algorithm with procedural fluency.
MA.4.NSO.2.4:	Divide a whole number up to four digits by a one-digit whole number with procedural reliability. Represent remainders as fractional parts of the divisor. **Clarifications:** *Clarification 1:* Instruction focuses on helping a student choose a method they can use reliably. *Clarification 2:* Instruction includes the use of models based on place value, properties of operations or the relationship between multiplication and division.
	Explore the multiplication and division of multi-digit whole numbers using estimation, rounding and place value. **Clarifications:** *Clarification 1:* Instruction focuses on previous understanding of multiplication with multiples of 10 and 100, and seeing division as a missing factor

MA.4.NSO.2.5:	problem. *Clarification 2:* Estimating quotients builds the foundation for division using a standard algorithm. *Clarification 3:* When estimating the division of whole numbers, dividends are limited to up to four digits and divisors are limited to up to two digits.
MA.4.NSO.2.6:	Identify the number that is one-tenth more, one-tenth less, one-hundredth more and one-hundredth less than a given number.
MA.4.NSO.2.7:	Explore the addition and subtraction of multi-digit numbers with decimals to the hundredths. **Clarifications:** *Clarification 1:* Instruction includes the connection to money and the use of manipulatives and models based on place value.
MA.K12.MTR.1.1:	Mathematicians who participate in effortful learning both individually and with others: • Analyze the problem in a way that makes sense given the task. • Ask questions that will help with solving the task. • Build perseverance by modifying methods as needed while solving a challenging task. • Stay engaged and maintain a positive mindset when working to solve tasks. • Help and support each other when attempting a new method or approach. **Clarifications:** Teachers who encourage students to participate actively in effortful learning both individually and with others: • Cultivate a community of growth mindset learners. • Foster perseverance in students by choosing tasks that are challenging. • Develop students' ability to analyze and problem solve. • Recognize students' effort when solving challenging problems.
MA.K12.MTR.2.1:	Demonstrate understanding by representing problems in multiple ways. Mathematicians who demonstrate understanding by representing problems in multiple ways: • Build understanding through modeling and using manipulatives. • Represent solutions to problems in multiple ways using objects, drawings, tables, graphs and equations. • Progress from modeling problems with objects and drawings to using algorithms and equations. • Express connections between concepts and representations. • Choose a representation based on the given context or purpose. **Clarifications:** Teachers who encourage students to demonstrate understanding by representing problems in multiple ways: • Help students make connections between concepts and representations. • Provide opportunities for students to use manipulatives when investigating concepts. • Guide students from concrete to pictorial to abstract representations as understanding progresses. • Show students that various representations can have different purposes and can be useful in different situations.
MA.K12.MTR.3.1:	Complete tasks with mathematical fluency. Mathematicians who complete tasks with mathematical fluency: • Select efficient and appropriate methods for solving problems within the given context. • Maintain flexibility and accuracy while performing procedures and mental calculations. • Complete tasks accurately and with confidence. • Adapt procedures to apply them to a new context. • Use feedback to improve efficiency when performing calculations. **Clarifications:** Teachers who encourage students to complete tasks with mathematical fluency: • Provide students with the flexibility to solve problems by selecting a procedure that allows them to solve efficiently and accurately. • Offer multiple opportunities for students to practice efficient and generalizable methods. • Provide opportunities for students to reflect on the method they used and determine if a more efficient method could have been used.
MA.K12.MTR.4.1:	Engage in discussions that reflect on the mathematical thinking of self and others. Mathematicians who engage in discussions that reflect on the mathematical thinking of self and others: • Communicate mathematical ideas, vocabulary and methods effectively. • Analyze the mathematical thinking of others. • Compare the efficiency of a method to those expressed by others. • Recognize errors and suggest how to correctly solve the task. • Justify results by explaining methods and processes. • Construct possible arguments based on evidence. **Clarifications:** Teachers who encourage students to engage in discussions that reflect on the mathematical thinking of self and others: • Establish a culture in which students ask questions of the teacher and their peers, and error is an opportunity for learning. • Create opportunities for students to discuss their thinking with peers. • Select, sequence and present student work to advance and deepen understanding of correct and increasingly efficient methods. • Develop students' ability to justify methods and compare their responses to the responses of their peers.
	Use patterns and structure to help understand and connect mathematical concepts. Mathematicians who use patterns and structure to help understand and connect mathematical concepts: • Focus on relevant details within a problem. • Create plans and procedures to logically order events, steps or ideas to solve problems. • Decompose a complex problem into manageable parts. • Relate previously learned concepts to new concepts.

MA.K12.MTR.5.1:	• Look for similarities among problems. • Connect solutions of problems to more complicated large-scale situations. **Clarifications:** Teachers who encourage students to use patterns and structure to help understand and connect mathematical concepts: • Help students recognize the patterns in the world around them and connect these patterns to mathematical concepts. • Support students to develop generalizations based on the similarities found among problems. • Provide opportunities for students to create plans and procedures to solve problems. • Develop students' ability to construct relationships between their current understanding and more sophisticated ways of thinking.
MA.K12.MTR.6.1:	Assess the reasonableness of solutions. Mathematicians who assess the reasonableness of solutions: • Estimate to discover possible solutions. • Use benchmark quantities to determine if a solution makes sense. • Check calculations when solving problems. • Verify possible solutions by explaining the methods used. • Evaluate results based on the given context. **Clarifications:** Teachers who encourage students to assess the reasonableness of solutions: • Have students estimate or predict solutions prior to solving. • Prompt students to continually ask, "Does this solution make sense? How do you know?" • Reinforce that students check their work as they progress within and after a task. • Strengthen students' ability to verify solutions through justifications.
MA.K12.MTR.7.1:	Apply mathematics to real-world contexts. Mathematicians who apply mathematics to real-world contexts: • Connect mathematical concepts to everyday experiences. • Use models and methods to understand, represent and solve problems. • Perform investigations to gather data or determine if a method is appropriate. • Redesign models and methods to improve accuracy or efficiency. **Clarifications:** Teachers who encourage students to apply mathematics to real-world contexts: • Provide opportunities for students to create models, both concrete and abstract, and perform investigations. • Challenge students to question the accuracy of their models and methods. • Support students as they validate conclusions by comparing them to the given situation. • Indicate how various concepts can be applied to other disciplines.
ELA.K12.EE.1.1:	Cite evidence to explain and justify reasoning. **Clarifications:** K-1 Students include textual evidence in their oral communication with guidance and support from adults. The evidence can consist of details from the text without naming the text. During 1st grade, students learn how to incorporate the evidence in their writing. 2-3 Students include relevant textual evidence in their written and oral communication. Students should name the text when they refer to it. In 3rd grade, students should use a combination of direct and indirect citations. 4-5 Students continue with previous skills and reference comments made by speakers and peers. Students cite texts that they've directly quoted, paraphrased, or used for information. When writing, students will use the form of citation dictated by the instructor or the style guide referenced by the instructor. 6-8 Students continue with previous skills and use a style guide to create a proper citation. 9-12 Students continue with previous skills and should be aware of existing style guides and the ways in which they differ.
ELA.K12.EE.2.1:	Read and comprehend grade-level complex texts proficiently. **Clarifications:** See Text Complexity for grade-level complexity bands and a text complexity rubric.
ELA.K12.EE.3.1:	Make inferences to support comprehension. **Clarifications:** Students will make inferences before the words infer or inference are introduced. Kindergarten students will answer questions like "Why is the girl smiling?" or make predictions about what will happen based on the title page. Students will use the terms and apply them in 2nd grade and beyond.
ELA.K12.EE.4.1:	Use appropriate collaborative techniques and active listening skills when engaging in discussions in a variety of situations. **Clarifications:** In kindergarten, students learn to listen to one another respectfully. In grades 1-2, students build upon these skills by justifying what they are thinking. For example: "I think _____ because _____." The collaborative conversations are becoming academic conversations. In grades 3-12, students engage in academic conversations discussing claims and justifying their reasoning, refining and applying skills. Students build on ideas, propel the conversation, and support claims and counterclaims with evidence.
ELA.K12.EE.5.1:	Use the accepted rules governing a specific format to create quality work. **Clarifications:** Students will incorporate skills learned into work products to produce quality work. For students to incorporate these skills appropriately, they must receive instruction. A 3rd grade student creating a poster board display must have instruction in how to effectively present information to do quality work.
	Use appropriate voice and tone when speaking or writing.

ELA.K12.EE.6.1:	**Clarifications:** In kindergarten and 1st grade, students learn the difference between formal and informal language. For example, the way we talk to our friends differs from the way we speak to adults. In 2nd grade and beyond, students practice appropriate social and academic language to discuss texts.
ELD.K12.ELL.MA.1:	English language learners communicate information, ideas and concepts necessary for academic success in the content area of Mathematics.
ELD.K12.ELL.SI.1:	English language learners communicate for social and instructional purposes within the school setting.

General Course Information and Notes

VERSION DESCRIPTION

The benchmarks in this course are mastery goals that students are expected to attain by the end of the year. To build mastery, students will continue to review and apply earlier grade-level benchmarks and expectations.

GENERAL NOTES

In grade 4, instructional time will emphasize four areas: (1) extending understanding of multi-digit multiplication and division; (2) developing the relationship between fractions and decimals and beginning operations with both; (3) classifying and measuring angles and (4) developing an understanding for interpreting data to include mode, median and range.

Curricular content for all subjects must integrate critical-thinking, problem-solving, and workforce-literacy skills; communication, reading, and writing skills; mathematics skills; collaboration skills; contextual and applied-learning skills; technology-literacy skills; information and media-literacy skills; and civic-engagement skills.

English Language Development ELD Standards Special Notes Section:
Teachers are required to provide listening, speaking, reading and writing instruction that allows English language learners (ELL) to communicate information, ideas and concepts for academic success in the content area of Mathematics. For the given level of English language proficiency and with visual, graphic, or interactive support, students will interact with grade level words, expressions, sentences and discourse to process or produce language necessary for academic success. The ELD standard should specify a relevant content area concept or topic of study chosen by curriculum developers and teachers which maximizes an ELL's need for communication and social skills. To access an ELL supporting document which delineates performance definitions and descriptors, please click on the following link:
cpalms.org/uploads/docs/standards/eld/MA.pdf

GENERAL INFORMATION

Course Number: 5012060

Course Path: Section: Grades PreK to 12 Education Courses > **Grade Group:** Grades PreK to 5 Education Courses > **Subject:** Mathematics > **SubSubject:** General Mathematics >
Abbreviated Title: GRADE FOUR MATH
Course Length: Year (Y)

Course Type: Core Academic Course

Course Level: 2

Course Status: Draft - Course Pending Approval

Educator Certifications

Elementary Education (Elementary Grades 1-6)
Mathematics (Elementary Grades 1-6)
Elementary Education (Grades K-6)

Grade Five Mathematics (#5012070) 2022 - And Beyond

Course Standards

Name	Description
MA.5.AR.1.1:	Solve multi-step real-world problems involving any combination of the four operations with whole numbers, including problems in which remainders must be interpreted within the context. **Clarifications:** *Clarification 1:* Depending on the context, the solution of a division problem with a remainder may be the whole number part of the quotient, the whole number part of the quotient with the remainder, the whole number part of the quotient plus 1, or the remainder.
MA.5.AR.1.2:	Solve real-world problems involving the addition, subtraction or multiplication of fractions, including mixed numbers and fractions greater than 1. **Clarifications:** *Clarification 1:* Instruction includes the use of visual models and equations to represent the problem.
MA.5.AR.1.3:	Solve real-world problems involving division of a unit fraction by a whole number and a whole number by a unit fraction. **Clarifications:** *Clarification 1:* Instruction includes the use of visual models and equations to represent the problem.
MA.5.AR.2.1:	Translate written real-world and mathematical descriptions into numerical expressions and numerical expressions into written mathematical descriptions. **Clarifications:** *Clarification 1:* Expressions are limited to any combination of the arithmetic operations, including parentheses, with whole numbers, decimals and fractions. *Clarification 2:* Within this benchmark, the expectation is not to include exponents or nested grouping symbols.
MA.5.AR.2.2:	Evaluate multi-step numerical expressions using order of operations. **Clarifications:** *Clarification 1:* Multi-step expressions are limited to any combination of arithmetic operations, including parentheses, with whole numbers, decimals and fractions. *Clarification 2:* Within this benchmark, the expectation is not to include exponents or nested grouping symbols. *Clarification 3:* Decimals are limited to hundredths. Expressions cannot include division of a fraction by a fraction.
MA.5.AR.2.3:	Determine and explain whether an equation involving any of the four operations is true or false. **Clarifications:** *Clarification 1:* Problem types include equations that include parenthesis but not nested parentheses. *Clarification 2:* Instruction focuses on the connection between properties of equality and order of operations.
MA.5.AR.2.4:	Given a mathematical or real-world context, write an equation involving any of the four operations to determine the unknown whole number with the unknown in any position. **Clarifications:** *Clarification 1:* Instruction extends the development of algebraic thinking where the unknown letter is recognized as a variable. *Clarification 2:* Problems include the unknown and different operations on either side of the equal sign
MA.5.AR.3.1:	Given a numerical pattern, identify and write a rule that can describe the pattern as an expression. **Clarifications:** *Clarification 1:* Rules are limited to one or two operations using whole numbers.
MA.5.AR.3.2:	Given a rule for a numerical pattern, use a two-column table to record the inputs and outputs. **Clarifications:** *Clarification 1:* Instruction builds a foundation for proportional and linear relationships in later grades. *Clarification 2:* Rules are limited to one or two operations using whole numbers.
MA.5.DP.1.1:	Collect and represent numerical data, including fractional and decimal values, using tables, line graphs or line plots. **Clarifications:** *Clarification 1:* Within this benchmark, the expectation is for an estimation of fractional and decimal heights on line graphs. *Clarification 2:* Decimal values are limited to hundredths. Denominators are limited to 1, 2, 3 and 4. Fractions can be greater than one.
MA.5.DP.1.2:	Interpret numerical data, with whole-number values, represented with tables or line plots by determining the mean, mode, median or range. **Clarifications:** *Clarification 1:* Instruction includes interpreting the mean in real-world problems as a leveling out, a balance point or an equal share.
MA.5.FR.1.1:	Given a mathematical or real-world problem, represent the division of two whole numbers as a fraction. **Clarifications:** *Clarification 1:* Instruction includes making a connection between fractions and division by understanding that fractions can also represent division of a numerator by a denominator. *Clarification 2:* Within this benchmark, the expectation is not to simplify or use lowest terms. *Clarification 3:* Fractions can include fractions greater than one.

MA.5.FR.2.1:	Add and subtract fractions with unlike denominators, including mixed numbers and fractions greater than 1, with procedural reliability. **Clarifications:** *Clarification 1:* Instruction includes the use of estimation, manipulatives, drawings or the properties of operations. *Clarification 2:* Instruction builds on the understanding from previous grades of factors up to 12 and their multiples.
MA.5.FR.2.2:	Extend previous understanding of multiplication to multiply a fraction by a fraction, including mixed numbers and fractions greater than 1, with procedural reliability. **Clarifications:** *Clarification 1:* Instruction includes the use of manipulatives, drawings or the properties of operations. *Clarification 2:* Denominators limited to whole numbers up to 20.
MA.5.FR.2.3:	When multiplying a given number by a fraction less than 1 or a fraction greater than 1, predict and explain the relative size of the product to the given number without calculating. **Clarifications:** *Clarification 1:* Instruction focuses on the connection to decimals, estimation and assessing the reasonableness of an answer.
MA.5.FR.2.4:	Extend previous understanding of division to explore the division of a unit fraction by a whole number and a whole number by a unit fraction. **Clarifications:** *Clarification 1:* Instruction includes the use of manipulatives, drawings or the properties of operations. *Clarification 2:* Refer to Situations Involving Operations with Numbers (Appendix A).
MA.5.GR.1.1:	Classify triangles or quadrilaterals into different categories based on shared defining attributes. Explain why a triangle or quadrilateral would or would not belong to a category. **Clarifications:** *Clarification 1:* Triangles include scalene, isosceles, equilateral, acute, obtuse and right; quadrilaterals include parallelograms, rhombi, rectangles, squares and trapezoids.
MA.5.GR.1.2:	Identify and classify three-dimensional figures into categories based on their defining attributes. Figures are limited to right pyramids, right prisms, right circular cylinders, right circular cones and spheres. **Clarifications:** *Clarification 1:* Defining attributes include the number and shape of faces, number and shape of bases, whether or not there is an apex, curved or straight edges and curved or flat faces.
MA.5.GR.2.1:	Find the perimeter and area of a rectangle with fractional or decimal side lengths using visual models and formulas. **Clarifications:** *Clarification 1:* Instruction includes finding the area of a rectangle with fractional side lengths by tiling it with squares having unit fraction side lengths and showing that the area is the same as would be found by multiplying the side lengths. *Clarification 2:* Responses include the appropriate units in word form.
MA.5.GR.3.1:	Explore volume as an attribute of three-dimensional figures by packing them with unit cubes without gaps. Find the volume of a right rectangular prism with whole-number side lengths by counting unit cubes. **Clarifications:** *Clarification 1:* Instruction emphasizes the conceptual understanding that volume is an attribute that can be measured for a three-dimensional figure. The measurement unit for volume is the volume of a unit cube, which is a cube with edge length of 1 unit.
MA.5.GR.3.2:	Find the volume of a right rectangular prism with whole-number side lengths using a visual model and a formula. **Clarifications:** *Clarification 1:* Instruction includes finding the volume of right rectangular prisms by packing the figure with unit cubes, using a visual model or applying a multiplication formula. *Clarification 2:* Right rectangular prisms cannot exceed two-digit edge lengths and responses include the appropriate units in word form.
MA.5.GR.3.3:	Solve real-world problems involving the volume of right rectangular prisms, including problems with an unknown edge length, with whole-number edge lengths using a visual model or a formula. Write an equation with a variable for the unknown to represent the problem. **Clarifications:** *Clarification 1:* Instruction progresses from right rectangular prisms to composite figures composed of right rectangular prisms. *Clarification 2:* When finding the volume of composite figures composed of right rectangular prisms, recognize volume as additive by adding the volume of non-overlapping parts. *Clarification 3:* Responses include the appropriate units in word form.
MA.5.GR.4.1:	Identify the origin and axes in the coordinate system. Plot and label ordered pairs in the first quadrant of the coordinate plane. **Clarifications:** *Clarification 1:* Instruction includes the connection between two-column tables and coordinates on a coordinate plane. *Clarification 2:* Instruction focuses on the connection of the number line to the x- and y-axis. *Clarification 3:* Coordinate planes include axes scaled by whole numbers. Ordered pairs contain only whole numbers.
MA.5.GR.4.2:	Represent mathematical and real-world problems by plotting points in the first quadrant of the coordinate plane and interpret coordinate values of points in the context of the situation. **Clarifications:** *Clarification 1:* Coordinate planes include axes scaled by whole numbers. Ordered pairs contain only whole numbers.
MA.5.M.1.1:	Solve multi-step real-world problems that involve converting measurement units to equivalent measurements within a single system of measurement. **Clarifications:** *Clarification 1:* Within the benchmark, the expectation is not to memorize the conversions. *Clarification 2:* Conversions include length, time, volume and capacity represented as whole numbers, fractions and decimals.

MA.5.M.2.1:	Solve multi-step real-world problems involving money using decimal notation.
MA.5.NSO.1.1:	Express how the value of a digit in a multi-digit number with decimals to the thousandths changes if the digit moves one or more places to the left or right.
MA.5.NSO.1.2:	Read and write multi-digit numbers with decimals to the thousandths using standard form, word form and expanded form.
MA.5.NSO.1.3:	Compose and decompose multi-digit numbers with decimals to the thousandths in multiple ways using the values of the digits in each place. Demonstrate the compositions or decompositions using objects, drawings and expressions or equations.
MA.5.NSO.1.4:	Plot, order and compare multi-digit numbers with decimals up to the thousandths. **Clarifications:** *Clarification 1:* When comparing numbers, instruction includes using an appropriately scaled number line and using place values of digits. *Clarification 2:* Scaled number lines must be provided and can be a representation of any range of numbers. *Clarification 3:* Within this benchmark, the expectation is to use symbols (<, > or =).
MA.5.NSO.1.5:	Round multi-digit numbers with decimals to the thousandths to the nearest hundredth, tenth or whole number.
MA.5.NSO.2.1:	Multiply multi-digit whole numbers including using a standard algorithm with procedural fluency.
MA.5.NSO.2.2:	Divide multi-digit whole numbers, up to five digits by two digits, including using a standard algorithm with procedural fluency. Represent remainders as fractions. **Clarifications:** *Clarification 1:* Within this benchmark, the expectation is not to use simplest form for fractions.
MA.5.NSO.2.3:	Add and subtract multi-digit numbers with decimals to the thousandths, including using a standard algorithm with procedural fluency.
MA.5.NSO.2.4:	Explore the multiplication and division of multi-digit numbers with decimals to the hundredths using estimation, rounding and place value. **Clarifications:** *Clarification 1:* Estimating quotients builds the foundation for division using a standard algorithm. *Clarification 2:* Instruction includes the use of models based on place value and the properties of operations.
MA.5.NSO.2.5:	Multiply and divide a multi-digit number with decimals to the tenths by one-tenth and one-hundredth with procedural reliability. **Clarifications:** *Clarification 1:* Instruction focuses on the place value of the digit when multiplying or dividing.
MA.K12.MTR.1.1:	Mathematicians who participate in effortful learning both individually and with others: • Analyze the problem in a way that makes sense given the task. • Ask questions that will help with solving the task. • Build perseverance by modifying methods as needed while solving a challenging task. • Stay engaged and maintain a positive mindset when working to solve tasks. • Help and support each other when attempting a new method or approach. **Clarifications:** Teachers who encourage students to participate actively in effortful learning both individually and with others: • Cultivate a community of growth mindset learners. • Foster perseverance in students by choosing tasks that are challenging. • Develop students' ability to analyze and problem solve. • Recognize students' effort when solving challenging problems.
MA.K12.MTR.2.1:	Demonstrate understanding by representing problems in multiple ways. Mathematicians who demonstrate understanding by representing problems in multiple ways: • Build understanding through modeling and using manipulatives. • Represent solutions to problems in multiple ways using objects, drawings, tables, graphs and equations. • Progress from modeling problems with objects and drawings to using algorithms and equations. • Express connections between concepts and representations. • Choose a representation based on the given context or purpose. **Clarifications:** Teachers who encourage students to demonstrate understanding by representing problems in multiple ways: • Help students make connections between concepts and representations. • Provide opportunities for students to use manipulatives when investigating concepts. • Guide students from concrete to pictorial to abstract representations as understanding progresses. • Show students that various representations can have different purposes and can be useful in different situations.
MA.K12.MTR.3.1:	Complete tasks with mathematical fluency. Mathematicians who complete tasks with mathematical fluency: • Select efficient and appropriate methods for solving problems within the given context. • Maintain flexibility and accuracy while performing procedures and mental calculations. • Complete tasks accurately and with confidence. • Adapt procedures to apply them to a new context. • Use feedback to improve efficiency when performing calculations. **Clarifications:** Teachers who encourage students to complete tasks with mathematical fluency: • Provide students with the flexibility to solve problems by selecting a procedure that allows them to solve efficiently and accurately. • Offer multiple opportunities for students to practice efficient and generalizable methods. • Provide opportunities for students to reflect on the method they used and determine if a more efficient method could have been used.
	Engage in discussions that reflect on the mathematical thinking of self and others. Mathematicians who engage in discussions that reflect on the mathematical thinking of self and others:

MA.K12.MTR.4.1:	• Communicate mathematical ideas, vocabulary and methods effectively. • Analyze the mathematical thinking of others. • Compare the efficiency of a method to those expressed by others. • Recognize errors and suggest how to correctly solve the task. • Justify results by explaining methods and processes. • Construct possible arguments based on evidence. **Clarifications:** Teachers who encourage students to engage in discussions that reflect on the mathematical thinking of self and others: • Establish a culture in which students ask questions of the teacher and their peers, and error is an opportunity for learning. • Create opportunities for students to discuss their thinking with peers. • Select, sequence and present student work to advance and deepen understanding of correct and increasingly efficient methods. • Develop students' ability to justify methods and compare their responses to the responses of their peers.
MA.K12.MTR.5.1:	Use patterns and structure to help understand and connect mathematical concepts. Mathematicians who use patterns and structure to help understand and connect mathematical concepts: • Focus on relevant details within a problem. • Create plans and procedures to logically order events, steps or ideas to solve problems. • Decompose a complex problem into manageable parts. • Relate previously learned concepts to new concepts. • Look for similarities among problems. • Connect solutions of problems to more complicated large-scale situations. **Clarifications:** Teachers who encourage students to use patterns and structure to help understand and connect mathematical concepts: • Help students recognize the patterns in the world around them and connect these patterns to mathematical concepts. • Support students to develop generalizations based on the similarities found among problems. • Provide opportunities for students to create plans and procedures to solve problems. • Develop students' ability to construct relationships between their current understanding and more sophisticated ways of thinking.
MA.K12.MTR.6.1:	Assess the reasonableness of solutions. Mathematicians who assess the reasonableness of solutions: • Estimate to discover possible solutions. • Use benchmark quantities to determine if a solution makes sense. • Check calculations when solving problems. • Verify possible solutions by explaining the methods used. • Evaluate results based on the given context. **Clarifications:** Teachers who encourage students to assess the reasonableness of solutions: • Have students estimate or predict solutions prior to solving. • Prompt students to continually ask, "Does this solution make sense? How do you know?" • Reinforce that students check their work as they progress within and after a task. • Strengthen students' ability to verify solutions through justifications.
MA.K12.MTR.7.1:	Apply mathematics to real-world contexts. Mathematicians who apply mathematics to real-world contexts: • Connect mathematical concepts to everyday experiences. • Use models and methods to understand, represent and solve problems. • Perform investigations to gather data or determine if a method is appropriate. • Redesign models and methods to improve accuracy or efficiency. **Clarifications:** Teachers who encourage students to apply mathematics to real-world contexts: • Provide opportunities for students to create models, both concrete and abstract, and perform investigations. • Challenge students to question the accuracy of their models and methods. • Support students as they validate conclusions by comparing them to the given situation. • Indicate how various concepts can be applied to other disciplines.
ELA.K12.EE.1.1:	Cite evidence to explain and justify reasoning. **Clarifications:** K-1 Students include textual evidence in their oral communication with guidance and support from adults. The evidence can consist of details from the text without naming the text. During 1st grade, students learn how to incorporate the evidence in their writing. 2-3 Students include relevant textual evidence in their written and oral communication. Students should name the text when they refer to it. In 3rd grade, students should use a combination of direct and indirect citations. 4-5 Students continue with previous skills and reference comments made by speakers and peers. Students cite texts that they've directly quoted, paraphrased, or used for information. When writing, students will use the form of citation dictated by the instructor or the style guide referenced by the instructor. 6-8 Students continue with previous skills and use a style guide to create a proper citation. 9-12 Students continue with previous skills and should be aware of existing style guides and the ways in which they differ.
ELA.K12.EE.2.1:	Read and comprehend grade-level complex texts proficiently. **Clarifications:** See Text Complexity for grade-level complexity bands and a text complexity rubric.
	Make inferences to support comprehension.

ELA.K12.EE.3.1:	**Clarifications:** Students will make inferences before the words infer or inference are introduced. Kindergarten students will answer questions like "Why is the girl smiling?" or make predictions about what will happen based on the title page. Students will use the terms and apply them in 2nd grade and beyond.
ELA.K12.EE.4.1:	Use appropriate collaborative techniques and active listening skills when engaging in discussions in a variety of situations. **Clarifications:** In kindergarten, students learn to listen to one another respectfully. In grades 1-2, students build upon these skills by justifying what they are thinking. For example: "I think _____ because _____." The collaborative conversations are becoming academic conversations. In grades 3-12, students engage in academic conversations discussing claims and justifying their reasoning, refining and applying skills. Students build on ideas, propel the conversation, and support claims and counterclaims with evidence.
ELA.K12.EE.5.1:	Use the accepted rules governing a specific format to create quality work. **Clarifications:** Students will incorporate skills learned into work products to produce quality work. For students to incorporate these skills appropriately, they must receive instruction. A 3rd grade student creating a poster board display must have instruction in how to effectively present information to do quality work.
ELA.K12.EE.6.1:	Use appropriate voice and tone when speaking or writing. **Clarifications:** In kindergarten and 1st grade, students learn the difference between formal and informal language. For example, the way we talk to our friends differs from the way we speak to adults. In 2nd grade and beyond, students practice appropriate social and academic language to discuss texts.
ELD.K12.ELL.MA.1:	English language learners communicate information, ideas and concepts necessary for academic success in the content area of Mathematics.
ELD.K12.ELL.SI.1:	English language learners communicate for social and instructional purposes within the school setting.

General Course Information and Notes

VERSION DESCRIPTION

The benchmarks in this course are mastery goals that students are expected to attain by the end of the year. To build mastery, students will continue to review and apply earlier grade-level benchmarks and expectations.

GENERAL NOTES

In grade 5, instructional time will emphasize five areas: (1) multiplying and dividing multi-digit whole numbers, including using a standard algorithm; (2) adding and subtracting fractions and decimals with procedural fluency, developing an understanding of multiplication and division of fractions and decimals; (3) developing an understanding of the coordinate plane and plotting pairs of numbers in the first quadrant; (4) extending geometric reasoning to include volume and (5) extending understanding of data to include the mean.

Curricular content for all subjects must integrate critical-thinking, problem-solving, and workforce-literacy skills; communication, reading, and writing skills; mathematics skills; collaboration skills; contextual and applied-learning skills; technology-literacy skills; information and media-literacy skills; and civic-engagement skills.

English Language Development ELD Standards Special Notes Section:
Teachers are required to provide listening, speaking, reading and writing instruction that allows English language learners (ELL) to communicate information, ideas and concepts for academic success in the content area of Mathematics. For the given level of English language proficiency and with visual, graphic, or interactive support, students will interact with grade level words, expressions, sentences and discourse to process or produce language necessary for academic success. The ELD standard should specify a relevant content area concept or topic of study chosen by curriculum developers and teachers which maximizes an ELL's need for communication and social skills. To access an ELL supporting document which delineates performance definitions and descriptors, please click on the following link: cpalms.org/uploads/docs/standards/eld/MA.pdf

GENERAL INFORMATION

Course Number: 5012070

Course Path: Section: Grades PreK to 12 Education Courses > **Grade Group:** Grades PreK to 5 Education Courses > **Subject:** Mathematics > **SubSubject:** General Mathematics >

Abbreviated Title: GRADE FIVE MATH

Course Length: Year (Y)

Course Type: Core Academic Course

Course Level: 2

Course Status: Draft - Course Pending Approval

Educator Certifications

Elementary Education (Elementary Grades 1-6)
Mathematics (Elementary Grades 1-6)
Middle Grades Mathematics (Middle Grades 5-9)
Elementary Education (Grades K-6)

M/J Music Theory 1 (#1300000) 2022 - And Beyond

Course Standards

Name	Description
MU.68.C.1.1:	Develop strategies for listening to unfamiliar musical works. **Clarifications:** e.g., listening maps, active listening, checklists
MU.68.C.1.2:	Compare, using correct music vocabulary, the aesthetic impact of a performance to one's own hypothesis of the composer's intent. **Clarifications:** e.g., quality recordings, peer group and individual performances, composer notes, instrumentation, expressive elements, title
MU.68.C.2.3:	Critique personal composition and/or improvisation, using simple criteria, to generate improvements with guidance from teachers and/or peers.
MU.68.C.3.1:	Apply specific criteria to evaluate why a musical work is an exemplar in a specific style or genre.
MU.68.F.1.1:	Create a composition and/or performance, using visual, kinesthetic, digital, and/or acoustic means to manipulate musical elements.
MU.68.F.2.1:	Describe several routes a composition or performance could travel from creator to consumer. **Clarifications:** e.g., MIDI and other technology, production, sharing on the Internet, home studios, professional recording studios, sales
MU.68.F.3.2:	Investigate and discuss laws that protect intellectual property, and practice safe, legal, and responsible acquisition and use of musical media.
MU.68.F.3.3:	Identify the tasks involved in the compositional process and discuss how the process might be applied in the work place. **Clarifications:** e.g., idea, development, editing, selling, revising, testing, presenting
MU.68.H.2.2:	Analyze how technology has changed the way music is created, performed, acquired, and experienced. **Clarifications:** e.g., from harpsichord to piano; from phonograph to CD
MU.68.H.2.3:	Classify the literature being studied by genre, style, and/or time period.
MU.68.H.3.1:	Identify connections among music and other content areas and/or contexts through interdisciplinary collaboration. **Clarifications:** e.g., school: other music classes, social studies, dance, physical education, science, health, math, world languages; community: cultural connections and traditions, ceremonial music, sales and advertising, communication
MU.68.H.3.2:	Discuss how the absence of music would affect other content areas and contexts. **Clarifications:** e.g., theatre and dance, movies, sporting events, video games, commercial advertising, social gatherings, civic and religious ceremonies, plays
MU.68.O.2.2:	Demonstrate knowledge of major and minor tonalities through performance and composition. **Clarifications:** e.g., scales; key signatures; relative major/minor; parallel major/minor
MU.68.O.3.1:	Describe how the combination of instrumentation and expressive elements in a musical work can convey a specific thought, idea, mood, and/or image. **Clarifications:** e.g., tempo markings, expression markings, articulation markings, phrasing, scales, modes, harmonic structure, timbre, rhythm, orchestration
MU.68.S.1.1:	Improvise rhythmic and melodic phrases to accompany familiar songs and/or standard harmonic progressions. **Clarifications:** e.g., blues, rock
MU.68.S.1.3:	Arrange a short musical piece by manipulating melody, form, rhythm, and/or voicing.
MU.68.S.1.4:	Sing or play melodies by ear with support from the teacher and/or peers. **Clarifications:** e.g., melodies using traditional classroom instruments and/or voice
MU.68.S.1.6:	Compose a melody, with or without lyrics, over a standard harmonic progression.
MU.68.S.1.8:	Demonstrate specified mixing and editing techniques using selected software and hardware.
MU.68.S.3.3:	Sight-read standard exercises and simple repertoire. **Clarifications:** e.g., note and rest values, key signatures, time signatures, expressive markings, special harmonic and/or notation symbols
MU.68.S.3.4:	Compare written notation to aural examples and analyze for accuracy of rhythm and pitch. **Clarifications:** e.g., error detection, interval reinforcement
MU.68.S.3.5:	Notate rhythmic phrases and/or melodies, in varying simple meters, performed by someone else.
	Mathematicians who participate in effortful learning both individually and with others: • Analyze the problem in a way that makes sense given the task. • Ask questions that will help with solving the task. • Build perseverance by modifying methods as needed while solving a challenging task. • Stay engaged and maintain a positive mindset when working to solve tasks. • Help and support each other when attempting a new method or approach.

MA.K12.MTR.1.1:

Clarifications:
Teachers who encourage students to participate actively in effortful learning both individually and with others:

- Cultivate a community of growth mindset learners.
- Foster perseverance in students by choosing tasks that are challenging.
- Develop students' ability to analyze and problem solve.
- Recognize students' effort when solving challenging problems.

Demonstrate understanding by representing problems in multiple ways.
Mathematicians who demonstrate understanding by representing problems in multiple ways:

- Build understanding through modeling and using manipulatives.
- Represent solutions to problems in multiple ways using objects, drawings, tables, graphs and equations.
- Progress from modeling problems with objects and drawings to using algorithms and equations.
- Express connections between concepts and representations.

MA.K12.MTR.2.1:

- Choose a representation based on the given context or purpose.

Clarifications:
Teachers who encourage students to demonstrate understanding by representing problems in multiple ways:

- Help students make connections between concepts and representations.
- Provide opportunities for students to use manipulatives when investigating concepts.
- Guide students from concrete to pictorial to abstract representations as understanding progresses.
- Show students that various representations can have different purposes and can be useful in different situations.

Complete tasks with mathematical fluency.
Mathematicians who complete tasks with mathematical fluency:

- Select efficient and appropriate methods for solving problems within the given context.
- Maintain flexibility and accuracy while performing procedures and mental calculations.
- Complete tasks accurately and with confidence.
- Adapt procedures to apply them to a new context.

MA.K12.MTR.3.1:

- Use feedback to improve efficiency when performing calculations.

Clarifications:
Teachers who encourage students to complete tasks with mathematical fluency:

- Provide students with the flexibility to solve problems by selecting a procedure that allows them to solve efficiently and accurately.
- Offer multiple opportunities for students to practice efficient and generalizable methods.
- Provide opportunities for students to reflect on the method they used and determine if a more efficient method could have been used.

Engage in discussions that reflect on the mathematical thinking of self and others.
Mathematicians who engage in discussions that reflect on the mathematical thinking of self and others:

- Communicate mathematical ideas, vocabulary and methods effectively.
- Analyze the mathematical thinking of others.
- Compare the efficiency of a method to those expressed by others.
- Recognize errors and suggest how to correctly solve the task.
- Justify results by explaining methods and processes.

MA.K12.MTR.4.1:

- Construct possible arguments based on evidence.

Clarifications:
Teachers who encourage students to engage in discussions that reflect on the mathematical thinking of self and others:

- Establish a culture in which students ask questions of the teacher and their peers, and error is an opportunity for learning.
- Create opportunities for students to discuss their thinking with peers.
- Select, sequence and present student work to advance and deepen understanding of correct and increasingly efficient methods.
- Develop students' ability to justify methods and compare their responses to the responses of their peers.

Use patterns and structure to help understand and connect mathematical concepts.
Mathematicians who use patterns and structure to help understand and connect mathematical concepts:

- Focus on relevant details within a problem.
- Create plans and procedures to logically order events, steps or ideas to solve problems.
- Decompose a complex problem into manageable parts.
- Relate previously learned concepts to new concepts.
- Look for similarities among problems.

MA.K12.MTR.5.1:

- Connect solutions of problems to more complicated large-scale situations.

Clarifications:
Teachers who encourage students to use patterns and structure to help understand and connect mathematical concepts:

- Help students recognize the patterns in the world around them and connect these patterns to mathematical concepts.
- Support students to develop generalizations based on the similarities found among problems.
- Provide opportunities for students to create plans and procedures to solve problems.
- Develop students' ability to construct relationships between their current understanding and more sophisticated ways of thinking.

Assess the reasonableness of solutions.
Mathematicians who assess the reasonableness of solutions:

- Estimate to discover possible solutions.
- Use benchmark quantities to determine if a solution makes sense.
- Check calculations when solving problems.
- Verify possible solutions by explaining the methods used.

MA.K12.MTR.6.1:	• Evaluate results based on the given context. **Clarifications:** Teachers who encourage students to assess the reasonableness of solutions: • Have students estimate or predict solutions prior to solving. • Prompt students to continually ask, "Does this solution make sense? How do you know?" • Reinforce that students check their work as they progress within and after a task. • Strengthen students' ability to verify solutions through justifications.
MA.K12.MTR.7.1:	Apply mathematics to real-world contexts. Mathematicians who apply mathematics to real-world contexts: • Connect mathematical concepts to everyday experiences. • Use models and methods to understand, represent and solve problems. • Perform investigations to gather data or determine if a method is appropriate. • Redesign models and methods to improve accuracy or efficiency. **Clarifications:** Teachers who encourage students to apply mathematics to real-world contexts: • Provide opportunities for students to create models, both concrete and abstract, and perform investigations. • Challenge students to question the accuracy of their models and methods. • Support students as they validate conclusions by comparing them to the given situation. • Indicate how various concepts can be applied to other disciplines.
ELA.K12.EE.1.1:	Cite evidence to explain and justify reasoning. **Clarifications:** K-1 Students include textual evidence in their oral communication with guidance and support from adults. The evidence can consist of details from the text without naming the text. During 1st grade, students learn how to incorporate the evidence in their writing. 2-3 Students include relevant textual evidence in their written and oral communication. Students should name the text when they refer to it. In 3rd grade, students should use a combination of direct and indirect citations. 4-5 Students continue with previous skills and reference comments made by speakers and peers. Students cite texts that they've directly quoted, paraphrased, or used for information. When writing, students will use the form of citation dictated by the instructor or the style guide referenced by the instructor. 6-8 Students continue with previous skills and use a style guide to create a proper citation. 9-12 Students continue with previous skills and should be aware of existing style guides and the ways in which they differ.
ELA.K12.EE.2.1:	Read and comprehend grade-level complex texts proficiently. **Clarifications:** See Text Complexity for grade-level complexity bands and a text complexity rubric.
ELA.K12.EE.3.1:	Make inferences to support comprehension. **Clarifications:** Students will make inferences before the words infer or inference are introduced. Kindergarten students will answer questions like "Why is the girl smiling?" or make predictions about what will happen based on the title page. Students will use the terms and apply them in 2nd grade and beyond.
ELA.K12.EE.4.1:	Use appropriate collaborative techniques and active listening skills when engaging in discussions in a variety of situations. **Clarifications:** In kindergarten, students learn to listen to one another respectfully. In grades 1-2, students build upon these skills by justifying what they are thinking. For example: "I think _____ because _____." The collaborative conversations are becoming academic conversations. In grades 3-12, students engage in academic conversations discussing claims and justifying their reasoning, refining and applying skills. Students build on ideas, propel the conversation, and support claims and counterclaims with evidence.
ELA.K12.EE.5.1:	Use the accepted rules governing a specific format to create quality work. **Clarifications:** Students will incorporate skills learned into work products to produce quality work. For students to incorporate these skills appropriately, they must receive instruction. A 3rd grade student creating a poster board display must have instruction in how to effectively present information to do quality work.
ELA.K12.EE.6.1:	Use appropriate voice and tone when speaking or writing. **Clarifications:** In kindergarten and 1st grade, students learn the difference between formal and informal language. For example, the way we talk to our friends differs from the way we speak to adults. In 2nd grade and beyond, students practice appropriate social and academic language to discuss texts.
DA.68.S.2.1:	Sustain focused attention, respect, and discipline during classes and performances.
ELD.K12.ELL.SI.1:	English language learners communicate for social and instructional purposes within the school setting.

General Course Information and Notes

VERSION DESCRIPTION

Students discover how music works with an exploratory introduction to the compositional process, and develop fluency in music notation and rhythmic skills, as well as knowledge of basic form. Acquisition of basic aural and keyboard skills provides students with skills to express themselves creatively through music. Public performances may

serve as a resource for specific instructional goals. Students may be required to attend one or more performances outside the school day to support, extend, and assess learning in the classroom.

GENERAL NOTES

Florida's Benchmarks for Excellent Student Thinking (B.E.S.T.) Standards
This course includes Florida's B.E.S.T. ELA Expectations (EE) and Mathematical Thinking and Reasoning Standards (MTRs) for students. Florida educators should intentionally embed these standards within the content and their instruction as applicable. For guidance on the implementation of the EEs and MTRs, please visit cpalms.org/Standards/BEST_Standards.aspx and select the appropriate B.E.S.T. Standards package.

English Language Development ELD Standards Special Notes Section:
Teachers are required to provide listening, speaking, reading and writing instruction that allows English language learners (ELL) to communicate for social and instructional purposes within the school setting. For the given level of English language proficiency and with visual, graphic, or interactive support, students will interact with grade level words, expressions, sentences and discourse to process or produce language necessary for academic success. The ELD standard should specify a relevant content area concept or topic of study chosen by curriculum developers and teachers which maximizes an ELL's need for communication and social skills. To access an ELL supporting document which delineates performance definitions and descriptors, please click on the following link: cpalms.org/uploads/docs/standards/eld/SI.pdf

GENERAL INFORMATION

Course Number: 1300000

Course Path: Section: Grades PreK to 12 Education Courses > **Grade Group:** Grades 6 to 8 Education Courses > **Subject:** Music Education > **SubSubject:** General Music >
Abbreviated Title: M/J MUS THEORY 1
Course Length: Year (Y)
Course Level: 2

Course Status: Draft - Course Pending Approval

Grade Level(s): 6,7,8

Educator Certifications

Vocal Music (Elementary and Secondary Grades K-12)
Instrumental Music (Secondary Grades 7-12)
Instrumental Music (Elementary and Secondary Grades K-12)
Music (Elementary and Secondary Grades K-12)

M/J Music Theory 2 (#1300010) 2022 - And Beyond

Course Standards

Name	Description
MU.68.C.1.1:	Develop strategies for listening to unfamiliar musical works. **Clarifications:** e.g., listening maps, active listening, checklists
MU.68.C.1.2:	Compare, using correct music vocabulary, the aesthetic impact of a performance to one's own hypothesis of the composer's intent. **Clarifications:** e.g., quality recordings, peer group and individual performances, composer notes, instrumentation, expressive elements, title
MU.68.C.1.3:	Identify, aurally, instrumental styles and a variety of instrumental ensembles. **Clarifications:** e.g., Classical, Baroque, Romantic, contemporary, jazz, pop, solo, duet, trio, quartet, small ensembles
MU.68.C.1.4:	Identify, aurally, a variety of vocal styles and ensembles. **Clarifications:** e.g., chant, spiritual, folk, opera, world, jazz, pop, solo, duet, trio, quartet, small ensembles, choirs
MU.68.C.2.3:	Critique personal composition and/or improvisation, using simple criteria, to generate improvements with guidance from teachers and/or peers.
MU.68.C.3.1:	Apply specific criteria to evaluate why a musical work is an exemplar in a specific style or genre.
MU.68.F.1.1:	Create a composition and/or performance, using visual, kinesthetic, digital, and/or acoustic means to manipulate musical elements.
MU.68.F.1.2:	Create an original composition that reflects various performances that use "traditional" and contemporary technologies. **Clarifications:** e.g., MIDI, Internet video resources, personal digital assistants, MP3 players, cell phones, digital recording, music software
MU.68.F.2.1:	Describe several routes a composition or performance could travel from creator to consumer. **Clarifications:** e.g., MIDI and other technology, production, sharing on the Internet, home studios, professional recording studios, sales
MU.68.F.2.2:	Describe how concert attendance can financially impact a community. **Clarifications:** e.g., increased revenues at restaurants, hotels, and travel agencies; venue maintenance, parking attendants
MU.68.F.3.1:	Describe how studying music can enhance citizenship, leadership, and global thinking. **Clarifications:** e.g., dedication to mastering a task, problem-solving, self-discipline, dependability, ability to organize, cultural awareness, mutual respect
MU.68.F.3.2:	Investigate and discuss laws that protect intellectual property, and practice safe, legal, and responsible acquisition and use of musical media.
MU.68.F.3.3:	Identify the tasks involved in the compositional process and discuss how the process might be applied in the work place. **Clarifications:** e.g., idea, development, editing, selling, revising, testing, presenting
MU.68.H.1.5:	Using representative musical works by selected composers, classify compositional characteristics common to a specific time period and/or genre.
MU.68.H.2.1:	Describe the influence of historical events and periods on music composition and performance.
MU.68.H.2.2:	Analyze how technology has changed the way music is created, performed, acquired, and experienced. **Clarifications:** e.g., from harpsichord to piano; from phonograph to CD
MU.68.H.2.3:	Classify the literature being studied by genre, style, and/or time period.
MU.68.H.3.1:	Identify connections among music and other content areas and/or contexts through interdisciplinary collaboration. **Clarifications:** e.g., school: other music classes, social studies, dance, physical education, science, health, math, world languages; community: cultural connections and traditions, ceremonial music, sales and advertising, communication
MU.68.O.1.1:	Compare performances of a musical work to identify artistic choices made by performers. **Clarifications:** e.g., rhythm, melody, timbre, form, tonality, harmony, expressive elements; choral, orchestral, band, ensemble
MU.68.O.2.1:	Create a composition, manipulating musical elements and exploring the effects of those manipulations. **Clarifications:** e.g., using electronic or paper-and-pencil means to experiment with timbre, melody, rhythm, harmony, form, tonality
MU.68.O.2.2:	Demonstrate knowledge of major and minor tonalities through performance and composition. **Clarifications:** e.g., scales; key signatures; relative major/minor; parallel major/minor
MU.68.O.3.1:	Describe how the combination of instrumentation and expressive elements in a musical work can convey a specific thought, idea, mood, and/or image. **Clarifications:** e.g., tempo markings, expression markings, articulation markings, phrasing, scales, modes, harmonic structure, timbre, rhythm, orchestration

MU.68.O.3.2:	Perform the expressive elements of a musical work indicated by the musical score and/or conductor, and transfer new knowledge and experiences to other musical works.
MU.68.S.1.2:	Compose a short musical piece. **Clarifications:** e.g., using traditional, non-traditional, digital, or classroom instruments and/or voice
MU.68.S.1.3:	Arrange a short musical piece by manipulating melody, form, rhythm, and/or voicing.
MU.68.S.1.4:	Sing or play melodies by ear with support from the teacher and/or peers. **Clarifications:** e.g., melodies using traditional classroom instruments and/or voice
MU.68.S.1.5:	Perform melodies with chord progressions. **Clarifications:** e.g., keyboard/piano, keyboard/piano and voice, guitar, voice and guitar
MU.68.S.1.6:	Compose a melody, with or without lyrics, over a standard harmonic progression.
MU.68.S.1.8:	Demonstrate specified mixing and editing techniques using selected software and hardware.
MU.68.S.3.3:	Sight-read standard exercises and simple repertoire. **Clarifications:** e.g., note and rest values, key signatures, time signatures, expressive markings, special harmonic and/or notation symbols
MU.68.S.3.4:	Compare written notation to aural examples and analyze for accuracy of rhythm and pitch. **Clarifications:** e.g., error detection, interval reinforcement
MU.68.S.3.5:	Notate rhythmic phrases and/or melodies, in varying simple meters, performed by someone else.
MA.K12.MTR.1.1:	Mathematicians who participate in effortful learning both individually and with others: • Analyze the problem in a way that makes sense given the task. • Ask questions that will help with solving the task. • Build perseverance by modifying methods as needed while solving a challenging task. • Stay engaged and maintain a positive mindset when working to solve tasks. • Help and support each other when attempting a new method or approach. **Clarifications:** Teachers who encourage students to participate actively in effortful learning both individually and with others: • Cultivate a community of growth mindset learners. • Foster perseverance in students by choosing tasks that are challenging. • Develop students' ability to analyze and problem solve. • Recognize students' effort when solving challenging problems.
MA.K12.MTR.2.1:	Demonstrate understanding by representing problems in multiple ways. Mathematicians who demonstrate understanding by representing problems in multiple ways: • Build understanding through modeling and using manipulatives. • Represent solutions to problems in multiple ways using objects, drawings, tables, graphs and equations. • Progress from modeling problems with objects and drawings to using algorithms and equations. • Express connections between concepts and representations. • Choose a representation based on the given context or purpose. **Clarifications:** Teachers who encourage students to demonstrate understanding by representing problems in multiple ways: • Help students make connections between concepts and representations. • Provide opportunities for students to use manipulatives when investigating concepts. • Guide students from concrete to pictorial to abstract representations as understanding progresses. • Show students that various representations can have different purposes and can be useful in different situations.
MA.K12.MTR.3.1:	Complete tasks with mathematical fluency. Mathematicians who complete tasks with mathematical fluency: • Select efficient and appropriate methods for solving problems within the given context. • Maintain flexibility and accuracy while performing procedures and mental calculations. • Complete tasks accurately and with confidence. • Adapt procedures to apply them to a new context. • Use feedback to improve efficiency when performing calculations. **Clarifications:** Teachers who encourage students to complete tasks with mathematical fluency: • Provide students with the flexibility to solve problems by selecting a procedure that allows them to solve efficiently and accurately. • Offer multiple opportunities for students to practice efficient and generalizable methods. • Provide opportunities for students to reflect on the method they used and determine if a more efficient method could have been used.
	Engage in discussions that reflect on the mathematical thinking of self and others. Mathematicians who engage in discussions that reflect on the mathematical thinking of self and others: • Communicate mathematical ideas, vocabulary and methods effectively. • Analyze the mathematical thinking of others. • Compare the efficiency of a method to those expressed by others. • Recognize errors and suggest how to correctly solve the task.

MA.K12.MTR.4.1:	• Justify results by explaining methods and processes. • Construct possible arguments based on evidence. **Clarifications:** Teachers who encourage students to engage in discussions that reflect on the mathematical thinking of self and others: • Establish a culture in which students ask questions of the teacher and their peers, and error is an opportunity for learning. • Create opportunities for students to discuss their thinking with peers. • Select, sequence and present student work to advance and deepen understanding of correct and increasingly efficient methods. • Develop students' ability to justify methods and compare their responses to the responses of their peers.
MA.K12.MTR.5.1:	Use patterns and structure to help understand and connect mathematical concepts. Mathematicians who use patterns and structure to help understand and connect mathematical concepts: • Focus on relevant details within a problem. • Create plans and procedures to logically order events, steps or ideas to solve problems. • Decompose a complex problem into manageable parts. • Relate previously learned concepts to new concepts. • Look for similarities among problems. • Connect solutions of problems to more complicated large-scale situations. **Clarifications:** Teachers who encourage students to use patterns and structure to help understand and connect mathematical concepts: • Help students recognize the patterns in the world around them and connect these patterns to mathematical concepts. • Support students to develop generalizations based on the similarities found among problems. • Provide opportunities for students to create plans and procedures to solve problems. • Develop students' ability to construct relationships between their current understanding and more sophisticated ways of thinking.
MA.K12.MTR.6.1:	Assess the reasonableness of solutions. Mathematicians who assess the reasonableness of solutions: • Estimate to discover possible solutions. • Use benchmark quantities to determine if a solution makes sense. • Check calculations when solving problems. • Verify possible solutions by explaining the methods used. • Evaluate results based on the given context. **Clarifications:** Teachers who encourage students to assess the reasonableness of solutions: • Have students estimate or predict solutions prior to solving. • Prompt students to continually ask, "Does this solution make sense? How do you know?" • Reinforce that students check their work as they progress within and after a task. • Strengthen students' ability to verify solutions through justifications.
MA.K12.MTR.7.1:	Apply mathematics to real-world contexts. Mathematicians who apply mathematics to real-world contexts: • Connect mathematical concepts to everyday experiences. • Use models and methods to understand, represent and solve problems. • Perform investigations to gather data or determine if a method is appropriate. • Redesign models and methods to improve accuracy or efficiency. **Clarifications:** Teachers who encourage students to apply mathematics to real-world contexts: • Provide opportunities for students to create models, both concrete and abstract, and perform investigations. • Challenge students to question the accuracy of their models and methods. • Support students as they validate conclusions by comparing them to the given situation. • Indicate how various concepts can be applied to other disciplines.
ELA.K12.EE.1.1:	Cite evidence to explain and justify reasoning. **Clarifications:** K-1 Students include textual evidence in their oral communication with guidance and support from adults. The evidence can consist of details from the text without naming the text. During 1st grade, students learn how to incorporate the evidence in their writing. 2-3 Students include relevant textual evidence in their written and oral communication. Students should name the text when they refer to it. In 3rd grade, students should use a combination of direct and indirect citations. 4-5 Students continue with previous skills and reference comments made by speakers and peers. Students cite texts that they've directly quoted, paraphrased, or used for information. When writing, students will use the form of citation dictated by the instructor or the style guide referenced by the instructor. 6-8 Students continue with previous skills and use a style guide to create a proper citation. 9-12 Students continue with previous skills and should be aware of existing style guides and the ways in which they differ.
ELA.K12.EE.2.1:	Read and comprehend grade-level complex texts proficiently. **Clarifications:** See Text Complexity for grade-level complexity bands and a text complexity rubric.
ELA.K12.EE.3.1:	Make inferences to support comprehension. **Clarifications:** Students will make inferences before the words infer or inference are introduced. Kindergarten students will answer questions like "Why is the girl smiling?" or make predictions about what will happen based on the title page. Students will use the terms and apply them in 2nd grade and beyond.

ELA.K12.EE.4.1:	Use appropriate collaborative techniques and active listening skills when engaging in discussions in a variety of situations. **Clarifications:** In kindergarten, students learn to listen to one another respectfully. In grades 1-2, students build upon these skills by justifying what they are thinking. For example: "I think _____ because _____." The collaborative conversations are becoming academic conversations. In grades 3-12, students engage in academic conversations discussing claims and justifying their reasoning, refining and applying skills. Students build on ideas, propel the conversation, and support claims and counterclaims with evidence.
ELA.K12.EE.5.1:	Use the accepted rules governing a specific format to create quality work. **Clarifications:** Students will incorporate skills learned into work products to produce quality work. For students to incorporate these skills appropriately, they must receive instruction. A 3rd grade student creating a poster board display must have instruction in how to effectively present information to do quality work.
ELA.K12.EE.6.1:	Use appropriate voice and tone when speaking or writing. **Clarifications:** In kindergarten and 1st grade, students learn the difference between formal and informal language. For example, the way we talk to our friends differs from the way we speak to adults. In 2nd grade and beyond, students practice appropriate social and academic language to discuss texts.
DA.68.S.2.1:	Sustain focused attention, respect, and discipline during classes and performances.
ELD.K12.ELL.SI.1:	English language learners communicate for social and instructional purposes within the school setting.

General Course Information and Notes

VERSION DESCRIPTION

Students with prior music theory experience expand their understanding of the technical and structural elements of music. Intermediate-level music theorists develop the aural skills needed for a variety of musical styles and processes, including composition, improvisation, performance, and consumerism. Class work focuses on creativity and strengthening analytical abilities. Public performances may serve as a resource for specific instructional goals. Students may be required to attend one or more performances outside the school day to support, extend, and assess learning in the classroom.

GENERAL NOTES

Florida's Benchmarks for Excellent Student Thinking (B.E.S.T.) Standards
This course includes Florida's B.E.S.T. ELA Expectations (EE) and Mathematical Thinking and Reasoning Standards (MTRs) for students. Florida educators should intentionally embed these standards within the content and their instruction as applicable. For guidance on the implementation of the EEs and MTRs, please visit cpalms.org/Standards/BEST_Standards.aspx and select the appropriate B.E.S.T. Standards package.

English Language Development ELD Standards Special Notes Section:
Teachers are required to provide listening, speaking, reading and writing instruction that allows English language learners (ELL) to communicate for social and instructional purposes within the school setting. For the given level of English language proficiency and with visual, graphic, or interactive support, students will interact with grade level words, expressions, sentences and discourse to process or produce language necessary for academic success. The ELD standard should specify a relevant content area concept or topic of study chosen by curriculum developers and teachers which maximizes an ELL's need for communication and social skills. To access an ELL supporting document which delineates performance definitions and descriptors, please click on the following link: cpalms.org/uploads/docs/standards/eld/SI.pdf

GENERAL INFORMATION

Course Number: 1300010

Course Path: Section: Grades PreK to 12 Education Courses > **Grade Group:** Grades 6 to 8 Education Courses > **Subject:** Music Education > **SubSubject:** General Music >
Abbreviated Title: M/J MUS THEORY 2
Course Length: Year (Y)
Course Level: 2

Course Status: Draft - Course Pending Approval
Grade Level(s): 6,7,8

Educator Certifications

Vocal Music (Elementary and Secondary Grades K-12)
Instrumental Music (Secondary Grades 7-12)
Instrumental Music (Elementary and Secondary Grades K-12)
Music (Elementary and Secondary Grades K-12)

M/J Basic Music Theory (#1300025) 2022 - And Beyond

Course Standards

Name	Description
MU.68.C.1.1:	Develop strategies for listening to unfamiliar musical works. **Clarifications:** e.g., listening maps, active listening, checklists
MU.68.C.1.2:	Compare, using correct music vocabulary, the aesthetic impact of a performance to one's own hypothesis of the composer's intent. **Clarifications:** e.g., quality recordings, peer group and individual performances, composer notes, instrumentation, expressive elements, title
MU.68.F.3.2:	Investigate and discuss laws that protect intellectual property, and practice safe, legal, and responsible acquisition and use of musical media.
MU.68.H.2.3:	Classify the literature being studied by genre, style, and/or time period.
MU.68.H.3.2:	Discuss how the absence of music would affect other content areas and contexts. **Clarifications:** e.g., theatre and dance, movies, sporting events, video games, commercial advertising, social gatherings, civic and religious ceremonies, plays
MU.68.O.2.2:	Demonstrate knowledge of major and minor tonalities through performance and composition. **Clarifications:** e.g., scales; key signatures; relative major/minor; parallel major/minor
MU.68.O.3.1:	Describe how the combination of instrumentation and expressive elements in a musical work can convey a specific thought, idea, mood, and/or image. **Clarifications:** e.g., tempo markings, expression markings, articulation markings, phrasing, scales, modes, harmonic structure, timbre, rhythm, orchestration
MU.68.S.1.1:	Improvise rhythmic and melodic phrases to accompany familiar songs and/or standard harmonic progressions. **Clarifications:** e.g., blues, rock
MU.68.S.1.3:	Arrange a short musical piece by manipulating melody, form, rhythm, and/or voicing.
MU.68.S.1.4:	Sing or play melodies by ear with support from the teacher and/or peers. **Clarifications:** e.g., melodies using traditional classroom instruments and/or voice
MU.68.S.1.6:	Compose a melody, with or without lyrics, over a standard harmonic progression.
MU.68.S.3.3:	Sight-read standard exercises and simple repertoire. **Clarifications:** e.g., note and rest values, key signatures, time signatures, expressive markings, special harmonic and/or notation symbols
MU.68.S.3.4:	Compare written notation to aural examples and analyze for accuracy of rhythm and pitch. **Clarifications:** e.g., error detection, interval reinforcement
MU.68.S.3.5:	Notate rhythmic phrases and/or melodies, in varying simple meters, performed by someone else.
MA.K12.MTR.1.1:	Mathematicians who participate in effortful learning both individually and with others: • Analyze the problem in a way that makes sense given the task. • Ask questions that will help with solving the task. • Build perseverance by modifying methods as needed while solving a challenging task. • Stay engaged and maintain a positive mindset when working to solve tasks. • Help and support each other when attempting a new method or approach. **Clarifications:** Teachers who encourage students to participate actively in effortful learning both individually and with others: • Cultivate a community of growth mindset learners. • Foster perseverance in students by choosing tasks that are challenging. • Develop students' ability to analyze and problem solve. • Recognize students' effort when solving challenging problems.
MA.K12.MTR.2.1:	Demonstrate understanding by representing problems in multiple ways. Mathematicians who demonstrate understanding by representing problems in multiple ways: • Build understanding through modeling and using manipulatives. • Represent solutions to problems in multiple ways using objects, drawings, tables, graphs and equations. • Progress from modeling problems with objects and drawings to using algorithms and equations. • Express connections between concepts and representations. • Choose a representation based on the given context or purpose. **Clarifications:** Teachers who encourage students to demonstrate understanding by representing problems in multiple ways: • Help students make connections between concepts and representations. • Provide opportunities for students to use manipulatives when investigating concepts.

- Guide students from concrete to pictorial to abstract representations as understanding progresses.
- Show students that various representations can have different purposes and can be useful in different situations.

MA.K12.MTR.3.1:

Complete tasks with mathematical fluency.
Mathematicians who complete tasks with mathematical fluency:

- Select efficient and appropriate methods for solving problems within the given context.
- Maintain flexibility and accuracy while performing procedures and mental calculations.
- Complete tasks accurately and with confidence.
- Adapt procedures to apply them to a new context.
- Use feedback to improve efficiency when performing calculations.

Clarifications:
Teachers who encourage students to complete tasks with mathematical fluency:

- Provide students with the flexibility to solve problems by selecting a procedure that allows them to solve efficiently and accurately.
- Offer multiple opportunities for students to practice efficient and generalizable methods.
- Provide opportunities for students to reflect on the method they used and determine if a more efficient method could have been used.

MA.K12.MTR.4.1:

Engage in discussions that reflect on the mathematical thinking of self and others.
Mathematicians who engage in discussions that reflect on the mathematical thinking of self and others:

- Communicate mathematical ideas, vocabulary and methods effectively.
- Analyze the mathematical thinking of others.
- Compare the efficiency of a method to those expressed by others.
- Recognize errors and suggest how to correctly solve the task.
- Justify results by explaining methods and processes.
- Construct possible arguments based on evidence.

Clarifications:
Teachers who encourage students to engage in discussions that reflect on the mathematical thinking of self and others:

- Establish a culture in which students ask questions of the teacher and their peers, and error is an opportunity for learning.
- Create opportunities for students to discuss their thinking with peers.
- Select, sequence and present student work to advance and deepen understanding of correct and increasingly efficient methods.
- Develop students' ability to justify methods and compare their responses to the responses of their peers.

MA.K12.MTR.5.1:

Use patterns and structure to help understand and connect mathematical concepts.
Mathematicians who use patterns and structure to help understand and connect mathematical concepts:

- Focus on relevant details within a problem.
- Create plans and procedures to logically order events, steps or ideas to solve problems.
- Decompose a complex problem into manageable parts.
- Relate previously learned concepts to new concepts.
- Look for similarities among problems.
- Connect solutions of problems to more complicated large-scale situations.

Clarifications:
Teachers who encourage students to use patterns and structure to help understand and connect mathematical concepts:

- Help students recognize the patterns in the world around them and connect these patterns to mathematical concepts.
- Support students to develop generalizations based on the similarities found among problems.
- Provide opportunities for students to create plans and procedures to solve problems.
- Develop students' ability to construct relationships between their current understanding and more sophisticated ways of thinking.

MA.K12.MTR.6.1:

Assess the reasonableness of solutions.
Mathematicians who assess the reasonableness of solutions:

- Estimate to discover possible solutions.
- Use benchmark quantities to determine if a solution makes sense.
- Check calculations when solving problems.
- Verify possible solutions by explaining the methods used.
- Evaluate results based on the given context.

Clarifications:
Teachers who encourage students to assess the reasonableness of solutions:

- Have students estimate or predict solutions prior to solving.
- Prompt students to continually ask, "Does this solution make sense? How do you know?"
- Reinforce that students check their work as they progress within and after a task.
- Strengthen students' ability to verify solutions through justifications.

MA.K12.MTR.7.1:

Apply mathematics to real-world contexts.
Mathematicians who apply mathematics to real-world contexts:

- Connect mathematical concepts to everyday experiences.
- Use models and methods to understand, represent and solve problems.
- Perform investigations to gather data or determine if a method is appropriate. • Redesign models and methods to improve accuracy or efficiency.

Clarifications:
Teachers who encourage students to apply mathematics to real-world contexts:

- Provide opportunities for students to create models, both concrete and abstract, and perform investigations.
- Challenge students to question the accuracy of their models and methods.
- Support students as they validate conclusions by comparing them to the given situation.

	• Indicate how various concepts can be applied to other disciplines.
ELA.K12.EE.1.1:	Cite evidence to explain and justify reasoning. **Clarifications:** K-1 Students include textual evidence in their oral communication with guidance and support from adults. The evidence can consist of details from the text without naming the text. During 1st grade, students learn how to incorporate the evidence in their writing. 2-3 Students include relevant textual evidence in their written and oral communication. Students should name the text when they refer to it. In 3rd grade, students should use a combination of direct and indirect citations. 4-5 Students continue with previous skills and reference comments made by speakers and peers. Students cite texts that they've directly quoted, paraphrased, or used for information. When writing, students will use the form of citation dictated by the instructor or the style guide referenced by the instructor. 6-8 Students continue with previous skills and use a style guide to create a proper citation. 9-12 Students continue with previous skills and should be aware of existing style guides and the ways in which they differ.
ELA.K12.EE.2.1:	Read and comprehend grade-level complex texts proficiently. **Clarifications:** See Text Complexity for grade-level complexity bands and a text complexity rubric.
ELA.K12.EE.3.1:	Make inferences to support comprehension. **Clarifications:** Students will make inferences before the words infer or inference are introduced. Kindergarten students will answer questions like "Why is the girl smiling?" or make predictions about what will happen based on the title page. Students will use the terms and apply them in 2nd grade and beyond.
ELA.K12.EE.4.1:	Use appropriate collaborative techniques and active listening skills when engaging in discussions in a variety of situations. **Clarifications:** In kindergarten, students learn to listen to one another respectfully. In grades 1-2, students build upon these skills by justifying what they are thinking. For example: "I think _____ because _____." The collaborative conversations are becoming academic conversations. In grades 3-12, students engage in academic conversations discussing claims and justifying their reasoning, refining and applying skills. Students build on ideas, propel the conversation, and support claims and counterclaims with evidence.
ELA.K12.EE.5.1:	Use the accepted rules governing a specific format to create quality work. **Clarifications:** Students will incorporate skills learned into work products to produce quality work. For students to incorporate these skills appropriately, they must receive instruction. A 3rd grade student creating a poster board display must have instruction in how to effectively present information to do quality work.
ELA.K12.EE.6.1:	Use appropriate voice and tone when speaking or writing. **Clarifications:** In kindergarten and 1st grade, students learn the difference between formal and informal language. For example, the way we talk to our friends differs from the way we speak to adults. In 2nd grade and beyond, students practice appropriate social and academic language to discuss texts.
DA.68.S.2.1:	Sustain focused attention, respect, and discipline during classes and performances.
ELD.K12.ELL.SI.1:	English language learners communicate for social and instructional purposes within the school setting.

General Course Information and Notes

GENERAL NOTES

In this introductory theory course, students develop fluency in reading and writing music, as well as knowledge of basic form. Acquisition of basic aural and keyboard skills provides students with skills to express themselves creatively through music. Public performances may serve as a resource for specific instructional goals. Students may be required to attend one or more performances outside of the school day to support, extend, and assess learning in the classroom.

English Language Development (ELD) Standards Special Notes Section:

Teachers are required to provide listening, speaking, reading and writing instruction that allows English language learners (ELL) to communicate for social and instructional purposes within the school setting. For the given level of English language proficiency and with visual, graphic, or interactive support, students will interact with grade level words, expressions, sentences and discourse to process or produce language necessary for academic success. The ELD standard should specify a relevant content area concept or topic of study chosen by curriculum developers and teachers which maximizes an ELL's need for communication and social skills. To access an ELL supporting document which delineates performance definitions and descriptors, please click on the following link: cpalms.org/uploads/docs/standards/eld/SI.pdf.

Florida's Benchmarks for Excellent Student Thinking (B.E.S.T.) Standards

This course includes Florida's B.E.S.T. ELA Expectations (EE) and Mathematical Thinking and Reasoning Standards (MTRs) for students. Florida educators should intentionally embed these standards within the content and their instruction as applicable. For guidance on the implementation of the EEs and MTRs, please visit cpalms.org/Standards/BEST_Standards.aspx and select the appropriate B.E.S.T. Standards package.

GENERAL INFORMATION

Course Path: Section: Grades PreK to 12 Education

Course Number: 1300025

Courses > **Grade Group:** Grades 6 to 8 Education
Courses > **Subject:** Music Education > **SubSubject:** General Music >

Abbreviated Title: M/J BASIC MUS THEORY

Course Length: Semester (S)

Course Type: Elective Course

Course Level: 2

Course Status: Draft - Course Pending Approval

Grade Level(s): 6,7,8

Educator Certifications

Instrumental Music (Secondary Grades 7-12)
Music (Elementary and Secondary Grades K-12)
Vocal Music (Elementary and Secondary Grades K-12)
Instrumental Music (Elementary and Secondary Grades K-12)

M/J Understanding Music (#1300030) 2022 - And Beyond

Course Standards

Name	Description
MU.68.C.1.1:	Develop strategies for listening to unfamiliar musical works. **Clarifications:** e.g., listening maps, active listening, checklists
MU.68.C.1.2:	Compare, using correct music vocabulary, the aesthetic impact of a performance to one's own hypothesis of the composer's intent. **Clarifications:** e.g., quality recordings, peer group and individual performances, composer notes, instrumentation, expressive elements, title
MU.68.C.1.3:	Identify, aurally, instrumental styles and a variety of instrumental ensembles. **Clarifications:** e.g., Classical, Baroque, Romantic, contemporary, jazz, pop, solo, duet, trio, quartet, small ensembles
MU.68.C.1.4:	Identify, aurally, a variety of vocal styles and ensembles. **Clarifications:** e.g., chant, spiritual, folk, opera, world, jazz, pop, solo, duet, trio, quartet, small ensembles, choirs
MU.68.C.3.1:	Apply specific criteria to evaluate why a musical work is an exemplar in a specific style or genre.
MU.68.F.3.1:	Describe how studying music can enhance citizenship, leadership, and global thinking. **Clarifications:** e.g., dedication to mastering a task, problem-solving, self-discipline, dependability, ability to organize, cultural awareness, mutual respect
MU.68.F.3.2:	Investigate and discuss laws that protect intellectual property, and practice safe, legal, and responsible acquisition and use of musical media.
MU.68.H.1.1:	Describe the functions of music from various cultures and time periods.
MU.68.H.1.2:	Identify the works of representative composers within a specific style or time period.
MU.68.H.1.5:	Using representative musical works by selected composers, classify compositional characteristics common to a specific time period and/or genre.
MU.68.H.2.1:	Describe the influence of historical events and periods on music composition and performance.
MU.68.H.2.2:	Analyze how technology has changed the way music is created, performed, acquired, and experienced. **Clarifications:** e.g., from harpsichord to piano; from phonograph to CD
MU.68.H.2.3:	Classify the literature being studied by genre, style, and/or time period.
MU.68.H.3.1:	Identify connections among music and other content areas and/or contexts through interdisciplinary collaboration. **Clarifications:** e.g., school: other music classes, social studies, dance, physical education, science, health, math, world languages; community: cultural connections and traditions, ceremonial music, sales and advertising, communication
MU.68.H.3.2:	Discuss how the absence of music would affect other content areas and contexts. **Clarifications:** e.g., theatre and dance, movies, sporting events, video games, commercial advertising, social gatherings, civic and religious ceremonies, plays
MU.68.O.1.1:	Compare performances of a musical work to identify artistic choices made by performers. **Clarifications:** e.g., rhythm, melody, timbre, form, tonality, harmony, expressive elements; choral, orchestral, band, ensemble
MU.68.O.3.1:	Describe how the combination of instrumentation and expressive elements in a musical work can convey a specific thought, idea, mood, and/or image. **Clarifications:** e.g., tempo markings, expression markings, articulation markings, phrasing, scales, modes, harmonic structure, timbre, rhythm, orchestration
MA.K12.MTR.1.1:	Mathematicians who participate in effortful learning both individually and with others: • Analyze the problem in a way that makes sense given the task. • Ask questions that will help with solving the task. • Build perseverance by modifying methods as needed while solving a challenging task. • Stay engaged and maintain a positive mindset when working to solve tasks. • Help and support each other when attempting a new method or approach. **Clarifications:** Teachers who encourage students to participate actively in effortful learning both individually and with others: • Cultivate a community of growth mindset learners. • Foster perseverance in students by choosing tasks that are challenging. • Develop students' ability to analyze and problem solve. • Recognize students' effort when solving challenging problems.
	Demonstrate understanding by representing problems in multiple ways. Mathematicians who demonstrate understanding by representing problems in multiple ways: • Build understanding through modeling and using manipulatives. • Represent solutions to problems in multiple ways using objects, drawings, tables, graphs and equations. • Progress from modeling problems with objects and drawings to using algorithms and equations.

MA.K12.MTR.2.1:	• Express connections between concepts and representations. • Choose a representation based on the given context or purpose. **Clarifications:** Teachers who encourage students to demonstrate understanding by representing problems in multiple ways: • Help students make connections between concepts and representations. • Provide opportunities for students to use manipulatives when investigating concepts. • Guide students from concrete to pictorial to abstract representations as understanding progresses. • Show students that various representations can have different purposes and can be useful in different situations.
MA.K12.MTR.3.1:	Complete tasks with mathematical fluency. Mathematicians who complete tasks with mathematical fluency: • Select efficient and appropriate methods for solving problems within the given context. • Maintain flexibility and accuracy while performing procedures and mental calculations. • Complete tasks accurately and with confidence. • Adapt procedures to apply them to a new context. • Use feedback to improve efficiency when performing calculations. **Clarifications:** Teachers who encourage students to complete tasks with mathematical fluency: • Provide students with the flexibility to solve problems by selecting a procedure that allows them to solve efficiently and accurately. • Offer multiple opportunities for students to practice efficient and generalizable methods. • Provide opportunities for students to reflect on the method they used and determine if a more efficient method could have been used.
MA.K12.MTR.4.1:	Engage in discussions that reflect on the mathematical thinking of self and others. Mathematicians who engage in discussions that reflect on the mathematical thinking of self and others: • Communicate mathematical ideas, vocabulary and methods effectively. • Analyze the mathematical thinking of others. • Compare the efficiency of a method to those expressed by others. • Recognize errors and suggest how to correctly solve the task. • Justify results by explaining methods and processes. • Construct possible arguments based on evidence. **Clarifications:** Teachers who encourage students to engage in discussions that reflect on the mathematical thinking of self and others: • Establish a culture in which students ask questions of the teacher and their peers, and error is an opportunity for learning. • Create opportunities for students to discuss their thinking with peers. • Select, sequence and present student work to advance and deepen understanding of correct and increasingly efficient methods. • Develop students' ability to justify methods and compare their responses to the responses of their peers.
MA.K12.MTR.5.1:	Use patterns and structure to help understand and connect mathematical concepts. Mathematicians who use patterns and structure to help understand and connect mathematical concepts: • Focus on relevant details within a problem. • Create plans and procedures to logically order events, steps or ideas to solve problems. • Decompose a complex problem into manageable parts. • Relate previously learned concepts to new concepts. • Look for similarities among problems. • Connect solutions of problems to more complicated large-scale situations. **Clarifications:** Teachers who encourage students to use patterns and structure to help understand and connect mathematical concepts: • Help students recognize the patterns in the world around them and connect these patterns to mathematical concepts. • Support students to develop generalizations based on the similarities found among problems. • Provide opportunities for students to create plans and procedures to solve problems. • Develop students' ability to construct relationships between their current understanding and more sophisticated ways of thinking.
MA.K12.MTR.6.1:	Assess the reasonableness of solutions. Mathematicians who assess the reasonableness of solutions: • Estimate to discover possible solutions. • Use benchmark quantities to determine if a solution makes sense. • Check calculations when solving problems. • Verify possible solutions by explaining the methods used. • Evaluate results based on the given context. **Clarifications:** Teachers who encourage students to assess the reasonableness of solutions: • Have students estimate or predict solutions prior to solving. • Prompt students to continually ask, "Does this solution make sense? How do you know?" • Reinforce that students check their work as they progress within and after a task. • Strengthen students' ability to verify solutions through justifications.
	Apply mathematics to real-world contexts. Mathematicians who apply mathematics to real-world contexts: • Connect mathematical concepts to everyday experiences. • Use models and methods to understand, represent and solve problems.

MA.K12.MTR.7.1:	• Perform investigations to gather data or determine if a method is appropriate. • Redesign models and methods to improve accuracy or efficiency. **Clarifications:** Teachers who encourage students to apply mathematics to real-world contexts: • Provide opportunities for students to create models, both concrete and abstract, and perform investigations. • Challenge students to question the accuracy of their models and methods. • Support students as they validate conclusions by comparing them to the given situation. • Indicate how various concepts can be applied to other disciplines.
ELA.K12.EE.1.1:	Cite evidence to explain and justify reasoning. **Clarifications:** K-1 Students include textual evidence in their oral communication with guidance and support from adults. The evidence can consist of details from the text without naming the text. During 1st grade, students learn how to incorporate the evidence in their writing. 2-3 Students include relevant textual evidence in their written and oral communication. Students should name the text when they refer to it. In 3rd grade, students should use a combination of direct and indirect citations. 4-5 Students continue with previous skills and reference comments made by speakers and peers. Students cite texts that they've directly quoted, paraphrased, or used for information. When writing, students will use the form of citation dictated by the instructor or the style guide referenced by the instructor. 6-8 Students continue with previous skills and use a style guide to create a proper citation. 9-12 Students continue with previous skills and should be aware of existing style guides and the ways in which they differ.
ELA.K12.EE.2.1:	Read and comprehend grade-level complex texts proficiently. **Clarifications:** See Text Complexity for grade-level complexity bands and a text complexity rubric.
ELA.K12.EE.3.1:	Make inferences to support comprehension. **Clarifications:** Students will make inferences before the words infer or inference are introduced. Kindergarten students will answer questions like "Why is the girl smiling?" or make predictions about what will happen based on the title page. Students will use the terms and apply them in 2nd grade and beyond.
ELA.K12.EE.4.1:	Use appropriate collaborative techniques and active listening skills when engaging in discussions in a variety of situations. **Clarifications:** In kindergarten, students learn to listen to one another respectfully. In grades 1-2, students build upon these skills by justifying what they are thinking. For example: "I think _____ because _____." The collaborative conversations are becoming academic conversations. In grades 3-12, students engage in academic conversations discussing claims and justifying their reasoning, refining and applying skills. Students build on ideas, propel the conversation, and support claims and counterclaims with evidence.
ELA.K12.EE.5.1:	Use the accepted rules governing a specific format to create quality work. **Clarifications:** Students will incorporate skills learned into work products to produce quality work. For students to incorporate these skills appropriately, they must receive instruction. A 3rd grade student creating a poster board display must have instruction in how to effectively present information to do quality work.
ELA.K12.EE.6.1:	Use appropriate voice and tone when speaking or writing. **Clarifications:** In kindergarten and 1st grade, students learn the difference between formal and informal language. For example, the way we talk to our friends differs from the way we speak to adults. In 2nd grade and beyond, students practice appropriate social and academic language to discuss texts.
DA.68.S.2.1:	Sustain focused attention, respect, and discipline during classes and performances.
ELD.K12.ELL.SI.1:	English language learners communicate for social and instructional purposes within the school setting.

General Course Information and Notes

GENERAL NOTES

Students engage in an exploratory study of music through the examination of significant composers and their compositions across selected musical eras and/or genres. Students will also learn about modern and historical instruments, and gain a rudimentary understanding of the elements of music in order to develop strategies for listening to and appreciating musical works. Students may be expected to attend one or more performances outside of the school day to support and extend learning in the classroom.
English Language Development (ELD) Standards Special Notes Section:

Teachers are required to provide listening, speaking, reading and writing instruction that allows English language learners (ELL) to communicate for social and instructional purposes within the school setting. For the given level of English language proficiency and with visual, graphic, or interactive support, students will interact with grade level words, expressions, sentences and discourse to process or produce language necessary for academic success. The ELD standard should specify a relevant content area concept or topic of study chosen by curriculum developers and teachers which maximizes an ELL's need for communication and social skills. To access an ELL supporting document which delineates performance definitions and descriptors, please click on the following link: cpalms.org/uploads/docs/standards/eld/SI.pdf.

Florida's Benchmarks for Excellent Student Thinking (B.E.S.T.) Standards
This course includes Florida's B.E.S.T. ELA Expectations (EE) and Mathematical Thinking and Reasoning Standards (MTRs) for students. Florida educators should intentionally embed these standards within the content and their instruction as applicable. For guidance on the implementation of the EEs and MTRs, please visit cpalms.org/Standards/BEST_Standards.aspx and select the appropriate B.E.S.T. Standards package.

GENERAL INFORMATION

Course Number: 1300030

Course Path: Section: Grades PreK to 12 Education Courses > **Grade Group:** Grades 6 to 8 Education Courses > **Subject:** Music Education > **SubSubject:** General Music >

Abbreviated Title: M/J UNDERSTAND MUSIC

Course Length: Semester (S)

Course Type: Elective Course

Course Level: 2

Course Status: Draft - Course Pending Approval

Grade Level(s): 6,7,8

Educator Certifications

Instrumental Music (Secondary Grades 7-12)
Music (Elementary and Secondary Grades K-12)
Vocal Music (Elementary and Secondary Grades K-12)
Instrumental Music (Elementary and Secondary Grades K-12)

M/J Exploring Music Performance (#1300080) 2022 - And Beyond

Course Standards

Name	Description
MU.68.C.1.1:	Develop strategies for listening to unfamiliar musical works. **Clarifications:** e.g., listening maps, active listening, checklists
MU.68.C.1.2:	Compare, using correct music vocabulary, the aesthetic impact of a performance to one's own hypothesis of the composer's intent. **Clarifications:** e.g., quality recordings, peer group and individual performances, composer notes, instrumentation, expressive elements, title
MU.68.C.2.1:	Critique personal performance, experiment with a variety of solutions, and make appropriate adjustments with guidance from teachers and peers. **Clarifications:** e.g., intonation, balance, blend, phrasing, rhythm
MU.68.C.2.2:	Critique, using correct music vocabulary, changes in one's own or others' musical performance resulting from practice or rehearsal. **Clarifications:** e.g., blend, balance, ensemble playing, sonority, technique, tone quality
MU.68.F.3.1:	Describe how studying music can enhance citizenship, leadership, and global thinking. **Clarifications:** e.g., dedication to mastering a task, problem-solving, self-discipline, dependability, ability to organize, cultural awareness, mutual respect
MU.68.F.3.2:	Investigate and discuss laws that protect intellectual property, and practice safe, legal, and responsible acquisition and use of musical media.
MU.68.H.2.1:	Describe the influence of historical events and periods on music composition and performance.
MU.68.H.3.1:	Identify connections among music and other content areas and/or contexts through interdisciplinary collaboration. **Clarifications:** e.g., school: other music classes, social studies, dance, physical education, science, health, math, world languages; community: cultural connections and traditions, ceremonial music, sales and advertising, communication
MU.68.H.3.2:	Discuss how the absence of music would affect other content areas and contexts. **Clarifications:** e.g., theatre and dance, movies, sporting events, video games, commercial advertising, social gatherings, civic and religious ceremonies, plays
MU.68.O.3.2:	Perform the expressive elements of a musical work indicated by the musical score and/or conductor, and transfer new knowledge and experiences to other musical works.
MU.68.S.3.1:	Sing and/or play age-appropriate repertoire expressively. **Clarifications:** e.g., technique, phrasing, dynamics, tone quality, blend, balance, intonation, kinesthetic support/response
MU.68.S.3.2:	Demonstrate proper vocal or instrumental technique. **Clarifications:** e.g., posture, breathing, fingering, embouchure, bow technique, tuning, strumming
MA.K12.MTR.1.1:	Mathematicians who participate in effortful learning both individually and with others: • Analyze the problem in a way that makes sense given the task. • Ask questions that will help with solving the task. • Build perseverance by modifying methods as needed while solving a challenging task. • Stay engaged and maintain a positive mindset when working to solve tasks. • Help and support each other when attempting a new method or approach. **Clarifications:** Teachers who encourage students to participate actively in effortful learning both individually and with others: • Cultivate a community of growth mindset learners. • Foster perseverance in students by choosing tasks that are challenging. • Develop students' ability to analyze and problem solve. • Recognize students' effort when solving challenging problems.
MA.K12.MTR.2.1:	Demonstrate understanding by representing problems in multiple ways. Mathematicians who demonstrate understanding by representing problems in multiple ways: • Build understanding through modeling and using manipulatives. • Represent solutions to problems in multiple ways using objects, drawings, tables, graphs and equations. • Progress from modeling problems with objects and drawings to using algorithms and equations. • Express connections between concepts and representations. • Choose a representation based on the given context or purpose. **Clarifications:** Teachers who encourage students to demonstrate understanding by representing problems in multiple ways: • Help students make connections between concepts and representations. • Provide opportunities for students to use manipulatives when investigating concepts.

- Guide students from concrete to pictorial to abstract representations as understanding progresses.
- Show students that various representations can have different purposes and can be useful in different situations.

MA.K12.MTR.3.1:

Complete tasks with mathematical fluency.
Mathematicians who complete tasks with mathematical fluency:

- Select efficient and appropriate methods for solving problems within the given context.
- Maintain flexibility and accuracy while performing procedures and mental calculations.
- Complete tasks accurately and with confidence.
- Adapt procedures to apply them to a new context.
- Use feedback to improve efficiency when performing calculations.

Clarifications:
Teachers who encourage students to complete tasks with mathematical fluency:

- Provide students with the flexibility to solve problems by selecting a procedure that allows them to solve efficiently and accurately.
- Offer multiple opportunities for students to practice efficient and generalizable methods.
- Provide opportunities for students to reflect on the method they used and determine if a more efficient method could have been used.

MA.K12.MTR.4.1:

Engage in discussions that reflect on the mathematical thinking of self and others.
Mathematicians who engage in discussions that reflect on the mathematical thinking of self and others:

- Communicate mathematical ideas, vocabulary and methods effectively.
- Analyze the mathematical thinking of others.
- Compare the efficiency of a method to those expressed by others.
- Recognize errors and suggest how to correctly solve the task.
- Justify results by explaining methods and processes.
- Construct possible arguments based on evidence.

Clarifications:
Teachers who encourage students to engage in discussions that reflect on the mathematical thinking of self and others:

- Establish a culture in which students ask questions of the teacher and their peers, and error is an opportunity for learning.
- Create opportunities for students to discuss their thinking with peers.
- Select, sequence and present student work to advance and deepen understanding of correct and increasingly efficient methods.
- Develop students' ability to justify methods and compare their responses to the responses of their peers.

MA.K12.MTR.5.1:

Use patterns and structure to help understand and connect mathematical concepts.
Mathematicians who use patterns and structure to help understand and connect mathematical concepts:

- Focus on relevant details within a problem.
- Create plans and procedures to logically order events, steps or ideas to solve problems.
- Decompose a complex problem into manageable parts.
- Relate previously learned concepts to new concepts.
- Look for similarities among problems.
- Connect solutions of problems to more complicated large-scale situations.

Clarifications:
Teachers who encourage students to use patterns and structure to help understand and connect mathematical concepts:

- Help students recognize the patterns in the world around them and connect these patterns to mathematical concepts.
- Support students to develop generalizations based on the similarities found among problems.
- Provide opportunities for students to create plans and procedures to solve problems.
- Develop students' ability to construct relationships between their current understanding and more sophisticated ways of thinking.

MA.K12.MTR.6.1:

Assess the reasonableness of solutions.
Mathematicians who assess the reasonableness of solutions:

- Estimate to discover possible solutions.
- Use benchmark quantities to determine if a solution makes sense.
- Check calculations when solving problems.
- Verify possible solutions by explaining the methods used.
- Evaluate results based on the given context.

Clarifications:
Teachers who encourage students to assess the reasonableness of solutions:

- Have students estimate or predict solutions prior to solving.
- Prompt students to continually ask, "Does this solution make sense? How do you know?"
- Reinforce that students check their work as they progress within and after a task.
- Strengthen students' ability to verify solutions through justifications.

MA.K12.MTR.7.1:

Apply mathematics to real-world contexts.
Mathematicians who apply mathematics to real-world contexts:

- Connect mathematical concepts to everyday experiences.
- Use models and methods to understand, represent and solve problems.
- Perform investigations to gather data or determine if a method is appropriate. • Redesign models and methods to improve accuracy or efficiency.

Clarifications:
Teachers who encourage students to apply mathematics to real-world contexts:

- Provide opportunities for students to create models, both concrete and abstract, and perform investigations.
- Challenge students to question the accuracy of their models and methods.
- Support students as they validate conclusions by comparing them to the given situation.

	• Indicate how various concepts can be applied to other disciplines.
ELA.K12.EE.1.1:	Cite evidence to explain and justify reasoning. **Clarifications:** K-1 Students include textual evidence in their oral communication with guidance and support from adults. The evidence can consist of details from the text without naming the text. During 1st grade, students learn how to incorporate the evidence in their writing. 2-3 Students include relevant textual evidence in their written and oral communication. Students should name the text when they refer to it. In 3rd grade, students should use a combination of direct and indirect citations. 4-5 Students continue with previous skills and reference comments made by speakers and peers. Students cite texts that they've directly quoted, paraphrased, or used for information. When writing, students will use the form of citation dictated by the instructor or the style guide referenced by the instructor. 6-8 Students continue with previous skills and use a style guide to create a proper citation. 9-12 Students continue with previous skills and should be aware of existing style guides and the ways in which they differ.
ELA.K12.EE.2.1:	Read and comprehend grade-level complex texts proficiently. **Clarifications:** See Text Complexity for grade-level complexity bands and a text complexity rubric.
ELA.K12.EE.3.1:	Make inferences to support comprehension. **Clarifications:** Students will make inferences before the words infer or inference are introduced. Kindergarten students will answer questions like "Why is the girl smiling?" or make predictions about what will happen based on the title page. Students will use the terms and apply them in 2nd grade and beyond.
ELA.K12.EE.4.1:	Use appropriate collaborative techniques and active listening skills when engaging in discussions in a variety of situations. **Clarifications:** In kindergarten, students learn to listen to one another respectfully. In grades 1-2, students build upon these skills by justifying what they are thinking. For example: "I think _____ because _____." The collaborative conversations are becoming academic conversations. In grades 3-12, students engage in academic conversations discussing claims and justifying their reasoning, refining and applying skills. Students build on ideas, propel the conversation, and support claims and counterclaims with evidence.
ELA.K12.EE.5.1:	Use the accepted rules governing a specific format to create quality work. **Clarifications:** Students will incorporate skills learned into work products to produce quality work. For students to incorporate these skills appropriately, they must receive instruction. A 3rd grade student creating a poster board display must have instruction in how to effectively present information to do quality work.
ELA.K12.EE.6.1:	Use appropriate voice and tone when speaking or writing. **Clarifications:** In kindergarten and 1st grade, students learn the difference between formal and informal language. For example, the way we talk to our friends differs from the way we speak to adults. In 2nd grade and beyond, students practice appropriate social and academic language to discuss texts.
DA.68.S.2.1:	Sustain focused attention, respect, and discipline during classes and performances.
ELD.K12.ELL.SI.1:	English language learners communicate for social and instructional purposes within the school setting.

General Course Information and Notes

GENERAL NOTES

Students with little or no vocal or instrumental experience develop basic foundational skills and knowledge, including music theory, technique, musicianship and ensemble skills. Students also explore different genres of music and learn about the benefits of music study. Students may be required to attend one or more performances outside of the school day to support, extend, and assess learning in the classroom. This course may require students to obtain a musical instrument (e.g., borrow, rent, purchase) from an outside source.

English Language Development (ELD) Standards Special Notes Section:

Teachers are required to provide listening, speaking, reading and writing instruction that allows English language learners (ELL) to communicate for social and instructional purposes within the school setting. For the given level of English language proficiency and with visual, graphic, or interactive support, students will interact with grade level words, expressions, sentences and discourse to process or produce language necessary for academic success. The ELD standard should specify a relevant content area concept or topic of study chosen by curriculum developers and teachers which maximizes an ELL's need for communication and social skills. To access an ELL supporting document which delineates performance definitions and descriptors, please click on the following link: cpalms.org/uploads/docs/standards/eld/SI.pdf.

Florida's Benchmarks for Excellent Student Thinking (B.E.S.T.) Standards

This course includes Florida's B.E.S.T. ELA Expectations (EE) and Mathematical Thinking and Reasoning Standards (MTRs) for students. Florida educators should intentionally embed these standards within the content and their instruction as applicable. For guidance on the implementation of the EEs and MTRs, please visit cpalms.org/Standards/BEST_Standards.aspx and select the appropriate B.E.S.T. Standards package.

GENERAL INFORMATION

Course Path: Section: Grades PreK to 12 Education

Course Number: 1300080

Courses > **Grade Group:** Grades 6 to 8 Education
Courses > **Subject:** Music Education > **SubSubject:** General Music >

Abbreviated Title: M/J EXPL MUS PERF

Course Length: Semester (S)

Course Type: Elective Course

Course Level: 2

Course Status: Draft - Course Pending Approval

Grade Level(s): 6,7,8

Educator Certifications

Instrumental Music (Secondary Grades 7-12)
Instrumental Music (Elementary and Secondary Grades K-12)
Vocal Music (Elementary and Secondary Grades K-12)
Music (Elementary and Secondary Grades K-12)

M/J Music Transfer (#1300220) 2022 - And Beyond

Course Standards

Name	Description
MA.K12.MTR.1.1:	Mathematicians who participate in effortful learning both individually and with others: • Analyze the problem in a way that makes sense given the task. • Ask questions that will help with solving the task. • Build perseverance by modifying methods as needed while solving a challenging task. • Stay engaged and maintain a positive mindset when working to solve tasks. • Help and support each other when attempting a new method or approach. **Clarifications:** Teachers who encourage students to participate actively in effortful learning both individually and with others: • Cultivate a community of growth mindset learners. • Foster perseverance in students by choosing tasks that are challenging. • Develop students' ability to analyze and problem solve. • Recognize students' effort when solving challenging problems.
MA.K12.MTR.2.1:	Demonstrate understanding by representing problems in multiple ways. Mathematicians who demonstrate understanding by representing problems in multiple ways: • Build understanding through modeling and using manipulatives. • Represent solutions to problems in multiple ways using objects, drawings, tables, graphs and equations. • Progress from modeling problems with objects and drawings to using algorithms and equations. • Express connections between concepts and representations. • Choose a representation based on the given context or purpose. **Clarifications:** Teachers who encourage students to demonstrate understanding by representing problems in multiple ways: • Help students make connections between concepts and representations. • Provide opportunities for students to use manipulatives when investigating concepts. • Guide students from concrete to pictorial to abstract representations as understanding progresses. • Show students that various representations can have different purposes and can be useful in different situations.
MA.K12.MTR.3.1:	Complete tasks with mathematical fluency. Mathematicians who complete tasks with mathematical fluency: • Select efficient and appropriate methods for solving problems within the given context. • Maintain flexibility and accuracy while performing procedures and mental calculations. • Complete tasks accurately and with confidence. • Adapt procedures to apply them to a new context. • Use feedback to improve efficiency when performing calculations. **Clarifications:** Teachers who encourage students to complete tasks with mathematical fluency: • Provide students with the flexibility to solve problems by selecting a procedure that allows them to solve efficiently and accurately. • Offer multiple opportunities for students to practice efficient and generalizable methods. • Provide opportunities for students to reflect on the method they used and determine if a more efficient method could have been used.
MA.K12.MTR.4.1:	Engage in discussions that reflect on the mathematical thinking of self and others. Mathematicians who engage in discussions that reflect on the mathematical thinking of self and others: • Communicate mathematical ideas, vocabulary and methods effectively. • Analyze the mathematical thinking of others. • Compare the efficiency of a method to those expressed by others. • Recognize errors and suggest how to correctly solve the task. • Justify results by explaining methods and processes. • Construct possible arguments based on evidence. **Clarifications:** Teachers who encourage students to engage in discussions that reflect on the mathematical thinking of self and others: • Establish a culture in which students ask questions of the teacher and their peers, and error is an opportunity for learning. • Create opportunities for students to discuss their thinking with peers. • Select, sequence and present student work to advance and deepen understanding of correct and increasingly efficient methods. • Develop students' ability to justify methods and compare their responses to the responses of their peers.
	Use patterns and structure to help understand and connect mathematical concepts. Mathematicians who use patterns and structure to help understand and connect mathematical concepts: • Focus on relevant details within a problem. • Create plans and procedures to logically order events, steps or ideas to solve problems. • Decompose a complex problem into manageable parts. • Relate previously learned concepts to new concepts.

MA.K12.MTR.5.1:	• Look for similarities among problems. • Connect solutions of problems to more complicated large-scale situations. **Clarifications:** Teachers who encourage students to use patterns and structure to help understand and connect mathematical concepts: • Help students recognize the patterns in the world around them and connect these patterns to mathematical concepts. • Support students to develop generalizations based on the similarities found among problems. • Provide opportunities for students to create plans and procedures to solve problems. • Develop students' ability to construct relationships between their current understanding and more sophisticated ways of thinking.
MA.K12.MTR.6.1:	Assess the reasonableness of solutions. Mathematicians who assess the reasonableness of solutions: • Estimate to discover possible solutions. • Use benchmark quantities to determine if a solution makes sense. • Check calculations when solving problems. • Verify possible solutions by explaining the methods used. • Evaluate results based on the given context. **Clarifications:** Teachers who encourage students to assess the reasonableness of solutions: • Have students estimate or predict solutions prior to solving. • Prompt students to continually ask, "Does this solution make sense? How do you know?" • Reinforce that students check their work as they progress within and after a task. • Strengthen students' ability to verify solutions through justifications.
MA.K12.MTR.7.1:	Apply mathematics to real-world contexts. Mathematicians who apply mathematics to real-world contexts: • Connect mathematical concepts to everyday experiences. • Use models and methods to understand, represent and solve problems. • Perform investigations to gather data or determine if a method is appropriate. • Redesign models and methods to improve accuracy or efficiency. **Clarifications:** Teachers who encourage students to apply mathematics to real-world contexts: • Provide opportunities for students to create models, both concrete and abstract, and perform investigations. • Challenge students to question the accuracy of their models and methods. • Support students as they validate conclusions by comparing them to the given situation. • Indicate how various concepts can be applied to other disciplines.
ELA.K12.EE.1.1:	Cite evidence to explain and justify reasoning. **Clarifications:** K-1 Students include textual evidence in their oral communication with guidance and support from adults. The evidence can consist of details from the text without naming the text. During 1st grade, students learn how to incorporate the evidence in their writing. 2-3 Students include relevant textual evidence in their written and oral communication. Students should name the text when they refer to it. In 3rd grade, students should use a combination of direct and indirect citations. 4-5 Students continue with previous skills and reference comments made by speakers and peers. Students cite texts that they've directly quoted, paraphrased, or used for information. When writing, students will use the form of citation dictated by the instructor or the style guide referenced by the instructor. 6-8 Students continue with previous skills and use a style guide to create a proper citation. 9-12 Students continue with previous skills and should be aware of existing style guides and the ways in which they differ.
ELA.K12.EE.2.1:	Read and comprehend grade-level complex texts proficiently. **Clarifications:** See Text Complexity for grade-level complexity bands and a text complexity rubric.
ELA.K12.EE.3.1:	Make inferences to support comprehension. **Clarifications:** Students will make inferences before the words infer or inference are introduced. Kindergarten students will answer questions like "Why is the girl smiling?" or make predictions about what will happen based on the title page. Students will use the terms and apply them in 2nd grade and beyond.
ELA.K12.EE.4.1:	Use appropriate collaborative techniques and active listening skills when engaging in discussions in a variety of situations. **Clarifications:** In kindergarten, students learn to listen to one another respectfully. In grades 1-2, students build upon these skills by justifying what they are thinking. For example: "I think _____ because _____." The collaborative conversations are becoming academic conversations. In grades 3-12, students engage in academic conversations discussing claims and justifying their reasoning, refining and applying skills. Students build on ideas, propel the conversation, and support claims and counterclaims with evidence.
ELA.K12.EE.5.1:	Use the accepted rules governing a specific format to create quality work. **Clarifications:** Students will incorporate skills learned into work products to produce quality work. For students to incorporate these skills appropriately, they must receive instruction. A 3rd grade student creating a poster board display must have instruction in how to effectively present information to do quality work.
	Use appropriate voice and tone when speaking or writing.

ELA.K12.EE.6.1:	**Clarifications:** In kindergarten and 1st grade, students learn the difference between formal and informal language. For example, the way we talk to our friends differs from the way we speak to adults. In 2nd grade and beyond, students practice appropriate social and academic language to discuss texts.
ELD.K12.ELL.SI.1:	English language learners communicate for social and instructional purposes within the school setting.

General Course Information and Notes

GENERAL NOTES

SUBJECT AREA TRANSFER NUMBERS

Each course transferred into a Florida public school by an out-of-state or non-public school student should be matched with a course title and number when such course provides substantially the same content. However, a few transfer courses may not be close enough in content to be matched. For those courses a subject area transfer number is provided.

Florida's Benchmarks for Excellent Student Thinking (B.E.S.T.) Standards
This course includes Florida's B.E.S.T. ELA Expectations (EE) and Mathematical Thinking and Reasoning Standards (MTRs) for students. Florida educators should intentionally embed these standards within the content and their instruction as applicable. For guidance on the implementation of the EEs and MTRs, please visit cpalms.org/Standards/BEST_Standards.aspx and select the appropriate B.E.S.T. Standards package.

GENERAL INFORMATION

Course Number: 1300220

Course Path: Section: Grades PreK to 12 Education Courses > **Grade Group:** Grades 6 to 8 Education Courses > **Subject:** Music Education > **SubSubject:** Music Technology >
Abbreviated Title: M/J MUS TRAN
Course Length: Not Applicable

Course Type: Transfer Course
Course Status: Draft - Course Pending Approval
Grade Level(s): 6,7,8

Music Theory 1 (#1300300) 2022 - And Beyond

Course Standards

Name	Description
MU.912.C.1.1:	Apply listening strategies to promote appreciation and understanding of unfamiliar musical works. **Clarifications:** e.g., listening maps, active listening, checklists
MU.912.C.1.2:	Compare, using correct music vocabulary, the aesthetic impact of two or more performances of a musical work to one's own hypothesis of the composer's intent. **Clarifications:** e.g., quality recordings, individual and peer-group performances, composer notes, instrumentation, expressive elements, title
MU.912.C.2.2:	Evaluate performance quality in recorded and/or live performances.
MU.912.C.2.3:	Evaluate one's own or other's compositions and/or improvisations and generate improvements independently or cooperatively.
MU.912.C.3.1:	Make critical evaluations, based on exemplary models, of the quality and effectiveness of performances and apply the criteria to personal development in music.
MU.912.F.1.1:	Analyze and evaluate the effect of "traditional" and contemporary technologies on the development of music.
MU.912.F.3.1:	Analyze and describe how meeting one's responsibilities in music offers opportunities to develop leadership skills, and identify personal examples of leadership in school and/or non-school settings.
MU.912.F.3.2:	Summarize copyright laws that govern printed, recorded, and on-line music to promote legal and responsible use of intellectual property and technology.
MU.912.F.3.4:	Design and implement a personal learning plan, related to the study of music, which demonstrates self-assessment, brain-storming, decision-making, and initiative to advance skills and/or knowledge.
MU.912.H.1.2:	Compare the work of, and influences on, two or more exemplary composers in the performance medium studied in class. **Clarifications:** e.g., vocal, instrumental, guitar, keyboard, electronic, handbells
MU.912.H.2.2:	Analyze current musical trends, including audience environments and music acquisition, to predict possible directions of music.
MU.912.H.3.1:	Apply knowledge of science, math, and music to demonstrate, through an acoustic or digital performance medium, how sound production affects musical performance. **Clarifications:** e.g., acoustics, sound amplification, materials, mechanics
MU.912.O.1.1:	Evaluate the organizational principles and conventions in musical works and discuss their effect on structure. **Clarifications:** e.g., rhythm, melody, timbre, form, tonality, harmony, texture; solo, chamber ensemble, large ensemble
MU.912.O.3.1:	Analyze expressive elements in a musical work and describe how the choices and manipulations of the elements support, for the listener, the implied meaning of the composer/performer. **Clarifications:** e.g., tempo markings, expression markings, articulation markings, phrasing, scales, modes, harmonic structure, timbre choice, rhythm, orchestration
MU.912.S.1.1:	Improvise rhythmic and melodic phrases over harmonic progressions. **Clarifications:** e.g., using text or scat syllables
MU.912.S.1.2:	Compose music for voices and/or acoustic, digital, or electronic instruments.
MU.912.S.1.3:	Arrange a musical work by manipulating two or more aspects of the composition. **Clarifications:** e.g., texture, mode, form, tempo, voicing
MU.912.S.1.8:	Record, mix, and edit a recorded performance.
MU.912.S.3.2:	Sight-read music accurately and expressively to show synthesis of skills. **Clarifications:** e.g., musical elements, expressive qualities, performance technique
MU.912.S.3.3:	Transcribe aurally presented songs into melodic and/or rhythmic notation to show synthesis of aural and notational skills.
MA.K12.MTR.1.1:	Mathematicians who participate in effortful learning both individually and with others: • Analyze the problem in a way that makes sense given the task. • Ask questions that will help with solving the task. • Build perseverance by modifying methods as needed while solving a challenging task. • Stay engaged and maintain a positive mindset when working to solve tasks. • Help and support each other when attempting a new method or approach. **Clarifications:** Teachers who encourage students to participate actively in effortful learning both individually and with others: • Cultivate a community of growth mindset learners. • Foster perseverance in students by choosing tasks that are challenging. • Develop students' ability to analyze and problem solve.

- Recognize students' effort when solving challenging problems.

Demonstrate understanding by representing problems in multiple ways.
Mathematicians who demonstrate understanding by representing problems in multiple ways:

- Build understanding through modeling and using manipulatives.
- Represent solutions to problems in multiple ways using objects, drawings, tables, graphs and equations.
- Progress from modeling problems with objects and drawings to using algorithms and equations.
- Express connections between concepts and representations.

MA.K12.MTR.2.1:

- Choose a representation based on the given context or purpose.

Clarifications:
Teachers who encourage students to demonstrate understanding by representing problems in multiple ways:

- Help students make connections between concepts and representations.
- Provide opportunities for students to use manipulatives when investigating concepts.
- Guide students from concrete to pictorial to abstract representations as understanding progresses.
- Show students that various representations can have different purposes and can be useful in different situations.

Complete tasks with mathematical fluency.
Mathematicians who complete tasks with mathematical fluency:

- Select efficient and appropriate methods for solving problems within the given context.
- Maintain flexibility and accuracy while performing procedures and mental calculations.
- Complete tasks accurately and with confidence.
- Adapt procedures to apply them to a new context.

MA.K12.MTR.3.1:

- Use feedback to improve efficiency when performing calculations.

Clarifications:
Teachers who encourage students to complete tasks with mathematical fluency:

- Provide students with the flexibility to solve problems by selecting a procedure that allows them to solve efficiently and accurately.
- Offer multiple opportunities for students to practice efficient and generalizable methods.
- Provide opportunities for students to reflect on the method they used and determine if a more efficient method could have been used.

Engage in discussions that reflect on the mathematical thinking of self and others.
Mathematicians who engage in discussions that reflect on the mathematical thinking of self and others:

- Communicate mathematical ideas, vocabulary and methods effectively.
- Analyze the mathematical thinking of others.
- Compare the efficiency of a method to those expressed by others.
- Recognize errors and suggest how to correctly solve the task.
- Justify results by explaining methods and processes.

MA.K12.MTR.4.1:

- Construct possible arguments based on evidence.

Clarifications:
Teachers who encourage students to engage in discussions that reflect on the mathematical thinking of self and others:

- Establish a culture in which students ask questions of the teacher and their peers, and error is an opportunity for learning.
- Create opportunities for students to discuss their thinking with peers.
- Select, sequence and present student work to advance and deepen understanding of correct and increasingly efficient methods.
- Develop students' ability to justify methods and compare their responses to the responses of their peers.

Use patterns and structure to help understand and connect mathematical concepts.
Mathematicians who use patterns and structure to help understand and connect mathematical concepts:

- Focus on relevant details within a problem.
- Create plans and procedures to logically order events, steps or ideas to solve problems.
- Decompose a complex problem into manageable parts.
- Relate previously learned concepts to new concepts.
- Look for similarities among problems.

MA.K12.MTR.5.1:

- Connect solutions of problems to more complicated large-scale situations.

Clarifications:
Teachers who encourage students to use patterns and structure to help understand and connect mathematical concepts:

- Help students recognize the patterns in the world around them and connect these patterns to mathematical concepts.
- Support students to develop generalizations based on the similarities found among problems.
- Provide opportunities for students to create plans and procedures to solve problems.
- Develop students' ability to construct relationships between their current understanding and more sophisticated ways of thinking.

Assess the reasonableness of solutions.
Mathematicians who assess the reasonableness of solutions:

- Estimate to discover possible solutions.
- Use benchmark quantities to determine if a solution makes sense.
- Check calculations when solving problems.
- Verify possible solutions by explaining the methods used.

MA.K12.MTR.6.1:

- Evaluate results based on the given context.

Clarifications:
Teachers who encourage students to assess the reasonableness of solutions:

- Have students estimate or predict solutions prior to solving.
- Prompt students to continually ask, "Does this solution make sense? How do you know?"

	• Reinforce that students check their work as they progress within and after a task. • Strengthen students' ability to verify solutions through justifications.
MA.K12.MTR.7.1:	Apply mathematics to real-world contexts. Mathematicians who apply mathematics to real-world contexts: • Connect mathematical concepts to everyday experiences. • Use models and methods to understand, represent and solve problems. • Perform investigations to gather data or determine if a method is appropriate. • Redesign models and methods to improve accuracy or efficiency. **Clarifications:** Teachers who encourage students to apply mathematics to real-world contexts: • Provide opportunities for students to create models, both concrete and abstract, and perform investigations. • Challenge students to question the accuracy of their models and methods. • Support students as they validate conclusions by comparing them to the given situation. • Indicate how various concepts can be applied to other disciplines.
ELA.K12.EE.1.1:	Cite evidence to explain and justify reasoning. **Clarifications:** K-1 Students include textual evidence in their oral communication with guidance and support from adults. The evidence can consist of details from the text without naming the text. During 1st grade, students learn how to incorporate the evidence in their writing. 2-3 Students include relevant textual evidence in their written and oral communication. Students should name the text when they refer to it. In 3rd grade, students should use a combination of direct and indirect citations. 4-5 Students continue with previous skills and reference comments made by speakers and peers. Students cite texts that they've directly quoted, paraphrased, or used for information. When writing, students will use the form of citation dictated by the instructor or the style guide referenced by the instructor. 6-8 Students continue with previous skills and use a style guide to create a proper citation. 9-12 Students continue with previous skills and should be aware of existing style guides and the ways in which they differ.
ELA.K12.EE.2.1:	Read and comprehend grade-level complex texts proficiently. **Clarifications:** See Text Complexity for grade-level complexity bands and a text complexity rubric.
ELA.K12.EE.3.1:	Make inferences to support comprehension. **Clarifications:** Students will make inferences before the words infer or inference are introduced. Kindergarten students will answer questions like "Why is the girl smiling?" or make predictions about what will happen based on the title page. Students will use the terms and apply them in 2nd grade and beyond.
ELA.K12.EE.4.1:	Use appropriate collaborative techniques and active listening skills when engaging in discussions in a variety of situations. **Clarifications:** In kindergarten, students learn to listen to one another respectfully. In grades 1-2, students build upon these skills by justifying what they are thinking. For example: "I think _____ because _____." The collaborative conversations are becoming academic conversations. In grades 3-12, students engage in academic conversations discussing claims and justifying their reasoning, refining and applying skills. Students build on ideas, propel the conversation, and support claims and counterclaims with evidence.
ELA.K12.EE.5.1:	Use the accepted rules governing a specific format to create quality work. **Clarifications:** Students will incorporate skills learned into work products to produce quality work. For students to incorporate these skills appropriately, they must receive instruction. A 3rd grade student creating a poster board display must have instruction in how to effectively present information to do quality work.
ELA.K12.EE.6.1:	Use appropriate voice and tone when speaking or writing. **Clarifications:** In kindergarten and 1st grade, students learn the difference between formal and informal language. For example, the way we talk to our friends differs from the way we speak to adults. In 2nd grade and beyond, students practice appropriate social and academic language to discuss texts.
DA.912.S.2.1:	Sustain focused attention, respect, and discipline during class, rehearsal, and performance.
ELD.K12.ELL.SI.1:	English language learners communicate for social and instructional purposes within the school setting.

General Course Information and Notes

VERSION DESCRIPTION

Students learn how music is constructed and developed, and acquire a basic understanding of the structural, technical, and historical elements of music. Student theorists develop basic ear-training, keyboard, and functional singing skills, and engage in the creative process through individual and collaborative projects. Public performances may serve as a resource for specific instructional goals. Students may be required to attend one or more performances outside the school day to support, extend, and assess learning in the classroom.

GENERAL NOTES

Special Notes:

Instructional Practices
Teaching from well-written, grade-level instructional materials enhances students' content area knowledge and also strengthens their ability to comprehend longer, complex reading passages on any topic for any reason. Using the following instructional practices also helps student learning:

1. Reading assignments from longer text passages as well as shorter ones when text is extremely complex.
2. Making close reading and rereading of texts central to lessons.
3. Asking high-level, text specific questions and requiring high-level, complex tasks and assignments.
4. Requiring students to support answers with evidence from the text.
5. Providing extensive text-based research and writing opportunities (claims and evidence).

Florida's Benchmarks for Excellent Student Thinking (B.E.S.T.) Standards
This course includes Florida's B.E.S.T. ELA Expectations (EE) and Mathematical Thinking and Reasoning Standards (MTRs) for students. Florida educators should intentionally embed these standards within the content and their instruction as applicable. For guidance on the implementation of the EEs and MTRs, please visit cpalms.org/Standards/BEST_Standards.aspx and select the appropriate B.E.S.T. Standards package.

English Language Development ELD Standards Special Notes Section:
Teachers are required to provide listening, speaking, reading and writing instruction that allows English language learners (ELL) to communicate for social and instructional purposes within the school setting. For the given level of English language proficiency and with visual, graphic, or interactive support, students will interact with grade level words, expressions, sentences and discourse to process or produce language necessary for academic success. The ELD standard should specify a relevant content area concept or topic of study chosen by curriculum developers and teachers which maximizes an ELL's need for communication and social skills. To access an ELL supporting document which delineates performance definitions and descriptors, please click on the following link: cpalms.org/uploads/docs/standards/eld/SI.pdf

GENERAL INFORMATION

Course Number: 1300300

Course Path: Section: Grades PreK to 12 Education Courses > **Grade Group:** Grades 9 to 12 and Adult Education Courses > **Subject:** Music Education > **SubSubject:** General Music >
Abbreviated Title: MUS THEORY 1

Number of Credits: One (1) credit

Course Length: Year (Y)

Course Type: Core Academic Course

Course Level: 2

Course Status: Draft - Course Pending Approval

Grade Level(s): 9,10,11,12

Graduation Requirement: Performing/Fine Arts

Educator Certifications

Music (Elementary and Secondary Grades K-12)
Vocal Music (Elementary and Secondary Grades K-12)
Instrumental Music (Secondary Grades 7-12)
Instrumental Music (Elementary and Secondary Grades K-12)

Music Theory 2 Honors (#1300310) 2022 - And Beyond

Course Standards

Name	Description
MU.912.C.1.1:	Apply listening strategies to promote appreciation and understanding of unfamiliar musical works. **Clarifications:** e.g., listening maps, active listening, checklists
MU.912.C.1.2:	Compare, using correct music vocabulary, the aesthetic impact of two or more performances of a musical work to one's own hypothesis of the composer's intent. **Clarifications:** e.g., quality recordings, individual and peer-group performances, composer notes, instrumentation, expressive elements, title
MU.912.C.1.3:	Analyze instruments of the world and classify them by common traits. **Clarifications:** e.g., classical and folk instruments from around the world
MU.912.C.2.3:	Evaluate one's own or other's compositions and/or improvisations and generate improvements independently or cooperatively.
MU.912.C.3.1:	Make critical evaluations, based on exemplary models, of the quality and effectiveness of performances and apply the criteria to personal development in music.
MU.912.F.1.1:	Analyze and evaluate the effect of "traditional" and contemporary technologies on the development of music.
MU.912.F.1.2:	Incorporate or adapt new, emerging, or previously unfamiliar technology to create an innovative composition, music project, or related product.
MU.912.F.2.2:	Analyze the effect of the arts and entertainment industry on the economic and social health of communities and regions. **Clarifications:** e.g., community revitalization, industry choosing new locations, cultural and social enrichment
MU.912.F.3.2:	Summarize copyright laws that govern printed, recorded, and on-line music to promote legal and responsible use of intellectual property and technology.
MU.912.F.3.3:	Define, prioritize, monitor, and successfully complete tasks related to individual musical performance or project presentation, without direct oversight, demonstrating skills for use in the workplace.
MU.912.F.3.4:	Design and implement a personal learning plan, related to the study of music, which demonstrates self-assessment, brain-storming, decision-making, and initiative to advance skills and/or knowledge.
MU.912.H.1.1:	Investigate and discuss how a culture's traditions are reflected through its music. **Clarifications:** e.g., patriotic, folk, celebration, entertainment, spiritual
MU.912.H.1.3:	Compare two or more works of a composer across performance media. **Clarifications:** e.g., orchestral and choral; guitar and string quartet; piano solo and piano concerto
MU.912.H.1.4:	Analyze how Western music has been influenced by historical and current world cultures.
MU.912.H.1.5:	Analyze music within cultures to gain understanding of authentic performance practices.
MU.912.H.2.2:	Analyze current musical trends, including audience environments and music acquisition, to predict possible directions of music.
MU.912.H.2.4:	Examine the effects of developing technology on composition, performance, and acquisition of music.
MU.912.H.3.2:	Combine personal interest with skills and knowledge from a non-music class to explore, design, and present a music-based or music-enhanced topic of interest to demonstrate the ability to make transfers across contexts. **Clarifications:** e.g., music and health, Holocaust, tolerance, African American history, world languages, scientific research, data analysis, problem-solving, public speaking
MU.912.O.1.1:	Evaluate the organizational principles and conventions in musical works and discuss their effect on structure. **Clarifications:** e.g., rhythm, melody, timbre, form, tonality, harmony, texture; solo, chamber ensemble, large ensemble
MU.912.O.2.1:	Transfer accepted composition conventions and performance practices of a specific style to a contrasting style of music.
MU.912.O.2.2:	Transpose melodies into different modalities through performance and composition.
MU.912.O.3.1:	Analyze expressive elements in a musical work and describe how the choices and manipulations of the elements support, for the listener, the implied meaning of the composer/performer. **Clarifications:** e.g., tempo markings, expression markings, articulation markings, phrasing, scales, modes, harmonic structure, timbre choice, rhythm, orchestration
MU.912.S.1.1:	Improvise rhythmic and melodic phrases over harmonic progressions. **Clarifications:** e.g., using text or scat syllables
MU.912.S.1.2:	Compose music for voices and/or acoustic, digital, or electronic instruments.
MU.912.S.1.3:	Arrange a musical work by manipulating two or more aspects of the composition. **Clarifications:** e.g., texture, mode, form, tempo, voicing

MU.912.S.1.4:	Perform and notate, independently and accurately, melodies by ear. **Clarifications:** e.g., singing, playing, writing
MU.912.S.1.8:	Record, mix, and edit a recorded performance.
MU.912.S.2.1:	Apply the ability to memorize and internalize musical structure, accurate and expressive details, and processing skills to the creation or performance of music literature. **Clarifications:** e.g., memorization, sequential process
MU.912.S.3.2:	Sight-read music accurately and expressively to show synthesis of skills. **Clarifications:** e.g., musical elements, expressive qualities, performance technique
MU.912.S.3.3:	Transcribe aurally presented songs into melodic and/or rhythmic notation to show synthesis of aural and notational skills.
MA.K12.MTR.1.1:	Mathematicians who participate in effortful learning both individually and with others: • Analyze the problem in a way that makes sense given the task. • Ask questions that will help with solving the task. • Build perseverance by modifying methods as needed while solving a challenging task. • Stay engaged and maintain a positive mindset when working to solve tasks. • Help and support each other when attempting a new method or approach. **Clarifications:** Teachers who encourage students to participate actively in effortful learning both individually and with others: • Cultivate a community of growth mindset learners. • Foster perseverance in students by choosing tasks that are challenging. • Develop students' ability to analyze and problem solve. • Recognize students' effort when solving challenging problems.
MA.K12.MTR.2.1:	Demonstrate understanding by representing problems in multiple ways. Mathematicians who demonstrate understanding by representing problems in multiple ways: • Build understanding through modeling and using manipulatives. • Represent solutions to problems in multiple ways using objects, drawings, tables, graphs and equations. • Progress from modeling problems with objects and drawings to using algorithms and equations. • Express connections between concepts and representations. • Choose a representation based on the given context or purpose. **Clarifications:** Teachers who encourage students to demonstrate understanding by representing problems in multiple ways: • Help students make connections between concepts and representations. • Provide opportunities for students to use manipulatives when investigating concepts. • Guide students from concrete to pictorial to abstract representations as understanding progresses. • Show students that various representations can have different purposes and can be useful in different situations.
MA.K12.MTR.3.1:	Complete tasks with mathematical fluency. Mathematicians who complete tasks with mathematical fluency: • Select efficient and appropriate methods for solving problems within the given context. • Maintain flexibility and accuracy while performing procedures and mental calculations. • Complete tasks accurately and with confidence. • Adapt procedures to apply them to a new context. • Use feedback to improve efficiency when performing calculations. **Clarifications:** Teachers who encourage students to complete tasks with mathematical fluency: • Provide students with the flexibility to solve problems by selecting a procedure that allows them to solve efficiently and accurately. • Offer multiple opportunities for students to practice efficient and generalizable methods. • Provide opportunities for students to reflect on the method they used and determine if a more efficient method could have been used.
MA.K12.MTR.4.1:	Engage in discussions that reflect on the mathematical thinking of self and others. Mathematicians who engage in discussions that reflect on the mathematical thinking of self and others: • Communicate mathematical ideas, vocabulary and methods effectively. • Analyze the mathematical thinking of others. • Compare the efficiency of a method to those expressed by others. • Recognize errors and suggest how to correctly solve the task. • Justify results by explaining methods and processes. • Construct possible arguments based on evidence. **Clarifications:** Teachers who encourage students to engage in discussions that reflect on the mathematical thinking of self and others: • Establish a culture in which students ask questions of the teacher and their peers, and error is an opportunity for learning. • Create opportunities for students to discuss their thinking with peers. • Select, sequence and present student work to advance and deepen understanding of correct and increasingly efficient methods. • Develop students' ability to justify methods and compare their responses to the responses of their peers.
	Use patterns and structure to help understand and connect mathematical concepts. Mathematicians who use patterns and structure to help understand and connect mathematical concepts:

MA.K12.MTR.5.1:	• Focus on relevant details within a problem. • Create plans and procedures to logically order events, steps or ideas to solve problems. • Decompose a complex problem into manageable parts. • Relate previously learned concepts to new concepts. • Look for similarities among problems. • Connect solutions of problems to more complicated large-scale situations. **Clarifications:** Teachers who encourage students to use patterns and structure to help understand and connect mathematical concepts: • Help students recognize the patterns in the world around them and connect these patterns to mathematical concepts. • Support students to develop generalizations based on the similarities found among problems. • Provide opportunities for students to create plans and procedures to solve problems. • Develop students' ability to construct relationships between their current understanding and more sophisticated ways of thinking.
MA.K12.MTR.6.1:	Assess the reasonableness of solutions. Mathematicians who assess the reasonableness of solutions: • Estimate to discover possible solutions. • Use benchmark quantities to determine if a solution makes sense. • Check calculations when solving problems. • Verify possible solutions by explaining the methods used. • Evaluate results based on the given context. **Clarifications:** Teachers who encourage students to assess the reasonableness of solutions: • Have students estimate or predict solutions prior to solving. • Prompt students to continually ask, "Does this solution make sense? How do you know?" • Reinforce that students check their work as they progress within and after a task. • Strengthen students' ability to verify solutions through justifications.
MA.K12.MTR.7.1:	Apply mathematics to real-world contexts. Mathematicians who apply mathematics to real-world contexts: • Connect mathematical concepts to everyday experiences. • Use models and methods to understand, represent and solve problems. • Perform investigations to gather data or determine if a method is appropriate. • Redesign models and methods to improve accuracy or efficiency. **Clarifications:** Teachers who encourage students to apply mathematics to real-world contexts: • Provide opportunities for students to create models, both concrete and abstract, and perform investigations. • Challenge students to question the accuracy of their models and methods. • Support students as they validate conclusions by comparing them to the given situation. • Indicate how various concepts can be applied to other disciplines.
ELA.K12.EE.1.1:	Cite evidence to explain and justify reasoning. **Clarifications:** K-1 Students include textual evidence in their oral communication with guidance and support from adults. The evidence can consist of details from the text without naming the text. During 1st grade, students learn how to incorporate the evidence in their writing. 2-3 Students include relevant textual evidence in their written and oral communication. Students should name the text when they refer to it. In 3rd grade, students should use a combination of direct and indirect citations. 4-5 Students continue with previous skills and reference comments made by speakers and peers. Students cite texts that they've directly quoted, paraphrased, or used for information. When writing, students will use the form of citation dictated by the instructor or the style guide referenced by the instructor. 6-8 Students continue with previous skills and use a style guide to create a proper citation. 9-12 Students continue with previous skills and should be aware of existing style guides and the ways in which they differ.
ELA.K12.EE.2.1:	Read and comprehend grade-level complex texts proficiently. **Clarifications:** See Text Complexity for grade-level complexity bands and a text complexity rubric.
ELA.K12.EE.3.1:	Make inferences to support comprehension. **Clarifications:** Students will make inferences before the words infer or inference are introduced. Kindergarten students will answer questions like "Why is the girl smiling?" or make predictions about what will happen based on the title page. Students will use the terms and apply them in 2nd grade and beyond.
ELA.K12.EE.4.1:	Use appropriate collaborative techniques and active listening skills when engaging in discussions in a variety of situations. **Clarifications:** In kindergarten, students learn to listen to one another respectfully. In grades 1-2, students build upon these skills by justifying what they are thinking. For example: "I think _____ because _____." The collaborative conversations are becoming academic conversations. In grades 3-12, students engage in academic conversations discussing claims and justifying their reasoning, refining and applying skills. Students build on ideas, propel the conversation, and support claims and counterclaims with evidence.
	Use the accepted rules governing a specific format to create quality work. **Clarifications:**

ELA.K12.EE.5.1:	Students will incorporate skills learned into work products to produce quality work. For students to incorporate these skills appropriately, they must receive instruction. A 3rd grade student creating a poster board display must have instruction in how to effectively present information to do quality work.
ELA.K12.EE.6.1:	Use appropriate voice and tone when speaking or writing. **Clarifications:** In kindergarten and 1st grade, students learn the difference between formal and informal language. For example, the way we talk to our friends differs from the way we speak to adults. In 2nd grade and beyond, students practice appropriate social and academic language to discuss texts.
DA.912.S.2.1:	Sustain focused attention, respect, and discipline during class, rehearsal, and performance.
ELD.K12.ELL.SI.1:	English language learners communicate for social and instructional purposes within the school setting.

General Course Information and Notes

VERSION DESCRIPTION

Students with prior music theory training study composition, form, and analysis, and develop individual aural skills. The aural, analytical, and cognitive skills expanded in this class inform the serious musician's performance abilities over a variety of styles and genres. Public performances may serve as a resource for specific instructional goals. Students may be required to attend one or more performances outside the school day to support, extend, and assess learning in the classroom.

GENERAL NOTES

Honors and Advanced Level Course Note: Advanced courses require a greater demand on students through increased academic rigor. Academic rigor is obtained through the application, analysis, evaluation, and creation of complex ideas that are often abstract and multi-faceted. Students are challenged to think and collaborate critically on the content they are learning. Honors level rigor will be achieved by increasing text complexity through text selection, focus on high-level qualitative measures, and complexity of task. Instruction will be structured to give students a deeper understanding of conceptual themes and organization within and across disciplines. Academic rigor is more than simply assigning to students a greater quantity of work.

Instructional Practices
Teaching from well-written, grade-level instructional materials enhances students' content area knowledge and also strengthens their ability to comprehend longer, complex reading passages on any topic for any reason. Using the following instructional practices also helps student learning:

1. Reading assignments from longer text passages as well as shorter ones when text is extremely complex.
2. Making close reading and rereading of texts central to lessons.
3. Asking high-level, textspecific questions and requiring high-level, complex tasks and assignments.
4. Requiring students to support answers with evidence from the text.
5. Providing extensive text-based research and writing opportunities (claims and evidence).

Florida's Benchmarks for Excellent Student Thinking (B.E.S.T.) Standards
This course includes Florida's B.E.S.T. ELA Expectations (EE) and Mathematical Thinking and Reasoning Standards (MTRs) for students. Florida educators should intentionally embed these standards within the content and their instruction as applicable. For guidance on the implementation of the EEs and MTRs, please visit cpalms.org/Standards/BEST_Standards.aspx and select the appropriate B.E.S.T. Standards package.

English Language Development ELD Standards Special Notes Section:
Teachers are required to provide listening, speaking, reading and writing instruction that allows English language learners (ELL) to communicate for social and instructional purposes within the school setting. For the given level of English language proficiency and with visual, graphic, or interactive support, students will interact with grade level words, expressions, sentences and discourse to process or produce language necessary for academic success. The ELD standard should specify a relevant content area concept or topic of study chosen by curriculum developers and teachers which maximizes an ELL's need for communication and social skills. To access an ELL supporting document which delineates performance definitions and descriptors, please click on the following link: cpalms.org/uploads/docs/standards/eld/SI.pdf

GENERAL INFORMATION

Course Number: 1300310

Course Path: Section: Grades PreK to 12 Education Courses > **Grade Group:** Grades 9 to 12 and Adult Education Courses > **Subject:** Music Education > **SubSubject:** General Music > **Abbreviated Title:** MUS THEORY 2 HON

Number of Credits: One (1) credit

Course Length: Year (Y)

Course Attributes:
- Honors

Course Type: Core Academic Course

Course Level: 3

Course Status: Draft - Course Pending Approval

Grade Level(s): 9,10,11,12

Graduation Requirement: Performing/Fine Arts

Educator Certifications

Music (Elementary and Secondary Grades K-12)
Vocal Music (Elementary and Secondary Grades K-12)
Instrumental Music (Secondary Grades 7-12)
Instrumental Music (Elementary and Secondary Grades K-12)

Music of the World (#1300340) 2022 - And Beyond

Course Standards

Name	Description
MU.912.C.1.1:	Apply listening strategies to promote appreciation and understanding of unfamiliar musical works. **Clarifications:** e.g., listening maps, active listening, checklists
MU.912.C.1.2:	Compare, using correct music vocabulary, the aesthetic impact of two or more performances of a musical work to one's own hypothesis of the composer's intent. **Clarifications:** e.g., quality recordings, individual and peer-group performances, composer notes, instrumentation, expressive elements, title
MU.912.C.1.3:	Analyze instruments of the world and classify them by common traits. **Clarifications:** e.g., classical and folk instruments from around the world
MU.912.C.2.2:	Evaluate performance quality in recorded and/or live performances.
MU.912.C.2.3:	Evaluate one's own or other's compositions and/or improvisations and generate improvements independently or cooperatively.
MU.912.F.1.1:	Analyze and evaluate the effect of "traditional" and contemporary technologies on the development of music.
MU.912.F.2.2:	Analyze the effect of the arts and entertainment industry on the economic and social health of communities and regions. **Clarifications:** e.g., community revitalization, industry choosing new locations, cultural and social enrichment
MU.912.F.3.1:	Analyze and describe how meeting one's responsibilities in music offers opportunities to develop leadership skills, and identify personal examples of leadership in school and/or non-school settings.
MU.912.F.3.2:	Summarize copyright laws that govern printed, recorded, and on-line music to promote legal and responsible use of intellectual property and technology.
MU.912.F.3.3:	Define, prioritize, monitor, and successfully complete tasks related to individual musical performance or project presentation, without direct oversight, demonstrating skills for use in the workplace.
MU.912.H.1.1:	Investigate and discuss how a culture's traditions are reflected through its music. **Clarifications:** e.g., patriotic, folk, celebration, entertainment, spiritual
MU.912.H.1.2:	Compare the work of, and influences on, two or more exemplary composers in the performance medium studied in class. **Clarifications:** e.g., vocal, instrumental, guitar, keyboard, electronic, handbells
MU.912.H.1.3:	Compare two or more works of a composer across performance media. **Clarifications:** e.g., orchestral and choral; guitar and string quartet; piano solo and piano concerto
MU.912.H.1.4:	Analyze how Western music has been influenced by historical and current world cultures.
MU.912.H.1.5:	Analyze music within cultures to gain understanding of authentic performance practices.
MU.912.H.2.1:	Evaluate the social impact of music on specific historical periods.
MU.912.H.2.4:	Examine the effects of developing technology on composition, performance, and acquisition of music.
MU.912.H.3.1:	Apply knowledge of science, math, and music to demonstrate, through an acoustic or digital performance medium, how sound production affects musical performance. **Clarifications:** e.g., acoustics, sound amplification, materials, mechanics
MU.912.O.1.1:	Evaluate the organizational principles and conventions in musical works and discuss their effect on structure. **Clarifications:** e.g., rhythm, melody, timbre, form, tonality, harmony, texture; solo, chamber ensemble, large ensemble
MU.912.O.3.1:	Analyze expressive elements in a musical work and describe how the choices and manipulations of the elements support, for the listener, the implied meaning of the composer/performer. **Clarifications:** e.g., tempo markings, expression markings, articulation markings, phrasing, scales, modes, harmonic structure, timbre choice, rhythm, orchestration
MU.912.S.1.1:	Improvise rhythmic and melodic phrases over harmonic progressions. **Clarifications:** e.g., using text or scat syllables
MU.912.S.1.3:	Arrange a musical work by manipulating two or more aspects of the composition. **Clarifications:** e.g., texture, mode, form, tempo, voicing
MU.912.S.3.1:	Synthesize a broad range of musical skills by performing a varied repertoire with expression, appropriate stylistic interpretation, technical accuracy, and kinesthetic energy.
	Mathematicians who participate in effortful learning both individually and with others:

- Analyze the problem in a way that makes sense given the task.
- Ask questions that will help with solving the task.
- Build perseverance by modifying methods as needed while solving a challenging task.
- Stay engaged and maintain a positive mindset when working to solve tasks.
- Help and support each other when attempting a new method or approach.

MA.K12.MTR.1.1:

Clarifications:
Teachers who encourage students to participate actively in effortful learning both individually and with others:
- Cultivate a community of growth mindset learners.
- Foster perseverance in students by choosing tasks that are challenging.
- Develop students' ability to analyze and problem solve.
- Recognize students' effort when solving challenging problems.

Demonstrate understanding by representing problems in multiple ways.
Mathematicians who demonstrate understanding by representing problems in multiple ways:

- Build understanding through modeling and using manipulatives.
- Represent solutions to problems in multiple ways using objects, drawings, tables, graphs and equations.
- Progress from modeling problems with objects and drawings to using algorithms and equations.
- Express connections between concepts and representations.
- Choose a representation based on the given context or purpose.

MA.K12.MTR.2.1:

Clarifications:
Teachers who encourage students to demonstrate understanding by representing problems in multiple ways:
- Help students make connections between concepts and representations.
- Provide opportunities for students to use manipulatives when investigating concepts.
- Guide students from concrete to pictorial to abstract representations as understanding progresses.
- Show students that various representations can have different purposes and can be useful in different situations.

Complete tasks with mathematical fluency.
Mathematicians who complete tasks with mathematical fluency:

- Select efficient and appropriate methods for solving problems within the given context.
- Maintain flexibility and accuracy while performing procedures and mental calculations.
- Complete tasks accurately and with confidence.
- Adapt procedures to apply them to a new context.
- Use feedback to improve efficiency when performing calculations.

MA.K12.MTR.3.1:

Clarifications:
Teachers who encourage students to complete tasks with mathematical fluency:
- Provide students with the flexibility to solve problems by selecting a procedure that allows them to solve efficiently and accurately.
- Offer multiple opportunities for students to practice efficient and generalizable methods.
- Provide opportunities for students to reflect on the method they used and determine if a more efficient method could have been used.

Engage in discussions that reflect on the mathematical thinking of self and others.
Mathematicians who engage in discussions that reflect on the mathematical thinking of self and others:

- Communicate mathematical ideas, vocabulary and methods effectively.
- Analyze the mathematical thinking of others.
- Compare the efficiency of a method to those expressed by others.
- Recognize errors and suggest how to correctly solve the task.
- Justify results by explaining methods and processes.
- Construct possible arguments based on evidence.

MA.K12.MTR.4.1:

Clarifications:
Teachers who encourage students to engage in discussions that reflect on the mathematical thinking of self and others:
- Establish a culture in which students ask questions of the teacher and their peers, and error is an opportunity for learning.
- Create opportunities for students to discuss their thinking with peers.
- Select, sequence and present student work to advance and deepen understanding of correct and increasingly efficient methods.
- Develop students' ability to justify methods and compare their responses to the responses of their peers.

Use patterns and structure to help understand and connect mathematical concepts.
Mathematicians who use patterns and structure to help understand and connect mathematical concepts:

- Focus on relevant details within a problem.
- Create plans and procedures to logically order events, steps or ideas to solve problems.
- Decompose a complex problem into manageable parts.
- Relate previously learned concepts to new concepts.
- Look for similarities among problems.
- Connect solutions of problems to more complicated large-scale situations.

MA.K12.MTR.5.1:

Clarifications:
Teachers who encourage students to use patterns and structure to help understand and connect mathematical concepts:
- Help students recognize the patterns in the world around them and connect these patterns to mathematical concepts.
- Support students to develop generalizations based on the similarities found among problems.
- Provide opportunities for students to create plans and procedures to solve problems.
- Develop students' ability to construct relationships between their current understanding and more sophisticated ways of thinking.

Assess the reasonableness of solutions.
Mathematicians who assess the reasonableness of solutions:

MA.K12.MTR.6.1:	• Estimate to discover possible solutions. • Use benchmark quantities to determine if a solution makes sense. • Check calculations when solving problems. • Verify possible solutions by explaining the methods used. • Evaluate results based on the given context. **Clarifications:** Teachers who encourage students to assess the reasonableness of solutions: • Have students estimate or predict solutions prior to solving. • Prompt students to continually ask, "Does this solution make sense? How do you know?" • Reinforce that students check their work as they progress within and after a task. • Strengthen students' ability to verify solutions through justifications.
MA.K12.MTR.7.1:	Apply mathematics to real-world contexts. Mathematicians who apply mathematics to real-world contexts: • Connect mathematical concepts to everyday experiences. • Use models and methods to understand, represent and solve problems. • Perform investigations to gather data or determine if a method is appropriate. • Redesign models and methods to improve accuracy or efficiency. **Clarifications:** Teachers who encourage students to apply mathematics to real-world contexts: • Provide opportunities for students to create models, both concrete and abstract, and perform investigations. • Challenge students to question the accuracy of their models and methods. • Support students as they validate conclusions by comparing them to the given situation. • Indicate how various concepts can be applied to other disciplines.
ELA.K12.EE.1.1:	Cite evidence to explain and justify reasoning. **Clarifications:** K-1 Students include textual evidence in their oral communication with guidance and support from adults. The evidence can consist of details from the text without naming the text. During 1st grade, students learn how to incorporate the evidence in their writing. 2-3 Students include relevant textual evidence in their written and oral communication. Students should name the text when they refer to it. In 3rd grade, students should use a combination of direct and indirect citations. 4-5 Students continue with previous skills and reference comments made by speakers and peers. Students cite texts that they've directly quoted, paraphrased, or used for information. When writing, students will use the form of citation dictated by the instructor or the style guide referenced by the instructor. 6-8 Students continue with previous skills and use a style guide to create a proper citation. 9-12 Students continue with previous skills and should be aware of existing style guides and the ways in which they differ.
ELA.K12.EE.2.1:	Read and comprehend grade-level complex texts proficiently. **Clarifications:** See Text Complexity for grade-level complexity bands and a text complexity rubric.
ELA.K12.EE.3.1:	Make inferences to support comprehension. **Clarifications:** Students will make inferences before the words infer or inference are introduced. Kindergarten students will answer questions like "Why is the girl smiling?" or make predictions about what will happen based on the title page. Students will use the terms and apply them in 2nd grade and beyond.
ELA.K12.EE.4.1:	Use appropriate collaborative techniques and active listening skills when engaging in discussions in a variety of situations. **Clarifications:** In kindergarten, students learn to listen to one another respectfully. In grades 1-2, students build upon these skills by justifying what they are thinking. For example: "I think _____ because _____." The collaborative conversations are becoming academic conversations. In grades 3-12, students engage in academic conversations discussing claims and justifying their reasoning, refining and applying skills. Students build on ideas, propel the conversation, and support claims and counterclaims with evidence.
ELA.K12.EE.5.1:	Use the accepted rules governing a specific format to create quality work. **Clarifications:** Students will incorporate skills learned into work products to produce quality work. For students to incorporate these skills appropriately, they must receive instruction. A 3rd grade student creating a poster board display must have instruction in how to effectively present information to do quality work.
ELA.K12.EE.6.1:	Use appropriate voice and tone when speaking or writing. **Clarifications:** In kindergarten and 1st grade, students learn the difference between formal and informal language. For example, the way we talk to our friends differs from the way we speak to adults. In 2nd grade and beyond, students practice appropriate social and academic language to discuss texts.
DA.912.S.2.1:	Sustain focused attention, respect, and discipline during class, rehearsal, and performance.
ELD.K12.ELL.SI.1:	English language learners communicate for social and instructional purposes within the school setting.

General Course Information and Notes

VERSION DESCRIPTION

Students explore the musical traditions of 20th- and 21st-century American and global communities around the world through study of current trends, focusing on the function of music within various cultures (e.g., jazz, world drumming, mariachi, soul, gamelan, Bollywood, digital). Students examine and report on human activities involving music, technology- and culture-related influences on music, and the sounds and structures of music composition. Public performances may serve as a resource for specific instructional goals. Students may be required to attend one or more performances outside the school day to support, extend, and assess learning in the classroom.

GENERAL NOTES

Florida's Benchmarks for Excellent Student Thinking (B.E.S.T.) Standards
This course includes Florida's B.E.S.T. ELA Expectations (EE) and Mathematical Thinking and Reasoning Standards (MTRs) for students. Florida educators should intentionally embed these standards within the content and their instruction as applicable. For guidance on the implementation of the EEs and MTRs, please visit cpalms.org/Standards/BEST_Standards.aspx and select the appropriate B.E.S.T. Standards package.

English Language Development ELD Standards Special Notes Section:
Teachers are required to provide listening, speaking, reading and writing instruction that allows English language learners (ELL) to communicate for social and instructional purposes within the school setting. For the given level of English language proficiency and with visual, graphic, or interactive support, students will interact with grade level words, expressions, sentences and discourse to process or produce language necessary for academic success. The ELD standard should specify a relevant content area concept or topic of study chosen by curriculum developers and teachers which maximizes an ELL's need for communication and social skills. To access an ELL supporting document which delineates performance definitions and descriptors, please click on the following link: cpalms.org/uploads/docs/standards/eld/SI.pdf

GENERAL INFORMATION

Course Number: 1300340

Course Path: Section: Grades PreK to 12 Education Courses > **Grade Group:** Grades 9 to 12 and Adult Education Courses > **Subject:** Music Education > **SubSubject:** General Music > **Abbreviated Title:** MUSIC WORLD

Number of Credits: One (1) credit

Course Length: Year (Y)

Course Type: Core Academic Course

Course Level: 2

Course Status: Draft - Course Pending Approval

Grade Level(s): 9,10,11,12

Graduation Requirement: Performing/Fine Arts

Educator Certifications

Music (Elementary and Secondary Grades K-12)
Vocal Music (Elementary and Secondary Grades K-12)
Instrumental Music (Secondary Grades 7-12)
Instrumental Music (Elementary and Secondary Grades K-12)

Florida's Preinternational Baccalaureate Music 1 (#1300800) 2022 - And Beyond

Course Standards

Name	Description
MU.912.C.1.1:	Apply listening strategies to promote appreciation and understanding of unfamiliar musical works. **Clarifications:** e.g., listening maps, active listening, checklists
MU.912.C.1.2:	Compare, using correct music vocabulary, the aesthetic impact of two or more performances of a musical work to one's own hypothesis of the composer's intent. **Clarifications:** e.g., quality recordings, individual and peer-group performances, composer notes, instrumentation, expressive elements, title
MU.912.C.2.1:	Evaluate and make appropriate adjustments to personal performance in solo and ensembles.
MU.912.C.2.2:	Evaluate performance quality in recorded and/or live performances.
MU.912.C.3.1:	Make critical evaluations, based on exemplary models, of the quality and effectiveness of performances and apply the criteria to personal development in music.
MU.912.F.2.1:	Design or refine a résumé for application to higher education or the workforce that highlights marketable skills and knowledge gained through music training. **Clarifications:** e.g., repertoire lists, technology-based work, ability to research and analyze, and examples of leadership and collaborative skills
MU.912.F.3.1:	Analyze and describe how meeting one's responsibilities in music offers opportunities to develop leadership skills, and identify personal examples of leadership in school and/or non-school settings.
MU.912.F.3.3:	Define, prioritize, monitor, and successfully complete tasks related to individual musical performance or project presentation, without direct oversight, demonstrating skills for use in the workplace.
MU.912.F.3.4:	Design and implement a personal learning plan, related to the study of music, which demonstrates self-assessment, brain-storming, decision-making, and initiative to advance skills and/or knowledge.
MU.912.H.1.1:	Investigate and discuss how a culture's traditions are reflected through its music. **Clarifications:** e.g., patriotic, folk, celebration, entertainment, spiritual
MU.912.H.3.1:	Apply knowledge of science, math, and music to demonstrate, through an acoustic or digital performance medium, how sound production affects musical performance. **Clarifications:** e.g., acoustics, sound amplification, materials, mechanics
MU.912.O.2.1:	Transfer accepted composition conventions and performance practices of a specific style to a contrasting style of music.
MU.912.O.2.2:	Transpose melodies into different modalities through performance and composition.
MU.912.O.3.1:	Analyze expressive elements in a musical work and describe how the choices and manipulations of the elements support, for the listener, the implied meaning of the composer/performer. **Clarifications:** e.g., tempo markings, expression markings, articulation markings, phrasing, scales, modes, harmonic structure, timbre choice, rhythm, orchestration
MU.912.O.3.2:	Interpret and perform expressive elements indicated by the musical score and/or conductor.
MU.912.S.2.1:	Apply the ability to memorize and internalize musical structure, accurate and expressive details, and processing skills to the creation or performance of music literature. **Clarifications:** e.g., memorization, sequential process
MU.912.S.2.2:	Transfer expressive elements and performance techniques from one piece of music to another.
MU.912.S.3.1:	Synthesize a broad range of musical skills by performing a varied repertoire with expression, appropriate stylistic interpretation, technical accuracy, and kinesthetic energy.
MU.912.S.3.2:	Sight-read music accurately and expressively to show synthesis of skills. **Clarifications:** e.g., musical elements, expressive qualities, performance technique
MU.912.S.3.4:	Analyze and describe the effect of rehearsal sessions and/or strategies on refinement of skills and techniques.
MU.912.S.3.5:	Develop and demonstrate proper vocal or instrumental technique. **Clarifications:** e.g., posture, breathing, fingering, embouchure, bow technique, tuning, strumming
	Mathematicians who participate in effortful learning both individually and with others: • Analyze the problem in a way that makes sense given the task. • Ask questions that will help with solving the task. • Build perseverance by modifying methods as needed while solving a challenging task.

- Stay engaged and maintain a positive mindset when working to solve tasks.
- Help and support each other when attempting a new method or approach.

MA.K12.MTR.1.1:

Clarifications:
Teachers who encourage students to participate actively in effortful learning both individually and with others:
- Cultivate a community of growth mindset learners.
- Foster perseverance in students by choosing tasks that are challenging.
- Develop students' ability to analyze and problem solve.
- Recognize students' effort when solving challenging problems.

Demonstrate understanding by representing problems in multiple ways.
Mathematicians who demonstrate understanding by representing problems in multiple ways:

- Build understanding through modeling and using manipulatives.
- Represent solutions to problems in multiple ways using objects, drawings, tables, graphs and equations.
- Progress from modeling problems with objects and drawings to using algorithms and equations.
- Express connections between concepts and representations.
- Choose a representation based on the given context or purpose.

MA.K12.MTR.2.1:

Clarifications:
Teachers who encourage students to demonstrate understanding by representing problems in multiple ways:
- Help students make connections between concepts and representations.
- Provide opportunities for students to use manipulatives when investigating concepts.
- Guide students from concrete to pictorial to abstract representations as understanding progresses.
- Show students that various representations can have different purposes and can be useful in different situations.

Complete tasks with mathematical fluency.
Mathematicians who complete tasks with mathematical fluency:

- Select efficient and appropriate methods for solving problems within the given context.
- Maintain flexibility and accuracy while performing procedures and mental calculations.
- Complete tasks accurately and with confidence.
- Adapt procedures to apply them to a new context.
- Use feedback to improve efficiency when performing calculations.

MA.K12.MTR.3.1:

Clarifications:
Teachers who encourage students to complete tasks with mathematical fluency:
- Provide students with the flexibility to solve problems by selecting a procedure that allows them to solve efficiently and accurately.
- Offer multiple opportunities for students to practice efficient and generalizable methods.
- Provide opportunities for students to reflect on the method they used and determine if a more efficient method could have been used.

Engage in discussions that reflect on the mathematical thinking of self and others.
Mathematicians who engage in discussions that reflect on the mathematical thinking of self and others:

- Communicate mathematical ideas, vocabulary and methods effectively.
- Analyze the mathematical thinking of others.
- Compare the efficiency of a method to those expressed by others.
- Recognize errors and suggest how to correctly solve the task.
- Justify results by explaining methods and processes.
- Construct possible arguments based on evidence.

MA.K12.MTR.4.1:

Clarifications:
Teachers who encourage students to engage in discussions that reflect on the mathematical thinking of self and others:
- Establish a culture in which students ask questions of the teacher and their peers, and error is an opportunity for learning.
- Create opportunities for students to discuss their thinking with peers.
- Select, sequence and present student work to advance and deepen understanding of correct and increasingly efficient methods.
- Develop students' ability to justify methods and compare their responses to the responses of their peers.

Use patterns and structure to help understand and connect mathematical concepts.
Mathematicians who use patterns and structure to help understand and connect mathematical concepts:

- Focus on relevant details within a problem.
- Create plans and procedures to logically order events, steps or ideas to solve problems.
- Decompose a complex problem into manageable parts.
- Relate previously learned concepts to new concepts.
- Look for similarities among problems.
- Connect solutions of problems to more complicated large-scale situations.

MA.K12.MTR.5.1:

Clarifications:
Teachers who encourage students to use patterns and structure to help understand and connect mathematical concepts:
- Help students recognize the patterns in the world around them and connect these patterns to mathematical concepts.
- Support students to develop generalizations based on the similarities found among problems.
- Provide opportunities for students to create plans and procedures to solve problems.
- Develop students' ability to construct relationships between their current understanding and more sophisticated ways of thinking.

Assess the reasonableness of solutions.
Mathematicians who assess the reasonableness of solutions:

- Estimate to discover possible solutions.
- Use benchmark quantities to determine if a solution makes sense.

MA.K12.MTR.6.1:	• Check calculations when solving problems. • Verify possible solutions by explaining the methods used. • Evaluate results based on the given context. **Clarifications:** Teachers who encourage students to assess the reasonableness of solutions: • Have students estimate or predict solutions prior to solving. • Prompt students to continually ask, "Does this solution make sense? How do you know?" • Reinforce that students check their work as they progress within and after a task. • Strengthen students' ability to verify solutions through justifications.
MA.K12.MTR.7.1:	Apply mathematics to real-world contexts. Mathematicians who apply mathematics to real-world contexts: • Connect mathematical concepts to everyday experiences. • Use models and methods to understand, represent and solve problems. • Perform investigations to gather data or determine if a method is appropriate. • Redesign models and methods to improve accuracy or efficiency. **Clarifications:** Teachers who encourage students to apply mathematics to real-world contexts: • Provide opportunities for students to create models, both concrete and abstract, and perform investigations. • Challenge students to question the accuracy of their models and methods. • Support students as they validate conclusions by comparing them to the given situation. • Indicate how various concepts can be applied to other disciplines.
ELA.K12.EE.1.1:	Cite evidence to explain and justify reasoning. **Clarifications:** K-1 Students include textual evidence in their oral communication with guidance and support from adults. The evidence can consist of details from the text without naming the text. During 1st grade, students learn how to incorporate the evidence in their writing. 2-3 Students include relevant textual evidence in their written and oral communication. Students should name the text when they refer to it. In 3rd grade, students should use a combination of direct and indirect citations. 4-5 Students continue with previous skills and reference comments made by speakers and peers. Students cite texts that they've directly quoted, paraphrased, or used for information. When writing, students will use the form of citation dictated by the instructor or the style guide referenced by the instructor. 6-8 Students continue with previous skills and use a style guide to create a proper citation. 9-12 Students continue with previous skills and should be aware of existing style guides and the ways in which they differ.
ELA.K12.EE.2.1:	Read and comprehend grade-level complex texts proficiently. **Clarifications:** See Text Complexity for grade-level complexity bands and a text complexity rubric.
ELA.K12.EE.3.1:	Make inferences to support comprehension. **Clarifications:** Students will make inferences before the words infer or inference are introduced. Kindergarten students will answer questions like "Why is the girl smiling?" or make predictions about what will happen based on the title page. Students will use the terms and apply them in 2nd grade and beyond.
ELA.K12.EE.4.1:	Use appropriate collaborative techniques and active listening skills when engaging in discussions in a variety of situations. **Clarifications:** In kindergarten, students learn to listen to one another respectfully. In grades 1-2, students build upon these skills by justifying what they are thinking. For example: "I think _____ because _____." The collaborative conversations are becoming academic conversations. In grades 3-12, students engage in academic conversations discussing claims and justifying their reasoning, refining and applying skills. Students build on ideas, propel the conversation, and support claims and counterclaims with evidence.
ELA.K12.EE.5.1:	Use the accepted rules governing a specific format to create quality work. **Clarifications:** Students will incorporate skills learned into work products to produce quality work. For students to incorporate these skills appropriately, they must receive instruction. A 3rd grade student creating a poster board display must have instruction in how to effectively present information to do quality work.
ELA.K12.EE.6.1:	Use appropriate voice and tone when speaking or writing. **Clarifications:** In kindergarten and 1st grade, students learn the difference between formal and informal language. For example, the way we talk to our friends differs from the way we speak to adults. In 2nd grade and beyond, students practice appropriate social and academic language to discuss texts.
DA.912.S.2.1:	Sustain focused attention, respect, and discipline during class, rehearsal, and performance.
ELD.K12.ELL.SI.1:	English language learners communicate for social and instructional purposes within the school setting.

General Course Information and Notes

VERSION DESCRIPTION

Students in this Pre-IB class refine their musicianship and performance skills on a specified instrument or voice. Students prepare for post-secondary and community music experiences and develop artistry independently through a variety of advanced solos, etudes, and excerpts. Public performances may serve as a culmination of specific instructional goals. Students may be required to attend and/or participate in rehearsals and performances outside the school day to support, extend, and assess learning in the classroom. This course, if used for an instrumental class, may also require students to obtain a musical instrument (e.g., borrow, rent, purchase) from an outside source.

In addition, the purpose of this Pre-IB course is to prepare students for the International Baccalaureate Diploma Programme (DP). As such, this course will provide academic rigor and relevance through a comprehensive curriculum based on the Next Generation Sunshine State Standards taught with reference to the unique facets of the IB. These facets include interrelatedness of subject areas, holistic view of knowledge, intercultural awareness embracing international issues, and communication as fundamental to learning. Instructional design must provide students with values and opportunities that enable them to develop respect for others and an appreciation of similarities and differences. Learning how to learn and how to critically evaluate information is as important as the content of the disciplines themselves.

GENERAL NOTES

Special Note. *Pre-IB courses have been created by individual schools or school districts since before the MYP started. These courses mapped backwards the Diploma Programme (DP) to prepare students as early as age 14. The IB was never involved in creating or approving these courses. The IB acknowledges that it is important for students to receive preparation for taking part in the DP, and that preparation is the MYP. The IB designed the MYP to address the whole child, which, as a result, has a very different philosophical approach that aims at educating all students aged 11-16. Pre-IB courses usually deal with content, with less emphasis upon the needs of the whole child or the affective domain than the MYP. A school can have a course that it calls "pre-IB" as long as it makes it clear that the course and any supporting material have been developed independently of the IB. For this reason, the school must name the course along the lines of, for example, the "Any School pre-IB course".*

The IB does not recognize pre-IB courses or courses labeled IB by different school districts which are not an official part of the IBDP or IBCC curriculum. Typically, students enrolled in grade 9 or 10 are not in the IBDP or IBCC programmes.
ibanswers.ibo.org/app/answers/detail/a_id/5414/kw/pre-ib. **Florida's Pre-IB courses should only be used in schools where MYP is not offered in order to prepare students to enter the IBDP. Teachers of Florida's Pre-IB courses should have undergone IB training in order to ensure seamless articulation for students within the subject area.**
Honors and Advanced Level Course Note: Advanced courses require a greater demand on students through increased academic rigor. Academic rigor is obtained through the application, analysis, evaluation, and creation of complex ideas that are often abstract and multi-faceted. Students are challenged to think and collaborate critically on the content they are learning. Honors level rigor will be achieved by increasing text complexity through text selection, focus on high-level qualitative measures, and complexity of task. Instruction will be structured to give students a deeper understanding of conceptual themes and organization within and across disciplines. Academic rigor is more than simply assigning to students a greater quantity of work.

Florida's Benchmarks for Excellent Student Thinking (B.E.S.T.) Standards
This course includes Florida's B.E.S.T. ELA Expectations (EE) and Mathematical Thinking and Reasoning Standards (MTRs) for students. Florida educators should intentionally embed these standards within the content and their instruction as applicable. For guidance on the implementation of the EEs and MTRs, please visit cpalms.org/Standards/BEST_Standards.aspx and select the appropriate B.E.S.T. Standards package.

English Language Development ELD Standards Special Notes Section:
Teachers are required to provide listening, speaking, reading and writing instruction that allows English language learners (ELL) to communicate for social and instructional purposes within the school setting. For the given level of English language proficiency and with visual, graphic, or interactive support, students will interact with grade level words, expressions, sentences and discourse to process or produce language necessary for academic success. The ELD standard should specify a relevant content area concept or topic of study chosen by curriculum developers and teachers which maximizes an ELL's need for communication and social skills. To access an ELL supporting document which delineates performance definitions and descriptors, please click on the following link: cpalms.org/uploads/docs/standards/eld/SI.pdf

GENERAL INFORMATION

Course Number: 1300800

Course Path: Section: Grades PreK to 12 Education Courses > **Grade Group:** Grades 9 to 12 and Adult Education Courses > **Subject:** Music Education > **SubSubject:** General Music > **Abbreviated Title:** FL PRE-IB MUSIC 1

Number of Credits: One (1) credit

Course Length: Year (Y)

Course Attributes:
- Honors

Course Type: Core Academic Course

Course Level: 3

Course Status: Draft - Course Pending Approval

Grade Level(s): 9,10

Graduation Requirement: Performing/Fine Arts

Educator Certifications

Music (Elementary and Secondary Grades K-12)
Vocal Music (Elementary and Secondary Grades K-12)
Instrumental Music (Secondary Grades 7-12)
Instrumental Music (Elementary and Secondary Grades K-12)

Florida's Preinternational Baccalaureate Music 2 (#1300810) 2022 - And Beyond

Course Standards

Name	Description
MU.912.C.1.1:	Apply listening strategies to promote appreciation and understanding of unfamiliar musical works. **Clarifications:** e.g., listening maps, active listening, checklists
MU.912.C.1.2:	Compare, using correct music vocabulary, the aesthetic impact of two or more performances of a musical work to one's own hypothesis of the composer's intent. **Clarifications:** e.g., quality recordings, individual and peer-group performances, composer notes, instrumentation, expressive elements, title
MU.912.C.2.1:	Evaluate and make appropriate adjustments to personal performance in solo and ensembles.
MU.912.C.2.2:	Evaluate performance quality in recorded and/or live performances.
MU.912.C.3.1:	Make critical evaluations, based on exemplary models, of the quality and effectiveness of performances and apply the criteria to personal development in music.
MU.912.F.1.1:	Analyze and evaluate the effect of "traditional" and contemporary technologies on the development of music.
MU.912.F.2.1:	Design or refine a résumé for application to higher education or the workforce that highlights marketable skills and knowledge gained through music training. **Clarifications:** e.g., repertoire lists, technology-based work, ability to research and analyze, and examples of leadership and collaborative skills
MU.912.F.2.2:	Analyze the effect of the arts and entertainment industry on the economic and social health of communities and regions. **Clarifications:** e.g., community revitalization, industry choosing new locations, cultural and social enrichment
MU.912.F.2.3:	Compare the organizational structure of a professional orchestra, chorus, quintet, or other ensemble to that of a business. **Clarifications:** e.g., leadership, financial needs and structure, marketing, personnel matters, manager, travel
MU.912.F.3.1:	Analyze and describe how meeting one's responsibilities in music offers opportunities to develop leadership skills, and identify personal examples of leadership in school and/or non-school settings.
MU.912.F.3.2:	Summarize copyright laws that govern printed, recorded, and on-line music to promote legal and responsible use of intellectual property and technology.
MU.912.F.3.3:	Define, prioritize, monitor, and successfully complete tasks related to individual musical performance or project presentation, without direct oversight, demonstrating skills for use in the workplace.
MU.912.F.3.4:	Design and implement a personal learning plan, related to the study of music, which demonstrates self-assessment, brain-storming, decision-making, and initiative to advance skills and/or knowledge.
MU.912.H.1.2:	Compare the work of, and influences on, two or more exemplary composers in the performance medium studied in class. **Clarifications:** e.g., vocal, instrumental, guitar, keyboard, electronic, handbells
MU.912.H.1.3:	Compare two or more works of a composer across performance media. **Clarifications:** e.g., orchestral and choral; guitar and string quartet; piano solo and piano concerto
MU.912.H.1.5:	Analyze music within cultures to gain understanding of authentic performance practices.
MU.912.H.2.1:	Evaluate the social impact of music on specific historical periods.
MU.912.H.2.2:	Analyze current musical trends, including audience environments and music acquisition, to predict possible directions of music.
MU.912.H.2.4:	Examine the effects of developing technology on composition, performance, and acquisition of music.
MU.912.O.1.1:	Evaluate the organizational principles and conventions in musical works and discuss their effect on structure. **Clarifications:** e.g., rhythm, melody, timbre, form, tonality, harmony, texture; solo, chamber ensemble, large ensemble
MU.912.O.2.1:	Transfer accepted composition conventions and performance practices of a specific style to a contrasting style of music.
MU.912.O.3.1:	Analyze expressive elements in a musical work and describe how the choices and manipulations of the elements support, for the listener, the implied meaning of the composer/performer. **Clarifications:** e.g., tempo markings, expression markings, articulation markings, phrasing, scales, modes, harmonic structure, timbre choice, rhythm, orchestration
MU.912.O.3.2:	Interpret and perform expressive elements indicated by the musical score and/or conductor.
MU.912.S.1.3:	Arrange a musical work by manipulating two or more aspects of the composition. **Clarifications:** e.g., texture, mode, form, tempo, voicing
	Perform and notate, independently and accurately, melodies by ear.

MU.912.S.1.4:	**Clarifications:** e.g., singing, playing, writing
MU.912.S.2.1:	Apply the ability to memorize and internalize musical structure, accurate and expressive details, and processing skills to the creation or performance of music literature. **Clarifications:** e.g., memorization, sequential process
MU.912.S.2.2:	Transfer expressive elements and performance techniques from one piece of music to another.
MU.912.S.3.1:	Synthesize a broad range of musical skills by performing a varied repertoire with expression, appropriate stylistic interpretation, technical accuracy, and kinesthetic energy.
MU.912.S.3.2:	Sight-read music accurately and expressively to show synthesis of skills. **Clarifications:** e.g., musical elements, expressive qualities, performance technique
MU.912.S.3.4:	Analyze and describe the effect of rehearsal sessions and/or strategies on refinement of skills and techniques.
MU.912.S.3.5:	Develop and demonstrate proper vocal or instrumental technique. **Clarifications:** e.g., posture, breathing, fingering, embouchure, bow technique, tuning, strumming
MA.K12.MTR.1.1:	Mathematicians who participate in effortful learning both individually and with others: • Analyze the problem in a way that makes sense given the task. • Ask questions that will help with solving the task. • Build perseverance by modifying methods as needed while solving a challenging task. • Stay engaged and maintain a positive mindset when working to solve tasks. • Help and support each other when attempting a new method or approach. **Clarifications:** Teachers who encourage students to participate actively in effortful learning both individually and with others: • Cultivate a community of growth mindset learners. • Foster perseverance in students by choosing tasks that are challenging. • Develop students' ability to analyze and problem solve. • Recognize students' effort when solving challenging problems.
MA.K12.MTR.2.1:	Demonstrate understanding by representing problems in multiple ways. Mathematicians who demonstrate understanding by representing problems in multiple ways: • Build understanding through modeling and using manipulatives. • Represent solutions to problems in multiple ways using objects, drawings, tables, graphs and equations. • Progress from modeling problems with objects and drawings to using algorithms and equations. • Express connections between concepts and representations. • Choose a representation based on the given context or purpose. **Clarifications:** Teachers who encourage students to demonstrate understanding by representing problems in multiple ways: • Help students make connections between concepts and representations. • Provide opportunities for students to use manipulatives when investigating concepts. • Guide students from concrete to pictorial to abstract representations as understanding progresses. • Show students that various representations can have different purposes and can be useful in different situations.
MA.K12.MTR.3.1:	Complete tasks with mathematical fluency. Mathematicians who complete tasks with mathematical fluency: • Select efficient and appropriate methods for solving problems within the given context. • Maintain flexibility and accuracy while performing procedures and mental calculations. • Complete tasks accurately and with confidence. • Adapt procedures to apply them to a new context. • Use feedback to improve efficiency when performing calculations. **Clarifications:** Teachers who encourage students to complete tasks with mathematical fluency: • Provide students with the flexibility to solve problems by selecting a procedure that allows them to solve efficiently and accurately. • Offer multiple opportunities for students to practice efficient and generalizable methods. • Provide opportunities for students to reflect on the method they used and determine if a more efficient method could have been used.
MA.K12.MTR.4.1:	Engage in discussions that reflect on the mathematical thinking of self and others. Mathematicians who engage in discussions that reflect on the mathematical thinking of self and others: • Communicate mathematical ideas, vocabulary and methods effectively. • Analyze the mathematical thinking of others. • Compare the efficiency of a method to those expressed by others. • Recognize errors and suggest how to correctly solve the task. • Justify results by explaining methods and processes. • Construct possible arguments based on evidence. **Clarifications:** Teachers who encourage students to engage in discussions that reflect on the mathematical thinking of self and others: • Establish a culture in which students ask questions of the teacher and their peers, and error is an opportunity for learning. • Create opportunities for students to discuss their thinking with peers. • Select, sequence and present student work to advance and deepen understanding of correct and increasingly efficient methods.

	• Develop students' ability to justify methods and compare their responses to the responses of their peers.
MA.K12.MTR.5.1:	Use patterns and structure to help understand and connect mathematical concepts. Mathematicians who use patterns and structure to help understand and connect mathematical concepts: • Focus on relevant details within a problem. • Create plans and procedures to logically order events, steps or ideas to solve problems. • Decompose a complex problem into manageable parts. • Relate previously learned concepts to new concepts. • Look for similarities among problems. • Connect solutions of problems to more complicated large-scale situations. **Clarifications:** Teachers who encourage students to use patterns and structure to help understand and connect mathematical concepts: • Help students recognize the patterns in the world around them and connect these patterns to mathematical concepts. • Support students to develop generalizations based on the similarities found among problems. • Provide opportunities for students to create plans and procedures to solve problems. • Develop students' ability to construct relationships between their current understanding and more sophisticated ways of thinking.
MA.K12.MTR.6.1:	Assess the reasonableness of solutions. Mathematicians who assess the reasonableness of solutions: • Estimate to discover possible solutions. • Use benchmark quantities to determine if a solution makes sense. • Check calculations when solving problems. • Verify possible solutions by explaining the methods used. • Evaluate results based on the given context. **Clarifications:** Teachers who encourage students to assess the reasonableness of solutions: • Have students estimate or predict solutions prior to solving. • Prompt students to continually ask, "Does this solution make sense? How do you know?" • Reinforce that students check their work as they progress within and after a task. • Strengthen students' ability to verify solutions through justifications.
MA.K12.MTR.7.1:	Apply mathematics to real-world contexts. Mathematicians who apply mathematics to real-world contexts: • Connect mathematical concepts to everyday experiences. • Use models and methods to understand, represent and solve problems. • Perform investigations to gather data or determine if a method is appropriate. • Redesign models and methods to improve accuracy or efficiency. **Clarifications:** Teachers who encourage students to apply mathematics to real-world contexts: • Provide opportunities for students to create models, both concrete and abstract, and perform investigations. • Challenge students to question the accuracy of their models and methods. • Support students as they validate conclusions by comparing them to the given situation. • Indicate how various concepts can be applied to other disciplines.
ELA.K12.EE.1.1:	Cite evidence to explain and justify reasoning. **Clarifications:** K-1 Students include textual evidence in their oral communication with guidance and support from adults. The evidence can consist of details from the text without naming the text. During 1st grade, students learn how to incorporate the evidence in their writing. 2-3 Students include relevant textual evidence in their written and oral communication. Students should name the text when they refer to it. In 3rd grade, students should use a combination of direct and indirect citations. 4-5 Students continue with previous skills and reference comments made by speakers and peers. Students cite texts that they've directly quoted, paraphrased, or used for information. When writing, students will use the form of citation dictated by the instructor or the style guide referenced by the instructor. 6-8 Students continue with previous skills and use a style guide to create a proper citation. 9-12 Students continue with previous skills and should be aware of existing style guides and the ways in which they differ.
ELA.K12.EE.2.1:	Read and comprehend grade-level complex texts proficiently. **Clarifications:** See Text Complexity for grade-level complexity bands and a text complexity rubric.
ELA.K12.EE.3.1:	Make inferences to support comprehension. **Clarifications:** Students will make inferences before the words infer or inference are introduced. Kindergarten students will answer questions like "Why is the girl smiling?" or make predictions about what will happen based on the title page. Students will use the terms and apply them in 2nd grade and beyond.
ELA.K12.EE.4.1:	Use appropriate collaborative techniques and active listening skills when engaging in discussions in a variety of situations. **Clarifications:** In kindergarten, students learn to listen to one another respectfully. In grades 1-2, students build upon these skills by justifying what they are thinking. For example: "I think _____ because _____." The collaborative conversations are becoming academic conversations. In grades 3-12, students engage in academic conversations discussing claims and justifying their reasoning, refining and applying skills. Students

	build on ideas, propel the conversation, and support claims and counterclaims with evidence.
ELA.K12.EE.5.1:	Use the accepted rules governing a specific format to create quality work. **Clarifications:** Students will incorporate skills learned into work products to produce quality work. For students to incorporate these skills appropriately, they must receive instruction. A 3rd grade student creating a poster board display must have instruction in how to effectively present information to do quality work.
ELA.K12.EE.6.1:	Use appropriate voice and tone when speaking or writing. **Clarifications:** In kindergarten and 1st grade, students learn the difference between formal and informal language. For example, the way we talk to our friends differs from the way we speak to adults. In 2nd grade and beyond, students practice appropriate social and academic language to discuss texts.
DA.912.F.3.8:	Demonstrate effective teamwork and accountability, using compromise, collaboration, and conflict resolution, to set and achieve goals as required in the work environment.
DA.912.S.2.1:	Sustain focused attention, respect, and discipline during class, rehearsal, and performance.
ELD.K12.ELL.SI.1:	English language learners communicate for social and instructional purposes within the school setting.

General Course Information and Notes

VERSION DESCRIPTION

Students with extensive vocal or instrumental ensemble experience refine their critical listening, music literacy, and ensemble skills through the study, rehearsal, and performance of high-quality, advanced literature. Students in this Pre-IB class use reflection and problem-solving skills with increasing independence to improve their performance and musical expression. Public performances may serve as a culmination of specific instructional goals. Students may be required to attend and/or participate in rehearsals and performances outside the school day to support, extend, and assess learning in the classroom. This course, if used for an instrumental ensemble, may also require students to obtain a musical instrument (e.g., borrow, rent, purchase) from an outside source. In addition, the purpose of this Pre-IB course is to prepare students for the International Baccalaureate Diploma Programme (DP). As such, this course will provide academic rigor and relevance through a comprehensive curriculum based on the Next Generation Sunshine State Standards taught with reference to the unique facets of the IB. These facets include interrelatedness of subject areas, holistic view of knowledge, intercultural awareness embracing international issues, and communication as fundamental to learning. Instructional design must provide students with values and opportunities that enable them to develop respect for others and an appreciation of similarities and differences. Learning how to learn and how to critically evaluate information is as important as the content of the disciplines themselves.

GENERAL NOTES

Special Note. *Pre-IB courses have been created by individual schools or school districts since before the MYP started. These courses mapped backwards the Diploma Programme (DP) to prepare students as early as age 14. The IB was never involved in creating or approving these courses. The IB acknowledges that it is important for students to receive preparation for taking part in the DP, and that preparation is the MYP. The IB designed the MYP to address the whole child, which, as a result, has a very different philosophical approach that aims at educating all students aged 11-16. Pre-IB courses usually deal with content, with less emphasis upon the needs of the whole child or the affective domain than the MYP. A school can have a course that it calls "pre-IB" as long as it makes it clear that the course and any supporting material have been developed independently of the IB. For this reason, the school must name the course along the lines of, for example, the "Any School pre-IB course".*

The IB does not recognize pre-IB courses or courses labeled IB by different school districts which are not an official part of the IBDP or IBCC curriculum. Typically, students enrolled in grade 9 or 10 are not in the IBDP or IBCC programmes.
ibanswers.ibo.org/app/answers/detail/a_id/5414/kw/pre-ib. **Florida's Pre-IB courses should only be used in schools where MYP is not offered in order to prepare students to enter the IBDP. Teachers of Florida's Pre-IB courses should have undergone IB training in order to ensure seamless articulation for students within the subject area.**
Honors and Advanced Level Course Note: Advanced courses require a greater demand on students through increased academic rigor. Academic rigor is obtained through the application, analysis, evaluation, and creation of complex ideas that are often abstract and multi-faceted. Students are challenged to think and collaborate critically on the content they are learning. Honors level rigor will be achieved by increasing text complexity through text selection, focus on high-level qualitative measures, and complexity of task. Instruction will be structured to give students a deeper understanding of conceptual themes and organization within and across disciplines. Academic rigor is more than simply assigning to students a greater quantity of work.

Florida's Benchmarks for Excellent Student Thinking (B.E.S.T.) Standards
This course includes Florida's B.E.S.T. ELA Expectations (EE) and Mathematical Thinking and Reasoning Standards (MTRs) for students. Florida educators should intentionally embed these standards within the content and their instruction as applicable. For guidance on the implementation of the EEs and MTRs, please visit cpalms.org/Standards/BEST_Standards.aspx and select the appropriate B.E.S.T. Standards package.

English Language Development ELD Standards Special Notes Section:
Teachers are required to provide listening, speaking, reading and writing instruction that allows English language learners (ELL) to communicate for social and instructional purposes within the school setting. For the given level of English language proficiency and with visual, graphic, or interactive support, students will interact with grade level words, expressions, sentences and discourse to process or produce language necessary for academic success. The ELD standard should specify a relevant content area concept or topic of study chosen by curriculum developers and teachers which maximizes an ELL's need for communication and social skills. To access an ELL supporting document which delineates performance definitions and descriptors, please click on the following link: cpalms.org/uploads/docs/standards/eld/SI.pdf

GENERAL INFORMATION

Course Number: 1300810

Course Path: Section: Grades PreK to 12 Education Courses > **Grade Group:** Grades 9 to 12 and Adult Education Courses > **Subject:** Music Education >

SubSubject: General Music >
Abbreviated Title: FL PRE-IB MUSIC 2
Number of Credits: One (1) credit
Course Length: Year (Y)
Course Attributes:

- Honors

Course Type: Core Academic Course
Course Level: 3
Course Status: Course Approved
Grade Level(s): 9,10
Graduation Requirement: Performing/Fine Arts

Educator Certifications

Music (Elementary and Secondary Grades K-12)
Vocal Music (Elementary and Secondary Grades K-12)
Instrumental Music (Secondary Grades 7-12)
Instrumental Music (Elementary and Secondary Grades K-12)

Music Transfer (#1300990) 2022 - And Beyond

Course Standards

Name	Description
MA.K12.MTR.1.1:	Mathematicians who participate in effortful learning both individually and with others: • Analyze the problem in a way that makes sense given the task. • Ask questions that will help with solving the task. • Build perseverance by modifying methods as needed while solving a challenging task. • Stay engaged and maintain a positive mindset when working to solve tasks. • Help and support each other when attempting a new method or approach. **Clarifications:** Teachers who encourage students to participate actively in effortful learning both individually and with others: • Cultivate a community of growth mindset learners. • Foster perseverance in students by choosing tasks that are challenging. • Develop students' ability to analyze and problem solve. • Recognize students' effort when solving challenging problems.
MA.K12.MTR.2.1:	Demonstrate understanding by representing problems in multiple ways. Mathematicians who demonstrate understanding by representing problems in multiple ways: • Build understanding through modeling and using manipulatives. • Represent solutions to problems in multiple ways using objects, drawings, tables, graphs and equations. • Progress from modeling problems with objects and drawings to using algorithms and equations. • Express connections between concepts and representations. • Choose a representation based on the given context or purpose. **Clarifications:** Teachers who encourage students to demonstrate understanding by representing problems in multiple ways: • Help students make connections between concepts and representations. • Provide opportunities for students to use manipulatives when investigating concepts. • Guide students from concrete to pictorial to abstract representations as understanding progresses. • Show students that various representations can have different purposes and can be useful in different situations.
MA.K12.MTR.3.1:	Complete tasks with mathematical fluency. Mathematicians who complete tasks with mathematical fluency: • Select efficient and appropriate methods for solving problems within the given context. • Maintain flexibility and accuracy while performing procedures and mental calculations. • Complete tasks accurately and with confidence. • Adapt procedures to apply them to a new context. • Use feedback to improve efficiency when performing calculations. **Clarifications:** Teachers who encourage students to complete tasks with mathematical fluency: • Provide students with the flexibility to solve problems by selecting a procedure that allows them to solve efficiently and accurately. • Offer multiple opportunities for students to practice efficient and generalizable methods. • Provide opportunities for students to reflect on the method they used and determine if a more efficient method could have been used.
MA.K12.MTR.4.1:	Engage in discussions that reflect on the mathematical thinking of self and others. Mathematicians who engage in discussions that reflect on the mathematical thinking of self and others: • Communicate mathematical ideas, vocabulary and methods effectively. • Analyze the mathematical thinking of others. • Compare the efficiency of a method to those expressed by others. • Recognize errors and suggest how to correctly solve the task. • Justify results by explaining methods and processes. • Construct possible arguments based on evidence. **Clarifications:** Teachers who encourage students to engage in discussions that reflect on the mathematical thinking of self and others: • Establish a culture in which students ask questions of the teacher and their peers, and error is an opportunity for learning. • Create opportunities for students to discuss their thinking with peers. • Select, sequence and present student work to advance and deepen understanding of correct and increasingly efficient methods. • Develop students' ability to justify methods and compare their responses to the responses of their peers.
	Use patterns and structure to help understand and connect mathematical concepts. Mathematicians who use patterns and structure to help understand and connect mathematical concepts: • Focus on relevant details within a problem. • Create plans and procedures to logically order events, steps or ideas to solve problems. • Decompose a complex problem into manageable parts. • Relate previously learned concepts to new concepts.

MA.K12.MTR.5.1:	• Look for similarities among problems. • Connect solutions of problems to more complicated large-scale situations. **Clarifications:** Teachers who encourage students to use patterns and structure to help understand and connect mathematical concepts: • Help students recognize the patterns in the world around them and connect these patterns to mathematical concepts. • Support students to develop generalizations based on the similarities found among problems. • Provide opportunities for students to create plans and procedures to solve problems. • Develop students' ability to construct relationships between their current understanding and more sophisticated ways of thinking.
MA.K12.MTR.6.1:	Assess the reasonableness of solutions. Mathematicians who assess the reasonableness of solutions: • Estimate to discover possible solutions. • Use benchmark quantities to determine if a solution makes sense. • Check calculations when solving problems. • Verify possible solutions by explaining the methods used. • Evaluate results based on the given context. **Clarifications:** Teachers who encourage students to assess the reasonableness of solutions: • Have students estimate or predict solutions prior to solving. • Prompt students to continually ask, "Does this solution make sense? How do you know?" • Reinforce that students check their work as they progress within and after a task. • Strengthen students' ability to verify solutions through justifications.
MA.K12.MTR.7.1:	Apply mathematics to real-world contexts. Mathematicians who apply mathematics to real-world contexts: • Connect mathematical concepts to everyday experiences. • Use models and methods to understand, represent and solve problems. • Perform investigations to gather data or determine if a method is appropriate. • Redesign models and methods to improve accuracy or efficiency. **Clarifications:** Teachers who encourage students to apply mathematics to real-world contexts: • Provide opportunities for students to create models, both concrete and abstract, and perform investigations. • Challenge students to question the accuracy of their models and methods. • Support students as they validate conclusions by comparing them to the given situation. • Indicate how various concepts can be applied to other disciplines.
ELA.K12.EE.1.1:	Cite evidence to explain and justify reasoning. **Clarifications:** K-1 Students include textual evidence in their oral communication with guidance and support from adults. The evidence can consist of details from the text without naming the text. During 1st grade, students learn how to incorporate the evidence in their writing. 2-3 Students include relevant textual evidence in their written and oral communication. Students should name the text when they refer to it. In 3rd grade, students should use a combination of direct and indirect citations. 4-5 Students continue with previous skills and reference comments made by speakers and peers. Students cite texts that they've directly quoted, paraphrased, or used for information. When writing, students will use the form of citation dictated by the instructor or the style guide referenced by the instructor. 6-8 Students continue with previous skills and use a style guide to create a proper citation. 9-12 Students continue with previous skills and should be aware of existing style guides and the ways in which they differ.
ELA.K12.EE.2.1:	Read and comprehend grade-level complex texts proficiently. **Clarifications:** See Text Complexity for grade-level complexity bands and a text complexity rubric.
ELA.K12.EE.3.1:	Make inferences to support comprehension. **Clarifications:** Students will make inferences before the words infer or inference are introduced. Kindergarten students will answer questions like "Why is the girl smiling?" or make predictions about what will happen based on the title page. Students will use the terms and apply them in 2nd grade and beyond.
ELA.K12.EE.4.1:	Use appropriate collaborative techniques and active listening skills when engaging in discussions in a variety of situations. **Clarifications:** In kindergarten, students learn to listen to one another respectfully. In grades 1-2, students build upon these skills by justifying what they are thinking. For example: "I think _____ because _____." The collaborative conversations are becoming academic conversations. In grades 3-12, students engage in academic conversations discussing claims and justifying their reasoning, refining and applying skills. Students build on ideas, propel the conversation, and support claims and counterclaims with evidence.
ELA.K12.EE.5.1:	Use the accepted rules governing a specific format to create quality work. **Clarifications:** Students will incorporate skills learned into work products to produce quality work. For students to incorporate these skills appropriately, they must receive instruction. A 3rd grade student creating a poster board display must have instruction in how to effectively present information to do quality work.
	Use appropriate voice and tone when speaking or writing.

ELA.K12.EE.6.1:	**Clarifications:** In kindergarten and 1st grade, students learn the difference between formal and informal language. For example, the way we talk to our friends differs from the way we speak to adults. In 2nd grade and beyond, students practice appropriate social and academic language to discuss texts.

General Course Information and Notes

VERSION DESCRIPTION

SUBJECT AREA TRANSFER NUMBERS

Each course transferred into a Florida public school by an out-of-state or non-public school student should be matched with a course title and number when such course provides substantially the same content. However, a few transfer courses may not be close enough in content to be matched. For those courses a subject area transfer number is provided.

GENERAL INFORMATION

Course Number: 1300990

Course Path: Section: Grades PreK to 12 Education Courses > **Grade Group:** Grades 9 to 12 and Adult Education Courses > **Subject:** Music Education > **SubSubject:** Eurythmics >

Abbreviated Title: MUS TRAN

Course Length: Not Applicable

Course Type: Transfer Course

Course Status: Draft - Course Pending Approval

Grade Level(s): 9,10,11,12

M/J Keyboard 1 (#1301030) 2022 - And Beyond

Course Standards

Name	Description
MU.68.C.1.1:	Develop strategies for listening to unfamiliar musical works. **Clarifications:** e.g., listening maps, active listening, checklists
MU.68.C.1.2:	Compare, using correct music vocabulary, the aesthetic impact of a performance to one's own hypothesis of the composer's intent. **Clarifications:** e.g., quality recordings, peer group and individual performances, composer notes, instrumentation, expressive elements, title
MU.68.C.2.1:	Critique personal performance, experiment with a variety of solutions, and make appropriate adjustments with guidance from teachers and peers. **Clarifications:** e.g., intonation, balance, blend, phrasing, rhythm
MU.68.C.2.2:	Critique, using correct music vocabulary, changes in one's own or others' musical performance resulting from practice or rehearsal. **Clarifications:** e.g., blend, balance, ensemble playing, sonority, technique, tone quality
MU.68.F.1.1:	Create a composition and/or performance, using visual, kinesthetic, digital, and/or acoustic means to manipulate musical elements.
MU.68.F.3.2:	Investigate and discuss laws that protect intellectual property, and practice safe, legal, and responsible acquisition and use of musical media.
MU.68.H.1.5:	Using representative musical works by selected composers, classify compositional characteristics common to a specific time period and/or genre.
MU.68.H.2.3:	Classify the literature being studied by genre, style, and/or time period.
MU.68.H.3.1:	Identify connections among music and other content areas and/or contexts through interdisciplinary collaboration. **Clarifications:** e.g., school: other music classes, social studies, dance, physical education, science, health, math, world languages; community: cultural connections and traditions, ceremonial music, sales and advertising, communication
MU.68.H.3.2:	Discuss how the absence of music would affect other content areas and contexts. **Clarifications:** e.g., theatre and dance, movies, sporting events, video games, commercial advertising, social gatherings, civic and religious ceremonies, plays
MU.68.O.1.1:	Compare performances of a musical work to identify artistic choices made by performers. **Clarifications:** e.g., rhythm, melody, timbre, form, tonality, harmony, expressive elements; choral, orchestral, band, ensemble
MU.68.O.3.2:	Perform the expressive elements of a musical work indicated by the musical score and/or conductor, and transfer new knowledge and experiences to other musical works.
MU.68.S.1.1:	Improvise rhythmic and melodic phrases to accompany familiar songs and/or standard harmonic progressions. **Clarifications:** e.g., blues, rock
MU.68.S.1.3:	Arrange a short musical piece by manipulating melody, form, rhythm, and/or voicing.
MU.68.S.2.2:	Transfer performance techniques from familiar to unfamiliar pieces.
MU.68.S.3.1:	Sing and/or play age-appropriate repertoire expressively. **Clarifications:** e.g., technique, phrasing, dynamics, tone quality, blend, balance, intonation, kinesthetic support/response
MU.68.S.3.2:	Demonstrate proper vocal or instrumental technique. **Clarifications:** e.g., posture, breathing, fingering, embouchure, bow technique, tuning, strumming
MU.68.S.3.5:	Notate rhythmic phrases and/or melodies, in varying simple meters, performed by someone else.
MA.K12.MTR.1.1:	Mathematicians who participate in effortful learning both individually and with others: • Analyze the problem in a way that makes sense given the task. • Ask questions that will help with solving the task. • Build perseverance by modifying methods as needed while solving a challenging task. • Stay engaged and maintain a positive mindset when working to solve tasks. • Help and support each other when attempting a new method or approach. **Clarifications:** Teachers who encourage students to participate actively in effortful learning both individually and with others: • Cultivate a community of growth mindset learners. • Foster perseverance in students by choosing tasks that are challenging. • Develop students' ability to analyze and problem solve. • Recognize students' effort when solving challenging problems.
	Demonstrate understanding by representing problems in multiple ways. Mathematicians who demonstrate understanding by representing problems in multiple ways: • Build understanding through modeling and using manipulatives.

- Represent solutions to problems in multiple ways using objects, drawings, tables, graphs and equations.
- Progress from modeling problems with objects and drawings to using algorithms and equations.
- Express connections between concepts and representations.

MA.K12.MTR.2.1:

- Choose a representation based on the given context or purpose.

Clarifications:
Teachers who encourage students to demonstrate understanding by representing problems in multiple ways:

- Help students make connections between concepts and representations.
- Provide opportunities for students to use manipulatives when investigating concepts.
- Guide students from concrete to pictorial to abstract representations as understanding progresses.
- Show students that various representations can have different purposes and can be useful in different situations.

Complete tasks with mathematical fluency.
Mathematicians who complete tasks with mathematical fluency:

- Select efficient and appropriate methods for solving problems within the given context.
- Maintain flexibility and accuracy while performing procedures and mental calculations.
- Complete tasks accurately and with confidence.
- Adapt procedures to apply them to a new context.

MA.K12.MTR.3.1:

- Use feedback to improve efficiency when performing calculations.

Clarifications:
Teachers who encourage students to complete tasks with mathematical fluency:

- Provide students with the flexibility to solve problems by selecting a procedure that allows them to solve efficiently and accurately.
- Offer multiple opportunities for students to practice efficient and generalizable methods.
- Provide opportunities for students to reflect on the method they used and determine if a more efficient method could have been used.

Engage in discussions that reflect on the mathematical thinking of self and others.
Mathematicians who engage in discussions that reflect on the mathematical thinking of self and others:

- Communicate mathematical ideas, vocabulary and methods effectively.
- Analyze the mathematical thinking of others.
- Compare the efficiency of a method to those expressed by others.
- Recognize errors and suggest how to correctly solve the task.
- Justify results by explaining methods and processes.

MA.K12.MTR.4.1:

- Construct possible arguments based on evidence.

Clarifications:
Teachers who encourage students to engage in discussions that reflect on the mathematical thinking of self and others:

- Establish a culture in which students ask questions of the teacher and their peers, and error is an opportunity for learning.
- Create opportunities for students to discuss their thinking with peers.
- Select, sequence and present student work to advance and deepen understanding of correct and increasingly efficient methods.
- Develop students' ability to justify methods and compare their responses to the responses of their peers.

Use patterns and structure to help understand and connect mathematical concepts.
Mathematicians who use patterns and structure to help understand and connect mathematical concepts:

- Focus on relevant details within a problem.
- Create plans and procedures to logically order events, steps or ideas to solve problems.
- Decompose a complex problem into manageable parts.
- Relate previously learned concepts to new concepts.
- Look for similarities among problems.

MA.K12.MTR.5.1:

- Connect solutions of problems to more complicated large-scale situations.

Clarifications:
Teachers who encourage students to use patterns and structure to help understand and connect mathematical concepts:

- Help students recognize the patterns in the world around them and connect these patterns to mathematical concepts.
- Support students to develop generalizations based on the similarities found among problems.
- Provide opportunities for students to create plans and procedures to solve problems.
- Develop students' ability to construct relationships between their current understanding and more sophisticated ways of thinking.

Assess the reasonableness of solutions.
Mathematicians who assess the reasonableness of solutions:

- Estimate to discover possible solutions.
- Use benchmark quantities to determine if a solution makes sense.
- Check calculations when solving problems.
- Verify possible solutions by explaining the methods used.

MA.K12.MTR.6.1:

- Evaluate results based on the given context.

Clarifications:
Teachers who encourage students to assess the reasonableness of solutions:

- Have students estimate or predict solutions prior to solving.
- Prompt students to continually ask, "Does this solution make sense? How do you know?"
- Reinforce that students check their work as they progress within and after a task.
- Strengthen students' ability to verify solutions through justifications.

Apply mathematics to real-world contexts.
Mathematicians who apply mathematics to real-world contexts:

MA.K12.MTR.7.1:	• Connect mathematical concepts to everyday experiences. • Use models and methods to understand, represent and solve problems. • Perform investigations to gather data or determine if a method is appropriate. • Redesign models and methods to improve accuracy or efficiency. **Clarifications:** Teachers who encourage students to apply mathematics to real-world contexts: • Provide opportunities for students to create models, both concrete and abstract, and perform investigations. • Challenge students to question the accuracy of their models and methods. • Support students as they validate conclusions by comparing them to the given situation. • Indicate how various concepts can be applied to other disciplines.
ELA.K12.EE.1.1:	Cite evidence to explain and justify reasoning. **Clarifications:** K-1 Students include textual evidence in their oral communication with guidance and support from adults. The evidence can consist of details from the text without naming the text. During 1st grade, students learn how to incorporate the evidence in their writing. 2-3 Students include relevant textual evidence in their written and oral communication. Students should name the text when they refer to it. In 3rd grade, students should use a combination of direct and indirect citations. 4-5 Students continue with previous skills and reference comments made by speakers and peers. Students cite texts that they've directly quoted, paraphrased, or used for information. When writing, students will use the form of citation dictated by the instructor or the style guide referenced by the instructor. 6-8 Students continue with previous skills and use a style guide to create a proper citation. 9-12 Students continue with previous skills and should be aware of existing style guides and the ways in which they differ.
ELA.K12.EE.2.1:	Read and comprehend grade-level complex texts proficiently. **Clarifications:** See Text Complexity for grade-level complexity bands and a text complexity rubric.
ELA.K12.EE.3.1:	Make inferences to support comprehension. **Clarifications:** Students will make inferences before the words infer or inference are introduced. Kindergarten students will answer questions like "Why is the girl smiling?" or make predictions about what will happen based on the title page. Students will use the terms and apply them in 2nd grade and beyond.
ELA.K12.EE.4.1:	Use appropriate collaborative techniques and active listening skills when engaging in discussions in a variety of situations. **Clarifications:** In kindergarten, students learn to listen to one another respectfully. In grades 1-2, students build upon these skills by justifying what they are thinking. For example: "I think _____ because _____." The collaborative conversations are becoming academic conversations. In grades 3-12, students engage in academic conversations discussing claims and justifying their reasoning, refining and applying skills. Students build on ideas, propel the conversation, and support claims and counterclaims with evidence.
ELA.K12.EE.5.1:	Use the accepted rules governing a specific format to create quality work. **Clarifications:** Students will incorporate skills learned into work products to produce quality work. For students to incorporate these skills appropriately, they must receive instruction. A 3rd grade student creating a poster board display must have instruction in how to effectively present information to do quality work.
ELA.K12.EE.6.1:	Use appropriate voice and tone when speaking or writing. **Clarifications:** In kindergarten and 1st grade, students learn the difference between formal and informal language. For example, the way we talk to our friends differs from the way we speak to adults. In 2nd grade and beyond, students practice appropriate social and academic language to discuss texts.
DA.68.S.2.1:	Sustain focused attention, respect, and discipline during classes and performances.
ELD.K12.ELL.SI.1:	English language learners communicate for social and instructional purposes within the school setting.

General Course Information and Notes

VERSION DESCRIPTION

Students with little or no prior experience develop fundamental piano techniques, learn to read music, apply basic music theory, and explore the role of keyboard music in history and culture. Beginning pianists explore musical creativity in the form of basic arranging and improvisation, and develop analytical listening and problem-solving skills. Public performances may serve as a culmination of specific instructional goals. Students may be required to attend and/or participate in rehearsals and performances outside the school day to support, extend, and assess learning in the classroom.

GENERAL NOTES

Florida's Benchmarks for Excellent Student Thinking (B.E.S.T.) Standards
This course includes Florida's B.E.S.T. ELA Expectations (EE) and Mathematical Thinking and Reasoning Standards (MTRs) for students. Florida educators should intentionally

embed these standards within the content and their instruction as applicable. For guidance on the implementation of the EEs and MTRs, please visit cpalms.org/Standards/BEST_Standards.aspx and select the appropriate B.E.S.T. Standards package.

English Language Development ELD Standards Special Notes Section:
Teachers are required to provide listening, speaking, reading and writing instruction that allows English language learners (ELL) to communicate for social and instructional purposes within the school setting. For the given level of English language proficiency and with visual, graphic, or interactive support, students will interact with grade level words, expressions, sentences and discourse to process or produce language necessary for academic success. The ELD standard should specify a relevant content area concept or topic of study chosen by curriculum developers and teachers which maximizes an ELL's need for communication and social skills. To access an ELL supporting document which delineates performance definitions and descriptors, please click on the following link: cpalms.org/uploads/docs/standards/eld/SI.pdf

GENERAL INFORMATION

Course Number: 1301030

Course Path: Section: Grades PreK to 12 Education Courses > **Grade Group:** Grades 6 to 8 Education Courses > **Subject:** Music Education > **SubSubject:** Instrumental Music >

Abbreviated Title: M/J KEYBD 1

Course Length: Year (Y)

Course Level: 2

Course Status: Draft - Course Pending Approval

Grade Level(s): 6,7,8

Educator Certifications

Vocal Music (Elementary and Secondary Grades K-12)
Instrumental Music (Secondary Grades 7-12)
Instrumental Music (Elementary and Secondary Grades K-12)
Music (Elementary and Secondary Grades K-12)

M/J Keyboard 2 (#1301040) 2022 - And Beyond

Course Standards

Name	Description
MU.68.C.1.1:	Develop strategies for listening to unfamiliar musical works. **Clarifications:** e.g., listening maps, active listening, checklists
MU.68.C.1.2:	Compare, using correct music vocabulary, the aesthetic impact of a performance to one's own hypothesis of the composer's intent. **Clarifications:** e.g., quality recordings, peer group and individual performances, composer notes, instrumentation, expressive elements, title
MU.68.C.1.3:	Identify, aurally, instrumental styles and a variety of instrumental ensembles. **Clarifications:** e.g., Classical, Baroque, Romantic, contemporary, jazz, pop, solo, duet, trio, quartet, small ensembles
MU.68.C.2.1:	Critique personal performance, experiment with a variety of solutions, and make appropriate adjustments with guidance from teachers and peers. **Clarifications:** e.g., intonation, balance, blend, phrasing, rhythm
MU.68.C.2.2:	Critique, using correct music vocabulary, changes in one's own or others' musical performance resulting from practice or rehearsal. **Clarifications:** e.g., blend, balance, ensemble playing, sonority, technique, tone quality
MU.68.C.2.3:	Critique personal composition and/or improvisation, using simple criteria, to generate improvements with guidance from teachers and/or peers.
MU.68.F.1.1:	Create a composition and/or performance, using visual, kinesthetic, digital, and/or acoustic means to manipulate musical elements.
MU.68.F.2.2:	Describe how concert attendance can financially impact a community. **Clarifications:** e.g., increased revenues at restaurants, hotels, and travel agencies; venue maintenance, parking attendants
MU.68.F.3.2:	Investigate and discuss laws that protect intellectual property, and practice safe, legal, and responsible acquisition and use of musical media.
MU.68.H.1.2:	Identify the works of representative composers within a specific style or time period.
MU.68.H.1.5:	Using representative musical works by selected composers, classify compositional characteristics common to a specific time period and/or genre.
MU.68.H.2.1:	Describe the influence of historical events and periods on music composition and performance.
MU.68.H.2.2:	Analyze how technology has changed the way music is created, performed, acquired, and experienced. **Clarifications:** e.g., from harpsichord to piano; from phonograph to CD
MU.68.H.2.3:	Classify the literature being studied by genre, style, and/or time period.
MU.68.H.3.1:	Identify connections among music and other content areas and/or contexts through interdisciplinary collaboration. **Clarifications:** e.g., school: other music classes, social studies, dance, physical education, science, health, math, world languages; community: cultural connections and traditions, ceremonial music, sales and advertising, communication
MU.68.H.3.2:	Discuss how the absence of music would affect other content areas and contexts. **Clarifications:** e.g., theatre and dance, movies, sporting events, video games, commercial advertising, social gatherings, civic and religious ceremonies, plays
MU.68.O.1.1:	Compare performances of a musical work to identify artistic choices made by performers. **Clarifications:** e.g., rhythm, melody, timbre, form, tonality, harmony, expressive elements; choral, orchestral, band, ensemble
MU.68.O.2.2:	Demonstrate knowledge of major and minor tonalities through performance and composition. **Clarifications:** e.g., scales; key signatures; relative major/minor; parallel major/minor
MU.68.O.3.2:	Perform the expressive elements of a musical work indicated by the musical score and/or conductor, and transfer new knowledge and experiences to other musical works.
MU.68.S.1.1:	Improvise rhythmic and melodic phrases to accompany familiar songs and/or standard harmonic progressions. **Clarifications:** e.g., blues, rock
MU.68.S.1.3:	Arrange a short musical piece by manipulating melody, form, rhythm, and/or voicing.
MU.68.S.1.4:	Sing or play melodies by ear with support from the teacher and/or peers. **Clarifications:** e.g., melodies using traditional classroom instruments and/or voice
MU.68.S.1.6:	Compose a melody, with or without lyrics, over a standard harmonic progression.
MU.68.S.2.2:	Transfer performance techniques from familiar to unfamiliar pieces.
MU.68.S.3.1:	Sing and/or play age-appropriate repertoire expressively. **Clarifications:** e.g., technique, phrasing, dynamics, tone quality, blend, balance, intonation, kinesthetic support/response

MU.68.S.3.2:	Demonstrate proper vocal or instrumental technique. **Clarifications:** e.g., posture, breathing, fingering, embouchure, bow technique, tuning, strumming
MU.68.S.3.3:	Sight-read standard exercises and simple repertoire. **Clarifications:** e.g., note and rest values, key signatures, time signatures, expressive markings, special harmonic and/or notation symbols
MU.68.S.3.4:	Compare written notation to aural examples and analyze for accuracy of rhythm and pitch. **Clarifications:** e.g., error detection, interval reinforcement
MU.68.S.3.5:	Notate rhythmic phrases and/or melodies, in varying simple meters, performed by someone else.
MA.K12.MTR.1.1:	Mathematicians who participate in effortful learning both individually and with others: • Analyze the problem in a way that makes sense given the task. • Ask questions that will help with solving the task. • Build perseverance by modifying methods as needed while solving a challenging task. • Stay engaged and maintain a positive mindset when working to solve tasks. • Help and support each other when attempting a new method or approach. **Clarifications:** Teachers who encourage students to participate actively in effortful learning both individually and with others: • Cultivate a community of growth mindset learners. • Foster perseverance in students by choosing tasks that are challenging. • Develop students' ability to analyze and problem solve. • Recognize students' effort when solving challenging problems.
MA.K12.MTR.2.1:	Demonstrate understanding by representing problems in multiple ways. Mathematicians who demonstrate understanding by representing problems in multiple ways: • Build understanding through modeling and using manipulatives. • Represent solutions to problems in multiple ways using objects, drawings, tables, graphs and equations. • Progress from modeling problems with objects and drawings to using algorithms and equations. • Express connections between concepts and representations. • Choose a representation based on the given context or purpose. **Clarifications:** Teachers who encourage students to demonstrate understanding by representing problems in multiple ways: • Help students make connections between concepts and representations. • Provide opportunities for students to use manipulatives when investigating concepts. • Guide students from concrete to pictorial to abstract representations as understanding progresses. • Show students that various representations can have different purposes and can be useful in different situations.
MA.K12.MTR.3.1:	Complete tasks with mathematical fluency. Mathematicians who complete tasks with mathematical fluency: • Select efficient and appropriate methods for solving problems within the given context. • Maintain flexibility and accuracy while performing procedures and mental calculations. • Complete tasks accurately and with confidence. • Adapt procedures to apply them to a new context. • Use feedback to improve efficiency when performing calculations. **Clarifications:** Teachers who encourage students to complete tasks with mathematical fluency: • Provide students with the flexibility to solve problems by selecting a procedure that allows them to solve efficiently and accurately. • Offer multiple opportunities for students to practice efficient and generalizable methods. • Provide opportunities for students to reflect on the method they used and determine if a more efficient method could have been used.
MA.K12.MTR.4.1:	Engage in discussions that reflect on the mathematical thinking of self and others. Mathematicians who engage in discussions that reflect on the mathematical thinking of self and others: • Communicate mathematical ideas, vocabulary and methods effectively. • Analyze the mathematical thinking of others. • Compare the efficiency of a method to those expressed by others. • Recognize errors and suggest how to correctly solve the task. • Justify results by explaining methods and processes. • Construct possible arguments based on evidence. **Clarifications:** Teachers who encourage students to engage in discussions that reflect on the mathematical thinking of self and others: • Establish a culture in which students ask questions of the teacher and their peers, and error is an opportunity for learning. • Create opportunities for students to discuss their thinking with peers. • Select, sequence and present student work to advance and deepen understanding of correct and increasingly efficient methods. • Develop students' ability to justify methods and compare their responses to the responses of their peers.
	Use patterns and structure to help understand and connect mathematical concepts. Mathematicians who use patterns and structure to help understand and connect mathematical concepts: • Focus on relevant details within a problem. • Create plans and procedures to logically order events, steps or ideas to solve problems.

MA.K12.MTR.5.1:	• Decompose a complex problem into manageable parts. • Relate previously learned concepts to new concepts. • Look for similarities among problems. • Connect solutions of problems to more complicated large-scale situations. **Clarifications:** Teachers who encourage students to use patterns and structure to help understand and connect mathematical concepts: • Help students recognize the patterns in the world around them and connect these patterns to mathematical concepts. • Support students to develop generalizations based on the similarities found among problems. • Provide opportunities for students to create plans and procedures to solve problems. • Develop students' ability to construct relationships between their current understanding and more sophisticated ways of thinking.
MA.K12.MTR.6.1:	Assess the reasonableness of solutions. Mathematicians who assess the reasonableness of solutions: • Estimate to discover possible solutions. • Use benchmark quantities to determine if a solution makes sense. • Check calculations when solving problems. • Verify possible solutions by explaining the methods used. • Evaluate results based on the given context. **Clarifications:** Teachers who encourage students to assess the reasonableness of solutions: • Have students estimate or predict solutions prior to solving. • Prompt students to continually ask, "Does this solution make sense? How do you know?" • Reinforce that students check their work as they progress within and after a task. • Strengthen students' ability to verify solutions through justifications.
MA.K12.MTR.7.1:	Apply mathematics to real-world contexts. Mathematicians who apply mathematics to real-world contexts: • Connect mathematical concepts to everyday experiences. • Use models and methods to understand, represent and solve problems. • Perform investigations to gather data or determine if a method is appropriate. • Redesign models and methods to improve accuracy or efficiency. **Clarifications:** Teachers who encourage students to apply mathematics to real-world contexts: • Provide opportunities for students to create models, both concrete and abstract, and perform investigations. • Challenge students to question the accuracy of their models and methods. • Support students as they validate conclusions by comparing them to the given situation. • Indicate how various concepts can be applied to other disciplines.
ELA.K12.EE.1.1:	Cite evidence to explain and justify reasoning. **Clarifications:** K-1 Students include textual evidence in their oral communication with guidance and support from adults. The evidence can consist of details from the text without naming the text. During 1st grade, students learn how to incorporate the evidence in their writing. 2-3 Students include relevant textual evidence in their written and oral communication. Students should name the text when they refer to it. In 3rd grade, students should use a combination of direct and indirect citations. 4-5 Students continue with previous skills and reference comments made by speakers and peers. Students cite texts that they've directly quoted, paraphrased, or used for information. When writing, students will use the form of citation dictated by the instructor or the style guide referenced by the instructor. 6-8 Students continue with previous skills and use a style guide to create a proper citation. 9-12 Students continue with previous skills and should be aware of existing style guides and the ways in which they differ.
ELA.K12.EE.2.1:	Read and comprehend grade-level complex texts proficiently. **Clarifications:** See Text Complexity for grade-level complexity bands and a text complexity rubric.
ELA.K12.EE.3.1:	Make inferences to support comprehension. **Clarifications:** Students will make inferences before the words infer or inference are introduced. Kindergarten students will answer questions like "Why is the girl smiling?" or make predictions about what will happen based on the title page. Students will use the terms and apply them in 2nd grade and beyond.
ELA.K12.EE.4.1:	Use appropriate collaborative techniques and active listening skills when engaging in discussions in a variety of situations. **Clarifications:** In kindergarten, students learn to listen to one another respectfully. In grades 1-2, students build upon these skills by justifying what they are thinking. For example: "I think _____ because _____." The collaborative conversations are becoming academic conversations. In grades 3-12, students engage in academic conversations discussing claims and justifying their reasoning, refining and applying skills. Students build on ideas, propel the conversation, and support claims and counterclaims with evidence.
ELA.K12.EE.5.1:	Use the accepted rules governing a specific format to create quality work. **Clarifications:** Students will incorporate skills learned into work products to produce quality work. For students to incorporate these skills appropriately, they must receive instruction. A 3rd grade student creating a poster board display must have instruction in how to effectively present information to

	do quality work.
ELA.K12.EE.6.1:	Use appropriate voice and tone when speaking or writing. **Clarifications:** In kindergarten and 1st grade, students learn the difference between formal and informal language. For example, the way we talk to our friends differs from the way we speak to adults. In 2nd grade and beyond, students practice appropriate social and academic language to discuss texts.
DA.68.S.2.1:	Sustain focused attention, respect, and discipline during classes and performances.
ELD.K12.ELL.SI.1:	English language learners communicate for social and instructional purposes within the school setting.

General Course Information and Notes

VERSION DESCRIPTION

Students build on prior piano experience to develop intermediate piano techniques and skills, and learn music repertoire from various styles and time periods. They explore musical creativity through improvisation and composition, and cultivate analytical listening and critical thinking skills associated with making informed musical decisions. Intermediate-level pianists also learn about the basic tools of music technology through such components as MIDI keyboards. Public performances may serve as a culmination of specific instructional goals. Students may be required to attend and/or participate in rehearsals and performances outside the school day to support, extend, and assess learning in the classroom.

GENERAL NOTES

Florida's Benchmarks for Excellent Student Thinking (B.E.S.T.) Standards
This course includes Florida's B.E.S.T. ELA Expectations (EE) and Mathematical Thinking and Reasoning Standards (MTRs) for students. Florida educators should intentionally embed these standards within the content and their instruction as applicable. For guidance on the implementation of the EEs and MTRs, please visit cpalms.org/Standards/BEST_Standards.aspx and select the appropriate B.E.S.T. Standards package.

English Language Development ELD Standards Special Notes Section:
Teachers are required to provide listening, speaking, reading and writing instruction that allows English language learners (ELL) to communicate for social and instructional purposes within the school setting. For the given level of English language proficiency and with visual, graphic, or interactive support, students will interact with grade level words, expressions, sentences and discourse to process or produce language necessary for academic success. The ELD standard should specify a relevant content area concept or topic of study chosen by curriculum developers and teachers which maximizes an ELL's need for communication and social skills. To access an ELL supporting document which delineates performance definitions and descriptors, please click on the following link: cpalms.org/uploads/docs/standards/eld/SI.pdf

GENERAL INFORMATION

Course Number: 1301040

Course Path: Section: Grades PreK to 12 Education Courses > **Grade Group:** Grades 6 to 8 Education Courses > **Subject:** Music Education > **SubSubject:** Instrumental Music >
Abbreviated Title: M/J KEYBD 2
Course Length: Year (Y)
Course Level: 2

Course Status: Draft - Course Pending Approval
Grade Level(s): 6,7,8

Educator Certifications

Instrumental Music (Secondary Grades 7-12)
Instrumental Music (Elementary and Secondary Grades K-12)
Vocal Music (Elementary and Secondary Grades K-12)
Music (Elementary and Secondary Grades K-12)

M/J Keyboard 3 (#1301050) 2022 - And Beyond

Course Standards

Name	Description
MU.68.C.1.1:	Develop strategies for listening to unfamiliar musical works. **Clarifications:** e.g., listening maps, active listening, checklists
MU.68.C.1.2:	Compare, using correct music vocabulary, the aesthetic impact of a performance to one's own hypothesis of the composer's intent. **Clarifications:** e.g., quality recordings, peer group and individual performances, composer notes, instrumentation, expressive elements, title
MU.68.C.1.3:	Identify, aurally, instrumental styles and a variety of instrumental ensembles. **Clarifications:** e.g., Classical, Baroque, Romantic, contemporary, jazz, pop, solo, duet, trio, quartet, small ensembles
MU.68.C.1.4:	Identify, aurally, a variety of vocal styles and ensembles. **Clarifications:** e.g., chant, spiritual, folk, opera, world, jazz, pop, solo, duet, trio, quartet, small ensembles, choirs
MU.68.C.2.1:	Critique personal performance, experiment with a variety of solutions, and make appropriate adjustments with guidance from teachers and peers. **Clarifications:** e.g., intonation, balance, blend, phrasing, rhythm
MU.68.C.2.2:	Critique, using correct music vocabulary, changes in one's own or others' musical performance resulting from practice or rehearsal. **Clarifications:** e.g., blend, balance, ensemble playing, sonority, technique, tone quality
MU.68.C.2.3:	Critique personal composition and/or improvisation, using simple criteria, to generate improvements with guidance from teachers and/or peers.
MU.68.C.3.1:	Apply specific criteria to evaluate why a musical work is an exemplar in a specific style or genre.
MU.68.F.1.1:	Create a composition and/or performance, using visual, kinesthetic, digital, and/or acoustic means to manipulate musical elements.
MU.68.F.1.2:	Create an original composition that reflects various performances that use "traditional" and contemporary technologies. **Clarifications:** e.g., MIDI, Internet video resources, personal digital assistants, MP3 players, cell phones, digital recording, music software
MU.68.F.2.1:	Describe several routes a composition or performance could travel from creator to consumer. **Clarifications:** e.g., MIDI and other technology, production, sharing on the Internet, home studios, professional recording studios, sales
MU.68.F.2.2:	Describe how concert attendance can financially impact a community. **Clarifications:** e.g., increased revenues at restaurants, hotels, and travel agencies; venue maintenance, parking attendants
MU.68.F.3.2:	Investigate and discuss laws that protect intellectual property, and practice safe, legal, and responsible acquisition and use of musical media.
MU.68.F.3.3:	Identify the tasks involved in the compositional process and discuss how the process might be applied in the work place. **Clarifications:** e.g., idea, development, editing, selling, revising, testing, presenting
MU.68.H.1.2:	Identify the works of representative composers within a specific style or time period.
MU.68.H.1.3:	Describe how American music has been influenced by other cultures.
MU.68.H.1.5:	Using representative musical works by selected composers, classify compositional characteristics common to a specific time period and/or genre.
MU.68.H.2.1:	Describe the influence of historical events and periods on music composition and performance.
MU.68.H.2.2:	Analyze how technology has changed the way music is created, performed, acquired, and experienced. **Clarifications:** e.g., from harpsichord to piano; from phonograph to CD
MU.68.H.2.3:	Classify the literature being studied by genre, style, and/or time period.
MU.68.H.3.1:	Identify connections among music and other content areas and/or contexts through interdisciplinary collaboration. **Clarifications:** e.g., school: other music classes, social studies, dance, physical education, science, health, math, world languages; community: cultural connections and traditions, ceremonial music, sales and advertising, communication
MU.68.O.1.1:	Compare performances of a musical work to identify artistic choices made by performers. **Clarifications:** e.g., rhythm, melody, timbre, form, tonality, harmony, expressive elements; choral, orchestral, band, ensemble
MU.68.O.2.1:	Create a composition, manipulating musical elements and exploring the effects of those manipulations. **Clarifications:** e.g., using electronic or paper-and-pencil means to experiment with timbre, melody, rhythm, harmony, form, tonality
MU.68.O.2.2:	Demonstrate knowledge of major and minor tonalities through performance and composition. **Clarifications:**

	e.g., scales; key signatures; relative major/minor; parallel major/minor
MU.68.O.3.1:	Describe how the combination of instrumentation and expressive elements in a musical work can convey a specific thought, idea, mood, and/or image. **Clarifications:** e.g., tempo markings, expression markings, articulation markings, phrasing, scales, modes, harmonic structure, timbre, rhythm, orchestration
MU.68.O.3.2:	Perform the expressive elements of a musical work indicated by the musical score and/or conductor, and transfer new knowledge and experiences to other musical works.
MU.68.S.1.1:	Improvise rhythmic and melodic phrases to accompany familiar songs and/or standard harmonic progressions. **Clarifications:** e.g., blues, rock
MU.68.S.1.2:	Compose a short musical piece. **Clarifications:** e.g., using traditional, non-traditional, digital, or classroom instruments and/or voice
MU.68.S.1.3:	Arrange a short musical piece by manipulating melody, form, rhythm, and/or voicing.
MU.68.S.1.4:	Sing or play melodies by ear with support from the teacher and/or peers. **Clarifications:** e.g., melodies using traditional classroom instruments and/or voice
MU.68.S.1.5:	Perform melodies with chord progressions. **Clarifications:** e.g., keyboard/piano, keyboard/piano and voice, guitar, voice and guitar
MU.68.S.1.6:	Compose a melody, with or without lyrics, over a standard harmonic progression.
MU.68.S.2.1:	Perform music from memory to demonstrate knowledge of the musical structure. **Clarifications:** e.g., basic themes, patterns, tonality, melody, harmony
MU.68.S.2.2:	Transfer performance techniques from familiar to unfamiliar pieces.
MU.68.S.3.1:	Sing and/or play age-appropriate repertoire expressively. **Clarifications:** e.g., technique, phrasing, dynamics, tone quality, blend, balance, intonation, kinesthetic support/response
MU.68.S.3.2:	Demonstrate proper vocal or instrumental technique. **Clarifications:** e.g., posture, breathing, fingering, embouchure, bow technique, tuning, strumming
MU.68.S.3.3:	Sight-read standard exercises and simple repertoire. **Clarifications:** e.g., note and rest values, key signatures, time signatures, expressive markings, special harmonic and/or notation symbols
MU.68.S.3.4:	Compare written notation to aural examples and analyze for accuracy of rhythm and pitch. **Clarifications:** e.g., error detection, interval reinforcement
MU.68.S.3.5:	Notate rhythmic phrases and/or melodies, in varying simple meters, performed by someone else.
MU.68.S.3.6:	Develop and demonstrate efficient rehearsal strategies to apply skills and techniques. **Clarifications:** e.g., independently, collaboratively
MA.K12.MTR.1.1:	Mathematicians who participate in effortful learning both individually and with others: • Analyze the problem in a way that makes sense given the task. • Ask questions that will help with solving the task. • Build perseverance by modifying methods as needed while solving a challenging task. • Stay engaged and maintain a positive mindset when working to solve tasks. • Help and support each other when attempting a new method or approach. **Clarifications:** Teachers who encourage students to participate actively in effortful learning both individually and with others: • Cultivate a community of growth mindset learners. • Foster perseverance in students by choosing tasks that are challenging. • Develop students' ability to analyze and problem solve. • Recognize students' effort when solving challenging problems.
MA.K12.MTR.2.1:	Demonstrate understanding by representing problems in multiple ways. Mathematicians who demonstrate understanding by representing problems in multiple ways: • Build understanding through modeling and using manipulatives. • Represent solutions to problems in multiple ways using objects, drawings, tables, graphs and equations. • Progress from modeling problems with objects and drawings to using algorithms and equations. • Express connections between concepts and representations. • Choose a representation based on the given context or purpose. **Clarifications:** Teachers who encourage students to demonstrate understanding by representing problems in multiple ways: • Help students make connections between concepts and representations. • Provide opportunities for students to use manipulatives when investigating concepts. • Guide students from concrete to pictorial to abstract representations as understanding progresses.

	• Show students that various representations can have different purposes and can be useful in different situations.
MA.K12.MTR.3.1:	Complete tasks with mathematical fluency. Mathematicians who complete tasks with mathematical fluency: • Select efficient and appropriate methods for solving problems within the given context. • Maintain flexibility and accuracy while performing procedures and mental calculations. • Complete tasks accurately and with confidence. • Adapt procedures to apply them to a new context. • Use feedback to improve efficiency when performing calculations. **Clarifications:** Teachers who encourage students to complete tasks with mathematical fluency: • Provide students with the flexibility to solve problems by selecting a procedure that allows them to solve efficiently and accurately. • Offer multiple opportunities for students to practice efficient and generalizable methods. • Provide opportunities for students to reflect on the method they used and determine if a more efficient method could have been used.
MA.K12.MTR.4.1:	Engage in discussions that reflect on the mathematical thinking of self and others. Mathematicians who engage in discussions that reflect on the mathematical thinking of self and others: • Communicate mathematical ideas, vocabulary and methods effectively. • Analyze the mathematical thinking of others. • Compare the efficiency of a method to those expressed by others. • Recognize errors and suggest how to correctly solve the task. • Justify results by explaining methods and processes. • Construct possible arguments based on evidence. **Clarifications:** Teachers who encourage students to engage in discussions that reflect on the mathematical thinking of self and others: • Establish a culture in which students ask questions of the teacher and their peers, and error is an opportunity for learning. • Create opportunities for students to discuss their thinking with peers. • Select, sequence and present student work to advance and deepen understanding of correct and increasingly efficient methods. • Develop students' ability to justify methods and compare their responses to the responses of their peers.
MA.K12.MTR.5.1:	Use patterns and structure to help understand and connect mathematical concepts. Mathematicians who use patterns and structure to help understand and connect mathematical concepts: • Focus on relevant details within a problem. • Create plans and procedures to logically order events, steps or ideas to solve problems. • Decompose a complex problem into manageable parts. • Relate previously learned concepts to new concepts. • Look for similarities among problems. • Connect solutions of problems to more complicated large-scale situations. **Clarifications:** Teachers who encourage students to use patterns and structure to help understand and connect mathematical concepts: • Help students recognize the patterns in the world around them and connect these patterns to mathematical concepts. • Support students to develop generalizations based on the similarities found among problems. • Provide opportunities for students to create plans and procedures to solve problems. • Develop students' ability to construct relationships between their current understanding and more sophisticated ways of thinking.
MA.K12.MTR.6.1:	Assess the reasonableness of solutions. Mathematicians who assess the reasonableness of solutions: • Estimate to discover possible solutions. • Use benchmark quantities to determine if a solution makes sense. • Check calculations when solving problems. • Verify possible solutions by explaining the methods used. • Evaluate results based on the given context. **Clarifications:** Teachers who encourage students to assess the reasonableness of solutions: • Have students estimate or predict solutions prior to solving. • Prompt students to continually ask, "Does this solution make sense? How do you know?" • Reinforce that students check their work as they progress within and after a task. • Strengthen students' ability to verify solutions through justifications.
MA.K12.MTR.7.1:	Apply mathematics to real-world contexts. Mathematicians who apply mathematics to real-world contexts: • Connect mathematical concepts to everyday experiences. • Use models and methods to understand, represent and solve problems. • Perform investigations to gather data or determine if a method is appropriate. • Redesign models and methods to improve accuracy or efficiency. **Clarifications:** Teachers who encourage students to apply mathematics to real-world contexts: • Provide opportunities for students to create models, both concrete and abstract, and perform investigations. • Challenge students to question the accuracy of their models and methods. • Support students as they validate conclusions by comparing them to the given situation. • Indicate how various concepts can be applied to other disciplines.

ELA.K12.EE.1.1:	Cite evidence to explain and justify reasoning. **Clarifications:** K-1 Students include textual evidence in their oral communication with guidance and support from adults. The evidence can consist of details from the text without naming the text. During 1st grade, students learn how to incorporate the evidence in their writing. 2-3 Students include relevant textual evidence in their written and oral communication. Students should name the text when they refer to it. In 3rd grade, students should use a combination of direct and indirect citations. 4-5 Students continue with previous skills and reference comments made by speakers and peers. Students cite texts that they've directly quoted, paraphrased, or used for information. When writing, students will use the form of citation dictated by the instructor or the style guide referenced by the instructor. 6-8 Students continue with previous skills and use a style guide to create a proper citation. 9-12 Students continue with previous skills and should be aware of existing style guides and the ways in which they differ.
ELA.K12.EE.2.1:	Read and comprehend grade-level complex texts proficiently. **Clarifications:** See Text Complexity for grade-level complexity bands and a text complexity rubric.
ELA.K12.EE.3.1:	Make inferences to support comprehension. **Clarifications:** Students will make inferences before the words infer or inference are introduced. Kindergarten students will answer questions like "Why is the girl smiling?" or make predictions about what will happen based on the title page. Students will use the terms and apply them in 2nd grade and beyond.
ELA.K12.EE.4.1:	Use appropriate collaborative techniques and active listening skills when engaging in discussions in a variety of situations. **Clarifications:** In kindergarten, students learn to listen to one another respectfully. In grades 1-2, students build upon these skills by justifying what they are thinking. For example: "I think _____ because _____." The collaborative conversations are becoming academic conversations. In grades 3-12, students engage in academic conversations discussing claims and justifying their reasoning, refining and applying skills. Students build on ideas, propel the conversation, and support claims and counterclaims with evidence.
ELA.K12.EE.5.1:	Use the accepted rules governing a specific format to create quality work. **Clarifications:** Students will incorporate skills learned into work products to produce quality work. For students to incorporate these skills appropriately, they must receive instruction. A 3rd grade student creating a poster board display must have instruction in how to effectively present information to do quality work.
ELA.K12.EE.6.1:	Use appropriate voice and tone when speaking or writing. **Clarifications:** In kindergarten and 1st grade, students learn the difference between formal and informal language. For example, the way we talk to our friends differs from the way we speak to adults. In 2nd grade and beyond, students practice appropriate social and academic language to discuss texts.
DA.68.S.2.1:	Sustain focused attention, respect, and discipline during classes and performances.
ELD.K12.ELL.SI.1:	English language learners communicate for social and instructional purposes within the school setting.

General Course Information and Notes

VERSION DESCRIPTION

Students with significant knowledge of piano technique, music literacy, and related musical knowledge extend their skills through a variety of solo and ensemble literature. Students explore the influence of the piano on performance and composition through history, and develop the skills needed to assess their own and others' piano performances. Advanced middle school pianists investigate familiar, new, and emerging music technology and its connection to keyboards and other sound-generating devices. Public performances may serve as a culmination of specific instructional goals. Students may be required to attend and/or participate in rehearsals and performances outside the school day to support, extend, and assess learning in the classroom.

GENERAL NOTES

Florida's Benchmarks for Excellent Student Thinking (B.E.S.T.) Standards
This course includes Florida's B.E.S.T. ELA Expectations (EE) and Mathematical Thinking and Reasoning Standards (MTRs) for students. Florida educators should intentionally embed these standards within the content and their instruction as applicable. For guidance on the implementation of the EEs and MTRs, please visit cpalms.org/Standards/BEST_Standards.aspx and select the appropriate B.E.S.T. Standards package.

English Language Development ELD Standards Special Notes Section:
Teachers are required to provide listening, speaking, reading and writing instruction that allows English language learners (ELL) to communicate for social and instructional purposes within the school setting. For the given level of English language proficiency and with visual, graphic, or interactive support, students will interact with grade level words, expressions, sentences and discourse to process or produce language necessary for academic success. The ELD standard should specify a relevant content area concept or topic of study chosen by curriculum developers and teachers which maximizes an ELL's need for communication and social skills. To access an ELL supporting document which delineates performance definitions and descriptors, please click on the following link: cpalms.org/uploads/docs/standards/eld/SI.pdf

GENERAL INFORMATION

Course Number: 1301050

Course Path: Section: Grades PreK to 12 Education Courses > **Grade Group:** Grades 6 to 8 Education Courses > **Subject:** Music Education > **SubSubject:** Instrumental Music >

Abbreviated Title: M/J KEYBD 3

Course Length: Year (Y)

Course Level: 2

Course Status: Draft - Course Pending Approval

Grade Level(s): 6,7,8

Educator Certifications

Vocal Music (Elementary and Secondary Grades K-12)
Instrumental Music (Secondary Grades 7-12)
Instrumental Music (Elementary and Secondary Grades K-12)
Music (Elementary and Secondary Grades K-12)

M/J Guitar 1 (#1301060) 2022 - And Beyond

Course Standards

Name	Description
MU.68.C.1.1:	Develop strategies for listening to unfamiliar musical works. **Clarifications:** e.g., listening maps, active listening, checklists
MU.68.C.1.2:	Compare, using correct music vocabulary, the aesthetic impact of a performance to one's own hypothesis of the composer's intent. **Clarifications:** e.g., quality recordings, peer group and individual performances, composer notes, instrumentation, expressive elements, title
MU.68.C.2.1:	Critique personal performance, experiment with a variety of solutions, and make appropriate adjustments with guidance from teachers and peers. **Clarifications:** e.g., intonation, balance, blend, phrasing, rhythm
MU.68.C.2.2:	Critique, using correct music vocabulary, changes in one's own or others' musical performance resulting from practice or rehearsal. **Clarifications:** e.g., blend, balance, ensemble playing, sonority, technique, tone quality
MU.68.F.2.2:	Describe how concert attendance can financially impact a community. **Clarifications:** e.g., increased revenues at restaurants, hotels, and travel agencies; venue maintenance, parking attendants
MU.68.F.3.2:	Investigate and discuss laws that protect intellectual property, and practice safe, legal, and responsible acquisition and use of musical media.
MU.68.H.1.3:	Describe how American music has been influenced by other cultures.
MU.68.H.2.1:	Describe the influence of historical events and periods on music composition and performance.
MU.68.H.2.3:	Classify the literature being studied by genre, style, and/or time period.
MU.68.H.3.1:	Identify connections among music and other content areas and/or contexts through interdisciplinary collaboration. **Clarifications:** e.g., school: other music classes, social studies, dance, physical education, science, health, math, world languages; community: cultural connections and traditions, ceremonial music, sales and advertising, communication
MU.68.O.3.2:	Perform the expressive elements of a musical work indicated by the musical score and/or conductor, and transfer new knowledge and experiences to other musical works.
MU.68.S.1.3:	Arrange a short musical piece by manipulating melody, form, rhythm, and/or voicing.
MU.68.S.1.5:	Perform melodies with chord progressions. **Clarifications:** e.g., keyboard/piano, keyboard/piano and voice, guitar, voice and guitar
MU.68.S.2.2:	Transfer performance techniques from familiar to unfamiliar pieces.
MU.68.S.3.1:	Sing and/or play age-appropriate repertoire expressively. **Clarifications:** e.g., technique, phrasing, dynamics, tone quality, blend, balance, intonation, kinesthetic support/response
MU.68.S.3.2:	Demonstrate proper vocal or instrumental technique. **Clarifications:** e.g., posture, breathing, fingering, embouchure, bow technique, tuning, strumming
MA.K12.MTR.1.1:	Mathematicians who participate in effortful learning both individually and with others: • Analyze the problem in a way that makes sense given the task. • Ask questions that will help with solving the task. • Build perseverance by modifying methods as needed while solving a challenging task. • Stay engaged and maintain a positive mindset when working to solve tasks. • Help and support each other when attempting a new method or approach. **Clarifications:** Teachers who encourage students to participate actively in effortful learning both individually and with others: • Cultivate a community of growth mindset learners. • Foster perseverance in students by choosing tasks that are challenging. • Develop students' ability to analyze and problem solve. • Recognize students' effort when solving challenging problems.
MA.K12.MTR.2.1:	Demonstrate understanding by representing problems in multiple ways. Mathematicians who demonstrate understanding by representing problems in multiple ways: • Build understanding through modeling and using manipulatives. • Represent solutions to problems in multiple ways using objects, drawings, tables, graphs and equations. • Progress from modeling problems with objects and drawings to using algorithms and equations. • Express connections between concepts and representations. • Choose a representation based on the given context or purpose.

Clarifications:
Teachers who encourage students to demonstrate understanding by representing problems in multiple ways:

- Help students make connections between concepts and representations.
- Provide opportunities for students to use manipulatives when investigating concepts.
- Guide students from concrete to pictorial to abstract representations as understanding progresses.
- Show students that various representations can have different purposes and can be useful in different situations.

MA.K12.MTR.3.1:

Complete tasks with mathematical fluency.
Mathematicians who complete tasks with mathematical fluency:

- Select efficient and appropriate methods for solving problems within the given context.
- Maintain flexibility and accuracy while performing procedures and mental calculations.
- Complete tasks accurately and with confidence.
- Adapt procedures to apply them to a new context.
- Use feedback to improve efficiency when performing calculations.

Clarifications:
Teachers who encourage students to complete tasks with mathematical fluency:

- Provide students with the flexibility to solve problems by selecting a procedure that allows them to solve efficiently and accurately.
- Offer multiple opportunities for students to practice efficient and generalizable methods.
- Provide opportunities for students to reflect on the method they used and determine if a more efficient method could have been used.

MA.K12.MTR.4.1:

Engage in discussions that reflect on the mathematical thinking of self and others.
Mathematicians who engage in discussions that reflect on the mathematical thinking of self and others:

- Communicate mathematical ideas, vocabulary and methods effectively.
- Analyze the mathematical thinking of others.
- Compare the efficiency of a method to those expressed by others.
- Recognize errors and suggest how to correctly solve the task.
- Justify results by explaining methods and processes.
- Construct possible arguments based on evidence.

Clarifications:
Teachers who encourage students to engage in discussions that reflect on the mathematical thinking of self and others:

- Establish a culture in which students ask questions of the teacher and their peers, and error is an opportunity for learning.
- Create opportunities for students to discuss their thinking with peers.
- Select, sequence and present student work to advance and deepen understanding of correct and increasingly efficient methods.
- Develop students' ability to justify methods and compare their responses to the responses of their peers.

MA.K12.MTR.5.1:

Use patterns and structure to help understand and connect mathematical concepts.
Mathematicians who use patterns and structure to help understand and connect mathematical concepts:

- Focus on relevant details within a problem.
- Create plans and procedures to logically order events, steps or ideas to solve problems.
- Decompose a complex problem into manageable parts.
- Relate previously learned concepts to new concepts.
- Look for similarities among problems.
- Connect solutions of problems to more complicated large-scale situations.

Clarifications:
Teachers who encourage students to use patterns and structure to help understand and connect mathematical concepts:

- Help students recognize the patterns in the world around them and connect these patterns to mathematical concepts.
- Support students to develop generalizations based on the similarities found among problems.
- Provide opportunities for students to create plans and procedures to solve problems.
- Develop students' ability to construct relationships between their current understanding and more sophisticated ways of thinking.

MA.K12.MTR.6.1:

Assess the reasonableness of solutions.
Mathematicians who assess the reasonableness of solutions:

- Estimate to discover possible solutions.
- Use benchmark quantities to determine if a solution makes sense.
- Check calculations when solving problems.
- Verify possible solutions by explaining the methods used.
- Evaluate results based on the given context.

Clarifications:
Teachers who encourage students to assess the reasonableness of solutions:

- Have students estimate or predict solutions prior to solving.
- Prompt students to continually ask, "Does this solution make sense? How do you know?"
- Reinforce that students check their work as they progress within and after a task.
- Strengthen students' ability to verify solutions through justifications.

MA.K12.MTR.7.1:

Apply mathematics to real-world contexts.
Mathematicians who apply mathematics to real-world contexts:

- Connect mathematical concepts to everyday experiences.
- Use models and methods to understand, represent and solve problems.
- Perform investigations to gather data or determine if a method is appropriate. • Redesign models and methods to improve accuracy or efficiency.

Clarifications:
Teachers who encourage students to apply mathematics to real-world contexts:

	• Provide opportunities for students to create models, both concrete and abstract, and perform investigations. • Challenge students to question the accuracy of their models and methods. • Support students as they validate conclusions by comparing them to the given situation. • Indicate how various concepts can be applied to other disciplines.
ELA.K12.EE.1.1:	Cite evidence to explain and justify reasoning. **Clarifications:** K-1 Students include textual evidence in their oral communication with guidance and support from adults. The evidence can consist of details from the text without naming the text. During 1st grade, students learn how to incorporate the evidence in their writing. 2-3 Students include relevant textual evidence in their written and oral communication. Students should name the text when they refer to it. In 3rd grade, students should use a combination of direct and indirect citations. 4-5 Students continue with previous skills and reference comments made by speakers and peers. Students cite texts that they've directly quoted, paraphrased, or used for information. When writing, students will use the form of citation dictated by the instructor or the style guide referenced by the instructor. 6-8 Students continue with previous skills and use a style guide to create a proper citation. 9-12 Students continue with previous skills and should be aware of existing style guides and the ways in which they differ.
ELA.K12.EE.2.1:	Read and comprehend grade-level complex texts proficiently. **Clarifications:** See Text Complexity for grade-level complexity bands and a text complexity rubric.
ELA.K12.EE.3.1:	Make inferences to support comprehension. **Clarifications:** Students will make inferences before the words infer or inference are introduced. Kindergarten students will answer questions like "Why is the girl smiling?" or make predictions about what will happen based on the title page. Students will use the terms and apply them in 2nd grade and beyond.
ELA.K12.EE.4.1:	Use appropriate collaborative techniques and active listening skills when engaging in discussions in a variety of situations. **Clarifications:** In kindergarten, students learn to listen to one another respectfully. In grades 1-2, students build upon these skills by justifying what they are thinking. For example: "I think _____ because _____." The collaborative conversations are becoming academic conversations. In grades 3-12, students engage in academic conversations discussing claims and justifying their reasoning, refining and applying skills. Students build on ideas, propel the conversation, and support claims and counterclaims with evidence.
ELA.K12.EE.5.1:	Use the accepted rules governing a specific format to create quality work. **Clarifications:** Students will incorporate skills learned into work products to produce quality work. For students to incorporate these skills appropriately, they must receive instruction. A 3rd grade student creating a poster board display must have instruction in how to effectively present information to do quality work.
ELA.K12.EE.6.1:	Use appropriate voice and tone when speaking or writing. **Clarifications:** In kindergarten and 1st grade, students learn the difference between formal and informal language. For example, the way we talk to our friends differs from the way we speak to adults. In 2nd grade and beyond, students practice appropriate social and academic language to discuss texts.
DA.68.S.2.1:	Sustain focused attention, respect, and discipline during classes and performances.
ELD.K12.ELL.SI.1:	English language learners communicate for social and instructional purposes within the school setting.

General Course Information and Notes

VERSION DESCRIPTION

Students with little or no experience develop basic guitar skills and knowledge, including simple and full-strum chords, strumming patterns, playing/singing simple melodies, foundational music theory, parts of the guitar, and ensemble skills. Beginning guitarists explore the careers and music of significant performers in pop/rock, jazz, blues, classical, country, bluegrass, and hard rock/metal genres. Public performances may serve as a culmination of specific instructional goals. Students may be required to attend and/or participate in rehearsals and performances outside the school day to support, extend, and assess learning in the classroom. This course may also require students to obtain a musical instrument (e.g., borrow, rent, purchase) from an outside source.

GENERAL NOTES

Florida's Benchmarks for Excellent Student Thinking (B.E.S.T.) Standards
This course includes Florida's B.E.S.T. ELA Expectations (EE) and Mathematical Thinking and Reasoning Standards (MTRs) for students. Florida educators should intentionally embed these standards within the content and their instruction as applicable. For guidance on the implementation of the EEs and MTRs, please visit cpalms.org/Standards/BEST_Standards.aspx and select the appropriate B.E.S.T. Standards package.

English Language Development ELD Standards Special Notes Section:
Teachers are required to provide listening, speaking, reading and writing instruction that allows English language learners (ELL) to communicate for social and instructional

purposes within the school setting. For the given level of English language proficiency and with visual, graphic, or interactive support, students will interact with grade level words, expressions, sentences and discourse to process or produce language necessary for academic success. The ELD standard should specify a relevant content area concept or topic of study chosen by curriculum developers and teachers which maximizes an ELL's need for communication and social skills. To access an ELL supporting document which delineates performance definitions and descriptors, please click on the following link: cpalms.org/uploads/docs/standards/eld/SI.pdf

GENERAL INFORMATION

Course Number: 1301060

Course Path: Section: Grades PreK to 12 Education Courses > **Grade Group:** Grades 6 to 8 Education Courses > **Subject:** Music Education > **SubSubject:** Instrumental Music >

Abbreviated Title: M/J GUITAR 1

Course Length: Year (Y)

Course Level: 2

Course Status: Draft - Course Pending Approval

Grade Level(s): 6,7,8

Educator Certifications

Vocal Music (Elementary and Secondary Grades K-12)
Instrumental Music (Secondary Grades 7-12)
Instrumental Music (Elementary and Secondary Grades K-12)
Music (Elementary and Secondary Grades K-12)

M/J Guitar 2 (#1301070) 2022 - And Beyond

Course Standards

Name	Description
MU.68.C.1.1:	Develop strategies for listening to unfamiliar musical works. **Clarifications:** e.g., listening maps, active listening, checklists
MU.68.C.1.2:	Compare, using correct music vocabulary, the aesthetic impact of a performance to one's own hypothesis of the composer's intent. **Clarifications:** e.g., quality recordings, peer group and individual performances, composer notes, instrumentation, expressive elements, title
MU.68.C.2.1:	Critique personal performance, experiment with a variety of solutions, and make appropriate adjustments with guidance from teachers and peers. **Clarifications:** e.g., intonation, balance, blend, phrasing, rhythm
MU.68.C.2.2:	Critique, using correct music vocabulary, changes in one's own or others' musical performance resulting from practice or rehearsal. **Clarifications:** e.g., blend, balance, ensemble playing, sonority, technique, tone quality
MU.68.C.3.1:	Apply specific criteria to evaluate why a musical work is an exemplar in a specific style or genre.
MU.68.F.2.2:	Describe how concert attendance can financially impact a community. **Clarifications:** e.g., increased revenues at restaurants, hotels, and travel agencies; venue maintenance, parking attendants
MU.68.F.3.1:	Describe how studying music can enhance citizenship, leadership, and global thinking. **Clarifications:** e.g., dedication to mastering a task, problem-solving, self-discipline, dependability, ability to organize, cultural awareness, mutual respect
MU.68.F.3.2:	Investigate and discuss laws that protect intellectual property, and practice safe, legal, and responsible acquisition and use of musical media.
MU.68.H.1.2:	Identify the works of representative composers within a specific style or time period.
MU.68.H.1.4:	Classify authentic stylistic features in music originating from various cultures. **Clarifications:** e.g., rhythm, layered texture, key patterns, tonality, melodic line, quarter- or semi-tones, national folk melodies, improvisation, instrumentation, aural/oral traditions, drumming patterns
MU.68.H.2.1:	Describe the influence of historical events and periods on music composition and performance.
MU.68.H.2.3:	Classify the literature being studied by genre, style, and/or time period.
MU.68.H.3.1:	Identify connections among music and other content areas and/or contexts through interdisciplinary collaboration. **Clarifications:** e.g., school: other music classes, social studies, dance, physical education, science, health, math, world languages; community: cultural connections and traditions, ceremonial music, sales and advertising, communication
MU.68.H.3.2:	Discuss how the absence of music would affect other content areas and contexts. **Clarifications:** e.g., theatre and dance, movies, sporting events, video games, commercial advertising, social gatherings, civic and religious ceremonies, plays
MU.68.O.1.1:	Compare performances of a musical work to identify artistic choices made by performers. **Clarifications:** e.g., rhythm, melody, timbre, form, tonality, harmony, expressive elements; choral, orchestral, band, ensemble
MU.68.O.3.1:	Describe how the combination of instrumentation and expressive elements in a musical work can convey a specific thought, idea, mood, and/or image. **Clarifications:** e.g., tempo markings, expression markings, articulation markings, phrasing, scales, modes, harmonic structure, timbre, rhythm, orchestration
MU.68.O.3.2:	Perform the expressive elements of a musical work indicated by the musical score and/or conductor, and transfer new knowledge and experiences to other musical works.
MU.68.S.1.3:	Arrange a short musical piece by manipulating melody, form, rhythm, and/or voicing.
MU.68.S.1.4:	Sing or play melodies by ear with support from the teacher and/or peers. **Clarifications:** e.g., melodies using traditional classroom instruments and/or voice
MU.68.S.1.5:	Perform melodies with chord progressions. **Clarifications:** e.g., keyboard/piano, keyboard/piano and voice, guitar, voice and guitar
MU.68.S.2.1:	Perform music from memory to demonstrate knowledge of the musical structure. **Clarifications:** e.g., basic themes, patterns, tonality, melody, harmony
MU.68.S.2.2:	Transfer performance techniques from familiar to unfamiliar pieces.
	Sing and/or play age-appropriate repertoire expressively.

MU.68.S.3.1:	**Clarifications:** e.g., technique, phrasing, dynamics, tone quality, blend, balance, intonation, kinesthetic support/response
MU.68.S.3.2:	Demonstrate proper vocal or instrumental technique. **Clarifications:** e.g., posture, breathing, fingering, embouchure, bow technique, tuning, strumming
MU.68.S.3.4:	Compare written notation to aural examples and analyze for accuracy of rhythm and pitch. **Clarifications:** e.g., error detection, interval reinforcement
MU.68.S.3.6:	Develop and demonstrate efficient rehearsal strategies to apply skills and techniques. **Clarifications:** e.g., independently, collaboratively
MA.K12.MTR.1.1:	Mathematicians who participate in effortful learning both individually and with others: • Analyze the problem in a way that makes sense given the task. • Ask questions that will help with solving the task. • Build perseverance by modifying methods as needed while solving a challenging task. • Stay engaged and maintain a positive mindset when working to solve tasks. • Help and support each other when attempting a new method or approach. **Clarifications:** Teachers who encourage students to participate actively in effortful learning both individually and with others: • Cultivate a community of growth mindset learners. • Foster perseverance in students by choosing tasks that are challenging. • Develop students' ability to analyze and problem solve. • Recognize students' effort when solving challenging problems.
MA.K12.MTR.2.1:	Demonstrate understanding by representing problems in multiple ways. Mathematicians who demonstrate understanding by representing problems in multiple ways: • Build understanding through modeling and using manipulatives. • Represent solutions to problems in multiple ways using objects, drawings, tables, graphs and equations. • Progress from modeling problems with objects and drawings to using algorithms and equations. • Express connections between concepts and representations. • Choose a representation based on the given context or purpose. **Clarifications:** Teachers who encourage students to demonstrate understanding by representing problems in multiple ways: • Help students make connections between concepts and representations. • Provide opportunities for students to use manipulatives when investigating concepts. • Guide students from concrete to pictorial to abstract representations as understanding progresses. • Show students that various representations can have different purposes and can be useful in different situations.
MA.K12.MTR.3.1:	Complete tasks with mathematical fluency. Mathematicians who complete tasks with mathematical fluency: • Select efficient and appropriate methods for solving problems within the given context. • Maintain flexibility and accuracy while performing procedures and mental calculations. • Complete tasks accurately and with confidence. • Adapt procedures to apply them to a new context. • Use feedback to improve efficiency when performing calculations. **Clarifications:** Teachers who encourage students to complete tasks with mathematical fluency: • Provide students with the flexibility to solve problems by selecting a procedure that allows them to solve efficiently and accurately. • Offer multiple opportunities for students to practice efficient and generalizable methods. • Provide opportunities for students to reflect on the method they used and determine if a more efficient method could have been used.
MA.K12.MTR.4.1:	Engage in discussions that reflect on the mathematical thinking of self and others. Mathematicians who engage in discussions that reflect on the mathematical thinking of self and others: • Communicate mathematical ideas, vocabulary and methods effectively. • Analyze the mathematical thinking of others. • Compare the efficiency of a method to those expressed by others. • Recognize errors and suggest how to correctly solve the task. • Justify results by explaining methods and processes. • Construct possible arguments based on evidence. **Clarifications:** Teachers who encourage students to engage in discussions that reflect on the mathematical thinking of self and others: • Establish a culture in which students ask questions of the teacher and their peers, and error is an opportunity for learning. • Create opportunities for students to discuss their thinking with peers. • Select, sequence and present student work to advance and deepen understanding of correct and increasingly efficient methods. • Develop students' ability to justify methods and compare their responses to the responses of their peers.
	Use patterns and structure to help understand and connect mathematical concepts. Mathematicians who use patterns and structure to help understand and connect mathematical concepts: • Focus on relevant details within a problem.

MA.K12.MTR.5.1:	• Create plans and procedures to logically order events, steps or ideas to solve problems. • Decompose a complex problem into manageable parts. • Relate previously learned concepts to new concepts. • Look for similarities among problems. • Connect solutions of problems to more complicated large-scale situations. **Clarifications:** Teachers who encourage students to use patterns and structure to help understand and connect mathematical concepts: • Help students recognize the patterns in the world around them and connect these patterns to mathematical concepts. • Support students to develop generalizations based on the similarities found among problems. • Provide opportunities for students to create plans and procedures to solve problems. • Develop students' ability to construct relationships between their current understanding and more sophisticated ways of thinking.
MA.K12.MTR.6.1:	Assess the reasonableness of solutions. Mathematicians who assess the reasonableness of solutions: • Estimate to discover possible solutions. • Use benchmark quantities to determine if a solution makes sense. • Check calculations when solving problems. • Verify possible solutions by explaining the methods used. • Evaluate results based on the given context. **Clarifications:** Teachers who encourage students to assess the reasonableness of solutions: • Have students estimate or predict solutions prior to solving. • Prompt students to continually ask, "Does this solution make sense? How do you know?" • Reinforce that students check their work as they progress within and after a task. • Strengthen students' ability to verify solutions through justifications.
MA.K12.MTR.7.1:	Apply mathematics to real-world contexts. Mathematicians who apply mathematics to real-world contexts: • Connect mathematical concepts to everyday experiences. • Use models and methods to understand, represent and solve problems. • Perform investigations to gather data or determine if a method is appropriate. • Redesign models and methods to improve accuracy or efficiency. **Clarifications:** Teachers who encourage students to apply mathematics to real-world contexts: • Provide opportunities for students to create models, both concrete and abstract, and perform investigations. • Challenge students to question the accuracy of their models and methods. • Support students as they validate conclusions by comparing them to the given situation. • Indicate how various concepts can be applied to other disciplines.
ELA.K12.EE.1.1:	Cite evidence to explain and justify reasoning. **Clarifications:** K-1 Students include textual evidence in their oral communication with guidance and support from adults. The evidence can consist of details from the text without naming the text. During 1st grade, students learn how to incorporate the evidence in their writing. 2-3 Students include relevant textual evidence in their written and oral communication. Students should name the text when they refer to it. In 3rd grade, students should use a combination of direct and indirect citations. 4-5 Students continue with previous skills and reference comments made by speakers and peers. Students cite texts that they've directly quoted, paraphrased, or used for information. When writing, students will use the form of citation dictated by the instructor or the style guide referenced by the instructor. 6-8 Students continue with previous skills and use a style guide to create a proper citation. 9-12 Students continue with previous skills and should be aware of existing style guides and the ways in which they differ.
ELA.K12.EE.2.1:	Read and comprehend grade-level complex texts proficiently. **Clarifications:** See Text Complexity for grade-level complexity bands and a text complexity rubric.
ELA.K12.EE.3.1:	Make inferences to support comprehension. **Clarifications:** Students will make inferences before the words infer or inference are introduced. Kindergarten students will answer questions like "Why is the girl smiling?" or make predictions about what will happen based on the title page. Students will use the terms and apply them in 2nd grade and beyond.
ELA.K12.EE.4.1:	Use appropriate collaborative techniques and active listening skills when engaging in discussions in a variety of situations. **Clarifications:** In kindergarten, students learn to listen to one another respectfully. In grades 1-2, students build upon these skills by justifying what they are thinking. For example: "I think _____ because _____." The collaborative conversations are becoming academic conversations. In grades 3-12, students engage in academic conversations discussing claims and justifying their reasoning, refining and applying skills. Students build on ideas, propel the conversation, and support claims and counterclaims with evidence.
ELA.K12.EE.5.1:	Use the accepted rules governing a specific format to create quality work. **Clarifications:** Students will incorporate skills learned into work products to produce quality work. For students to incorporate these skills appropriately, they

	must receive instruction. A 3rd grade student creating a poster board display must have instruction in how to effectively present information to do quality work.
ELA.K12.EE.6.1:	Use appropriate voice and tone when speaking or writing. **Clarifications:** In kindergarten and 1st grade, students learn the difference between formal and informal language. For example, the way we talk to our friends differs from the way we speak to adults. In 2nd grade and beyond, students practice appropriate social and academic language to discuss texts.
DA.68.S.2.1:	Sustain focused attention, respect, and discipline during classes and performances.
ELD.K12.ELL.SI.1:	English language learners communicate for social and instructional purposes within the school setting.

General Course Information and Notes

VERSION DESCRIPTION

Students with previous experience expand on basic guitar skills and knowledge, adding simple and full-strum chords, barre and power chords, and strumming patterns; adding more complex lead sheets and 1st-position chromatics; and building ensemble skills. Guitarists transfer between tablature and standard notation, study the work of significant musicians, and explore electric guitars, basses, and amplifiers. Public performances may serve as a culmination of specific instructional goals. Students may be required to attend and/or participate in rehearsals and performances outside the school day to support, extend, and assess learning in the classroom. This course may also require students to obtain a musical instrument (e.g., borrow, rent, purchase) from an outside source.

GENERAL NOTES

Florida's Benchmarks for Excellent Student Thinking (B.E.S.T.) Standards
This course includes Florida's B.E.S.T. ELA Expectations (EE) and Mathematical Thinking and Reasoning Standards (MTRs) for students. Florida educators should intentionally embed these standards within the content and their instruction as applicable. For guidance on the implementation of the EEs and MTRs, please visit cpalms.org/Standards/BEST_Standards.aspx and select the appropriate B.E.S.T. Standards package.

English Language Development ELD Standards Special Notes Section:
Teachers are required to provide listening, speaking, reading and writing instruction that allows English language learners (ELL) to communicate for social and instructional purposes within the school setting. For the given level of English language proficiency and with visual, graphic, or interactive support, students will interact with grade level words, expressions, sentences and discourse to process or produce language necessary for academic success. The ELD standard should specify a relevant content area concept or topic of study chosen by curriculum developers and teachers which maximizes an ELL's need for communication and social skills. To access an ELL supporting document which delineates performance definitions and descriptors, please click on the following link: cpalms.org/uploads/docs/standards/eld/SI.pdf

GENERAL INFORMATION

Course Number: 1301070

Course Path: Section: Grades PreK to 12 Education Courses > **Grade Group:** Grades 6 to 8 Education Courses > **Subject:** Music Education > **SubSubject:** Instrumental Music >
Abbreviated Title: M/J GUITAR 2
Course Length: Year (Y)
Course Level: 2

Course Status: Draft - Course Pending Approval

Grade Level(s): 6,7,8

Educator Certifications

Vocal Music (Elementary and Secondary Grades K-12)
Instrumental Music (Secondary Grades 7-12)
Instrumental Music (Elementary and Secondary Grades K-12)
Music (Elementary and Secondary Grades K-12)

M/J Guitar 3 (#1301080) 2022 - And Beyond

Course Standards

Name	Description
MU.68.C.1.1:	Develop strategies for listening to unfamiliar musical works. **Clarifications:** e.g., listening maps, active listening, checklists
MU.68.C.1.2:	Compare, using correct music vocabulary, the aesthetic impact of a performance to one's own hypothesis of the composer's intent. **Clarifications:** e.g., quality recordings, peer group and individual performances, composer notes, instrumentation, expressive elements, title
MU.68.C.2.1:	Critique personal performance, experiment with a variety of solutions, and make appropriate adjustments with guidance from teachers and peers. **Clarifications:** e.g., intonation, balance, blend, phrasing, rhythm
MU.68.C.2.2:	Critique, using correct music vocabulary, changes in one's own or others' musical performance resulting from practice or rehearsal. **Clarifications:** e.g., blend, balance, ensemble playing, sonority, technique, tone quality
MU.68.C.3.1:	Apply specific criteria to evaluate why a musical work is an exemplar in a specific style or genre.
MU.68.F.2.1:	Describe several routes a composition or performance could travel from creator to consumer. **Clarifications:** e.g., MIDI and other technology, production, sharing on the Internet, home studios, professional recording studios, sales
MU.68.F.2.2:	Describe how concert attendance can financially impact a community. **Clarifications:** e.g., increased revenues at restaurants, hotels, and travel agencies; venue maintenance, parking attendants
MU.68.F.3.1:	Describe how studying music can enhance citizenship, leadership, and global thinking. **Clarifications:** e.g., dedication to mastering a task, problem-solving, self-discipline, dependability, ability to organize, cultural awareness, mutual respect
MU.68.F.3.2:	Investigate and discuss laws that protect intellectual property, and practice safe, legal, and responsible acquisition and use of musical media.
MU.68.H.1.2:	Identify the works of representative composers within a specific style or time period.
MU.68.H.1.3:	Describe how American music has been influenced by other cultures.
MU.68.H.1.4:	Classify authentic stylistic features in music originating from various cultures. **Clarifications:** e.g., rhythm, layered texture, key patterns, tonality, melodic line, quarter- or semi-tones, national folk melodies, improvisation, instrumentation, aural/oral traditions, drumming patterns
MU.68.H.2.1:	Describe the influence of historical events and periods on music composition and performance.
MU.68.H.2.2:	Analyze how technology has changed the way music is created, performed, acquired, and experienced. **Clarifications:** e.g., from harpsichord to piano; from phonograph to CD
MU.68.H.2.3:	Classify the literature being studied by genre, style, and/or time period.
MU.68.H.3.1:	Identify connections among music and other content areas and/or contexts through interdisciplinary collaboration. **Clarifications:** e.g., school: other music classes, social studies, dance, physical education, science, health, math, world languages; community: cultural connections and traditions, ceremonial music, sales and advertising, communication
MU.68.H.3.2:	Discuss how the absence of music would affect other content areas and contexts. **Clarifications:** e.g., theatre and dance, movies, sporting events, video games, commercial advertising, social gatherings, civic and religious ceremonies, plays
MU.68.O.1.1:	Compare performances of a musical work to identify artistic choices made by performers. **Clarifications:** e.g., rhythm, melody, timbre, form, tonality, harmony, expressive elements; choral, orchestral, band, ensemble
MU.68.O.2.2:	Demonstrate knowledge of major and minor tonalities through performance and composition. **Clarifications:** e.g., scales; key signatures; relative major/minor; parallel major/minor
MU.68.O.3.1:	Describe how the combination of instrumentation and expressive elements in a musical work can convey a specific thought, idea, mood, and/or image. **Clarifications:** e.g., tempo markings, expression markings, articulation markings, phrasing, scales, modes, harmonic structure, timbre, rhythm, orchestration
MU.68.O.3.2:	Perform the expressive elements of a musical work indicated by the musical score and/or conductor, and transfer new knowledge and experiences to other musical works.
MU.68.S.1.3:	Arrange a short musical piece by manipulating melody, form, rhythm, and/or voicing.
	Sing or play melodies by ear with support from the teacher and/or peers.

MU.68.S.1.4:	**Clarifications:** e.g., melodies using traditional classroom instruments and/or voice
MU.68.S.1.5:	Perform melodies with chord progressions. **Clarifications:** e.g., keyboard/piano, keyboard/piano and voice, guitar, voice and guitar
MU.68.S.1.6:	Compose a melody, with or without lyrics, over a standard harmonic progression.
MU.68.S.2.1:	Perform music from memory to demonstrate knowledge of the musical structure. **Clarifications:** e.g., basic themes, patterns, tonality, melody, harmony
MU.68.S.2.2:	Transfer performance techniques from familiar to unfamiliar pieces.
MU.68.S.3.1:	Sing and/or play age-appropriate repertoire expressively. **Clarifications:** e.g., technique, phrasing, dynamics, tone quality, blend, balance, intonation, kinesthetic support/response
MU.68.S.3.2:	Demonstrate proper vocal or instrumental technique. **Clarifications:** e.g., posture, breathing, fingering, embouchure, bow technique, tuning, strumming
MU.68.S.3.3:	Sight-read standard exercises and simple repertoire. **Clarifications:** e.g., note and rest values, key signatures, time signatures, expressive markings, special harmonic and/or notation symbols
MU.68.S.3.4:	Compare written notation to aural examples and analyze for accuracy of rhythm and pitch. **Clarifications:** e.g., error detection, interval reinforcement
MU.68.S.3.5:	Notate rhythmic phrases and/or melodies, in varying simple meters, performed by someone else.
MU.68.S.3.6:	Develop and demonstrate efficient rehearsal strategies to apply skills and techniques. **Clarifications:** e.g., independently, collaboratively
MA.K12.MTR.1.1:	Mathematicians who participate in effortful learning both individually and with others: • Analyze the problem in a way that makes sense given the task. • Ask questions that will help with solving the task. • Build perseverance by modifying methods as needed while solving a challenging task. • Stay engaged and maintain a positive mindset when working to solve tasks. • Help and support each other when attempting a new method or approach. **Clarifications:** Teachers who encourage students to participate actively in effortful learning both individually and with others: • Cultivate a community of growth mindset learners. • Foster perseverance in students by choosing tasks that are challenging. • Develop students' ability to analyze and problem solve. • Recognize students' effort when solving challenging problems.
MA.K12.MTR.2.1:	Demonstrate understanding by representing problems in multiple ways. Mathematicians who demonstrate understanding by representing problems in multiple ways: • Build understanding through modeling and using manipulatives. • Represent solutions to problems in multiple ways using objects, drawings, tables, graphs and equations. • Progress from modeling problems with objects and drawings to using algorithms and equations. • Express connections between concepts and representations. • Choose a representation based on the given context or purpose. **Clarifications:** Teachers who encourage students to demonstrate understanding by representing problems in multiple ways: • Help students make connections between concepts and representations. • Provide opportunities for students to use manipulatives when investigating concepts. • Guide students from concrete to pictorial to abstract representations as understanding progresses. • Show students that various representations can have different purposes and can be useful in different situations.
MA.K12.MTR.3.1:	Complete tasks with mathematical fluency. Mathematicians who complete tasks with mathematical fluency: • Select efficient and appropriate methods for solving problems within the given context. • Maintain flexibility and accuracy while performing procedures and mental calculations. • Complete tasks accurately and with confidence. • Adapt procedures to apply them to a new context. • Use feedback to improve efficiency when performing calculations. **Clarifications:** Teachers who encourage students to complete tasks with mathematical fluency: • Provide students with the flexibility to solve problems by selecting a procedure that allows them to solve efficiently and accurately. • Offer multiple opportunities for students to practice efficient and generalizable methods. • Provide opportunities for students to reflect on the method they used and determine if a more efficient method could have been used.
	Engage in discussions that reflect on the mathematical thinking of self and others. Mathematicians who engage in discussions that reflect on the mathematical thinking of self and others:

MA.K12.MTR.4.1:	• Communicate mathematical ideas, vocabulary and methods effectively. • Analyze the mathematical thinking of others. • Compare the efficiency of a method to those expressed by others. • Recognize errors and suggest how to correctly solve the task. • Justify results by explaining methods and processes. • Construct possible arguments based on evidence. **Clarifications:** Teachers who encourage students to engage in discussions that reflect on the mathematical thinking of self and others: • Establish a culture in which students ask questions of the teacher and their peers, and error is an opportunity for learning. • Create opportunities for students to discuss their thinking with peers. • Select, sequence and present student work to advance and deepen understanding of correct and increasingly efficient methods. • Develop students' ability to justify methods and compare their responses to the responses of their peers.
MA.K12.MTR.5.1:	Use patterns and structure to help understand and connect mathematical concepts. Mathematicians who use patterns and structure to help understand and connect mathematical concepts: • Focus on relevant details within a problem. • Create plans and procedures to logically order events, steps or ideas to solve problems. • Decompose a complex problem into manageable parts. • Relate previously learned concepts to new concepts. • Look for similarities among problems. • Connect solutions of problems to more complicated large-scale situations. **Clarifications:** Teachers who encourage students to use patterns and structure to help understand and connect mathematical concepts: • Help students recognize the patterns in the world around them and connect these patterns to mathematical concepts. • Support students to develop generalizations based on the similarities found among problems. • Provide opportunities for students to create plans and procedures to solve problems. • Develop students' ability to construct relationships between their current understanding and more sophisticated ways of thinking.
MA.K12.MTR.6.1:	Assess the reasonableness of solutions. Mathematicians who assess the reasonableness of solutions: • Estimate to discover possible solutions. • Use benchmark quantities to determine if a solution makes sense. • Check calculations when solving problems. • Verify possible solutions by explaining the methods used. • Evaluate results based on the given context. **Clarifications:** Teachers who encourage students to assess the reasonableness of solutions: • Have students estimate or predict solutions prior to solving. • Prompt students to continually ask, "Does this solution make sense? How do you know?" • Reinforce that students check their work as they progress within and after a task. • Strengthen students' ability to verify solutions through justifications.
MA.K12.MTR.7.1:	Apply mathematics to real-world contexts. Mathematicians who apply mathematics to real-world contexts: • Connect mathematical concepts to everyday experiences. • Use models and methods to understand, represent and solve problems. • Perform investigations to gather data or determine if a method is appropriate. • Redesign models and methods to improve accuracy or efficiency. **Clarifications:** Teachers who encourage students to apply mathematics to real-world contexts: • Provide opportunities for students to create models, both concrete and abstract, and perform investigations. • Challenge students to question the accuracy of their models and methods. • Support students as they validate conclusions by comparing them to the given situation. • Indicate how various concepts can be applied to other disciplines.
ELA.K12.EE.1.1:	Cite evidence to explain and justify reasoning. **Clarifications:** K-1 Students include textual evidence in their oral communication with guidance and support from adults. The evidence can consist of details from the text without naming the text. During 1st grade, students learn how to incorporate the evidence in their writing. 2-3 Students include relevant textual evidence in their written and oral communication. Students should name the text when they refer to it. In 3rd grade, students should use a combination of direct and indirect citations. 4-5 Students continue with previous skills and reference comments made by speakers and peers. Students cite texts that they've directly quoted, paraphrased, or used for information. When writing, students will use the form of citation dictated by the instructor or the style guide referenced by the instructor. 6-8 Students continue with previous skills and use a style guide to create a proper citation. 9-12 Students continue with previous skills and should be aware of existing style guides and the ways in which they differ.
ELA.K12.EE.2.1:	Read and comprehend grade-level complex texts proficiently. **Clarifications:** See Text Complexity for grade-level complexity bands and a text complexity rubric.

	Make inferences to support comprehension.
ELA.K12.EE.3.1:	**Clarifications:** Students will make inferences before the words infer or inference are introduced. Kindergarten students will answer questions like "Why is the girl smiling?" or make predictions about what will happen based on the title page. Students will use the terms and apply them in 2nd grade and beyond.
	Use appropriate collaborative techniques and active listening skills when engaging in discussions in a variety of situations.
ELA.K12.EE.4.1:	**Clarifications:** In kindergarten, students learn to listen to one another respectfully. In grades 1-2, students build upon these skills by justifying what they are thinking. For example: "I think _____ because _____." The collaborative conversations are becoming academic conversations. In grades 3-12, students engage in academic conversations discussing claims and justifying their reasoning, refining and applying skills. Students build on ideas, propel the conversation, and support claims and counterclaims with evidence.
	Use the accepted rules governing a specific format to create quality work.
ELA.K12.EE.5.1:	**Clarifications:** Students will incorporate skills learned into work products to produce quality work. For students to incorporate these skills appropriately, they must receive instruction. A 3rd grade student creating a poster board display must have instruction in how to effectively present information to do quality work.
	Use appropriate voice and tone when speaking or writing.
ELA.K12.EE.6.1:	**Clarifications:** In kindergarten and 1st grade, students learn the difference between formal and informal language. For example, the way we talk to our friends differs from the way we speak to adults. In 2nd grade and beyond, students practice appropriate social and academic language to discuss texts.
DA.68.S.2.1:	Sustain focused attention, respect, and discipline during classes and performances.
ELD.K12.ELL.SI.1:	English language learners communicate for social and instructional purposes within the school setting.

General Course Information and Notes

VERSION DESCRIPTION

Students with previous experience strengthen their guitar skills and knowledge, reviewing barre and power chords; adding strumming and finger-picking patterns; playing in 5th position; working with major scales; and building ensemble skills. Guitarists expand their tablature and standard-notation reading skills, add to their knowledge of significant musicians, and explore electric guitars, basses, and amplifiers. Public performances may serve as a culmination of specific instructional goals. Students may be required to attend and/or participate in rehearsals and performances outside the school day to support, extend, and assess learning in the classroom. This course may also require students to obtain a musical instrument (e.g., borrow, rent, purchase) from an outside source.

GENERAL NOTES

Florida's Benchmarks for Excellent Student Thinking (B.E.S.T.) Standards
This course includes Florida's B.E.S.T. ELA Expectations (EE) and Mathematical Thinking and Reasoning Standards (MTRs) for students. Florida educators should intentionally embed these standards within the content and their instruction as applicable. For guidance on the implementation of the EEs and MTRs, please visit cpalms.org/Standards/BEST_Standards.aspx and select the appropriate B.E.S.T. Standards package.

English Language Development ELD Standards Special Notes Section:
Teachers are required to provide listening, speaking, reading and writing instruction that allows English language learners (ELL) to communicate for social and instructional purposes within the school setting. For the given level of English language proficiency and with visual, graphic, or interactive support, students will interact with grade level words, expressions, sentences and discourse to process or produce language necessary for academic success. The ELD standard should specify a relevant content area concept or topic of study chosen by curriculum developers and teachers which maximizes an ELL's need for communication and social skills. To access an ELL supporting document which delineates performance definitions and descriptors, please click on the following link: cpalms.org/uploads/docs/standards/eld/SI.pdf

GENERAL INFORMATION

Course Number: 1301080

Course Path: Section: Grades PreK to 12 Education Courses > **Grade Group:** Grades 6 to 8 Education Courses > **Subject:** Music Education > **SubSubject:** Instrumental Music >
Abbreviated Title: M/J GUITAR 3
Course Length: Year (Y)
Course Level: 2

Course Status: Draft - Course Pending Approval
Grade Level(s): 6,7,8

Educator Certifications

Vocal Music (Elementary and Secondary Grades K-12)
Instrumental Music (Secondary Grades 7-12)
Instrumental Music (Elementary and Secondary Grades K-12)
Music (Elementary and Secondary Grades K-12)

M/J Exploring Music 1 (#1301090) 2022 - And Beyond

Course Standards

Name	Description
MU.68.C.1.1:	Develop strategies for listening to unfamiliar musical works. **Clarifications:** e.g., listening maps, active listening, checklists
MU.68.C.1.2:	Compare, using correct music vocabulary, the aesthetic impact of a performance to one's own hypothesis of the composer's intent. **Clarifications:** e.g., quality recordings, peer group and individual performances, composer notes, instrumentation, expressive elements, title
MU.68.C.2.1:	Critique personal performance, experiment with a variety of solutions, and make appropriate adjustments with guidance from teachers and peers. **Clarifications:** e.g., intonation, balance, blend, phrasing, rhythm
MU.68.C.2.2:	Critique, using correct music vocabulary, changes in one's own or others' musical performance resulting from practice or rehearsal. **Clarifications:** e.g., blend, balance, ensemble playing, sonority, technique, tone quality
MU.68.C.3.1:	Apply specific criteria to evaluate why a musical work is an exemplar in a specific style or genre.
MU.68.F.2.2:	Describe how concert attendance can financially impact a community. **Clarifications:** e.g., increased revenues at restaurants, hotels, and travel agencies; venue maintenance, parking attendants
MU.68.F.3.1:	Describe how studying music can enhance citizenship, leadership, and global thinking. **Clarifications:** e.g., dedication to mastering a task, problem-solving, self-discipline, dependability, ability to organize, cultural awareness, mutual respect
MU.68.F.3.2:	Investigate and discuss laws that protect intellectual property, and practice safe, legal, and responsible acquisition and use of musical media.
MU.68.H.1.1:	Describe the functions of music from various cultures and time periods.
MU.68.H.1.2:	Identify the works of representative composers within a specific style or time period.
MU.68.H.1.3:	Describe how American music has been influenced by other cultures.
MU.68.H.1.4:	Classify authentic stylistic features in music originating from various cultures. **Clarifications:** e.g., rhythm, layered texture, key patterns, tonality, melodic line, quarter- or semi-tones, national folk melodies, improvisation, instrumentation, aural/oral traditions, drumming patterns
MU.68.H.2.2:	Analyze how technology has changed the way music is created, performed, acquired, and experienced. **Clarifications:** e.g., from harpsichord to piano; from phonograph to CD
MU.68.H.3.2:	Discuss how the absence of music would affect other content areas and contexts. **Clarifications:** e.g., theatre and dance, movies, sporting events, video games, commercial advertising, social gatherings, civic and religious ceremonies, plays
MU.68.O.1.1:	Compare performances of a musical work to identify artistic choices made by performers. **Clarifications:** e.g., rhythm, melody, timbre, form, tonality, harmony, expressive elements; choral, orchestral, band, ensemble
MU.68.O.3.1:	Describe how the combination of instrumentation and expressive elements in a musical work can convey a specific thought, idea, mood, and/or image. **Clarifications:** e.g., tempo markings, expression markings, articulation markings, phrasing, scales, modes, harmonic structure, timbre, rhythm, orchestration
MU.68.S.1.1:	Improvise rhythmic and melodic phrases to accompany familiar songs and/or standard harmonic progressions. **Clarifications:** e.g., blues, rock
MU.68.S.1.3:	Arrange a short musical piece by manipulating melody, form, rhythm, and/or voicing.
MU.68.S.3.1:	Sing and/or play age-appropriate repertoire expressively. **Clarifications:** e.g., technique, phrasing, dynamics, tone quality, blend, balance, intonation, kinesthetic support/response
MU.68.S.3.2:	Demonstrate proper vocal or instrumental technique. **Clarifications:** e.g., posture, breathing, fingering, embouchure, bow technique, tuning, strumming
	Mathematicians who participate in effortful learning both individually and with others: • Analyze the problem in a way that makes sense given the task. • Ask questions that will help with solving the task. • Build perseverance by modifying methods as needed while solving a challenging task. • Stay engaged and maintain a positive mindset when working to solve tasks.

MA.K12.MTR.1.1:	• Help and support each other when attempting a new method or approach. **Clarifications:** Teachers who encourage students to participate actively in effortful learning both individually and with others: • Cultivate a community of growth mindset learners. • Foster perseverance in students by choosing tasks that are challenging. • Develop students' ability to analyze and problem solve. • Recognize students' effort when solving challenging problems.
MA.K12.MTR.2.1:	Demonstrate understanding by representing problems in multiple ways. Mathematicians who demonstrate understanding by representing problems in multiple ways: • Build understanding through modeling and using manipulatives. • Represent solutions to problems in multiple ways using objects, drawings, tables, graphs and equations. • Progress from modeling problems with objects and drawings to using algorithms and equations. • Express connections between concepts and representations. • Choose a representation based on the given context or purpose. **Clarifications:** Teachers who encourage students to demonstrate understanding by representing problems in multiple ways: • Help students make connections between concepts and representations. • Provide opportunities for students to use manipulatives when investigating concepts. • Guide students from concrete to pictorial to abstract representations as understanding progresses. • Show students that various representations can have different purposes and can be useful in different situations.
MA.K12.MTR.3.1:	Complete tasks with mathematical fluency. Mathematicians who complete tasks with mathematical fluency: • Select efficient and appropriate methods for solving problems within the given context. • Maintain flexibility and accuracy while performing procedures and mental calculations. • Complete tasks accurately and with confidence. • Adapt procedures to apply them to a new context. • Use feedback to improve efficiency when performing calculations. **Clarifications:** Teachers who encourage students to complete tasks with mathematical fluency: • Provide students with the flexibility to solve problems by selecting a procedure that allows them to solve efficiently and accurately. • Offer multiple opportunities for students to practice efficient and generalizable methods. • Provide opportunities for students to reflect on the method they used and determine if a more efficient method could have been used.
MA.K12.MTR.4.1:	Engage in discussions that reflect on the mathematical thinking of self and others. Mathematicians who engage in discussions that reflect on the mathematical thinking of self and others: • Communicate mathematical ideas, vocabulary and methods effectively. • Analyze the mathematical thinking of others. • Compare the efficiency of a method to those expressed by others. • Recognize errors and suggest how to correctly solve the task. • Justify results by explaining methods and processes. • Construct possible arguments based on evidence. **Clarifications:** Teachers who encourage students to engage in discussions that reflect on the mathematical thinking of self and others: • Establish a culture in which students ask questions of the teacher and their peers, and error is an opportunity for learning. • Create opportunities for students to discuss their thinking with peers. • Select, sequence and present student work to advance and deepen understanding of correct and increasingly efficient methods. • Develop students' ability to justify methods and compare their responses to the responses of their peers.
MA.K12.MTR.5.1:	Use patterns and structure to help understand and connect mathematical concepts. Mathematicians who use patterns and structure to help understand and connect mathematical concepts: • Focus on relevant details within a problem. • Create plans and procedures to logically order events, steps or ideas to solve problems. • Decompose a complex problem into manageable parts. • Relate previously learned concepts to new concepts. • Look for similarities among problems. • Connect solutions of problems to more complicated large-scale situations. **Clarifications:** Teachers who encourage students to use patterns and structure to help understand and connect mathematical concepts: • Help students recognize the patterns in the world around them and connect these patterns to mathematical concepts. • Support students to develop generalizations based on the similarities found among problems. • Provide opportunities for students to create plans and procedures to solve problems. • Develop students' ability to construct relationships between their current understanding and more sophisticated ways of thinking.
	Assess the reasonableness of solutions. Mathematicians who assess the reasonableness of solutions: • Estimate to discover possible solutions. • Use benchmark quantities to determine if a solution makes sense. • Check calculations when solving problems.

MA.K12.MTR.6.1:	• Verify possible solutions by explaining the methods used. • Evaluate results based on the given context. **Clarifications:** Teachers who encourage students to assess the reasonableness of solutions: • Have students estimate or predict solutions prior to solving. • Prompt students to continually ask, "Does this solution make sense? How do you know?" • Reinforce that students check their work as they progress within and after a task. • Strengthen students' ability to verify solutions through justifications.
MA.K12.MTR.7.1:	Apply mathematics to real-world contexts. Mathematicians who apply mathematics to real-world contexts: • Connect mathematical concepts to everyday experiences. • Use models and methods to understand, represent and solve problems. • Perform investigations to gather data or determine if a method is appropriate. • Redesign models and methods to improve accuracy or efficiency. **Clarifications:** Teachers who encourage students to apply mathematics to real-world contexts: • Provide opportunities for students to create models, both concrete and abstract, and perform investigations. • Challenge students to question the accuracy of their models and methods. • Support students as they validate conclusions by comparing them to the given situation. • Indicate how various concepts can be applied to other disciplines.
ELA.K12.EE.1.1:	Cite evidence to explain and justify reasoning. **Clarifications:** K-1 Students include textual evidence in their oral communication with guidance and support from adults. The evidence can consist of details from the text without naming the text. During 1st grade, students learn how to incorporate the evidence in their writing. 2-3 Students include relevant textual evidence in their written and oral communication. Students should name the text when they refer to it. In 3rd grade, students should use a combination of direct and indirect citations. 4-5 Students continue with previous skills and reference comments made by speakers and peers. Students cite texts that they've directly quoted, paraphrased, or used for information. When writing, students will use the form of citation dictated by the instructor or the style guide referenced by the instructor. 6-8 Students continue with previous skills and use a style guide to create a proper citation. 9-12 Students continue with previous skills and should be aware of existing style guides and the ways in which they differ.
ELA.K12.EE.2.1:	Read and comprehend grade-level complex texts proficiently. **Clarifications:** See Text Complexity for grade-level complexity bands and a text complexity rubric.
ELA.K12.EE.3.1:	Make inferences to support comprehension. **Clarifications:** Students will make inferences before the words infer or inference are introduced. Kindergarten students will answer questions like "Why is the girl smiling?" or make predictions about what will happen based on the title page. Students will use the terms and apply them in 2nd grade and beyond.
ELA.K12.EE.4.1:	Use appropriate collaborative techniques and active listening skills when engaging in discussions in a variety of situations. **Clarifications:** In kindergarten, students learn to listen to one another respectfully. In grades 1-2, students build upon these skills by justifying what they are thinking. For example: "I think _____ because _____." The collaborative conversations are becoming academic conversations. In grades 3-12, students engage in academic conversations discussing claims and justifying their reasoning, refining and applying skills. Students build on ideas, propel the conversation, and support claims and counterclaims with evidence.
ELA.K12.EE.5.1:	Use the accepted rules governing a specific format to create quality work. **Clarifications:** Students will incorporate skills learned into work products to produce quality work. For students to incorporate these skills appropriately, they must receive instruction. A 3rd grade student creating a poster board display must have instruction in how to effectively present information to do quality work.
ELA.K12.EE.6.1:	Use appropriate voice and tone when speaking or writing. **Clarifications:** In kindergarten and 1st grade, students learn the difference between formal and informal language. For example, the way we talk to our friends differs from the way we speak to adults. In 2nd grade and beyond, students practice appropriate social and academic language to discuss texts.
DA.68.S.2.1:	Sustain focused attention, respect, and discipline during classes and performances.
ELD.K12.ELL.SI.1:	English language learners communicate for social and instructional purposes within the school setting.

General Course Information and Notes

VERSION DESCRIPTION

Students explore the essential elements of 20th- and 21st-century music in America (e.g., jazz, rock, soul, blues) and global cultures (e.g., Latin, Bollywood, European, Asian,

world drumming). Students reflect on the significance of social influences and historical events on the development of music. Participants focus on the creation, use, and performance of music; and the modes of listening, distributing, and gaining access to music. Public performances may serve as a resource for specific instructional goals.Students may be expected to attend one or more performances outside the school day to support, extend, and assess learning in the classroom.

GENERAL NOTES

Florida's Benchmarks for Excellent Student Thinking (B.E.S.T.) Standards
This course includes Florida's B.E.S.T. ELA Expectations (EE) and Mathematical Thinking and Reasoning Standards (MTRs) for students. Florida educators should intentionally embed these standards within the content and their instruction as applicable. For guidance on the implementation of the EEs and MTRs, please visit cpalms.org/Standards/BEST_Standards.aspx and select the appropriate B.E.S.T. Standards package.

English Language Development ELD Standards Special Notes Section:
Teachers are required to provide listening, speaking, reading and writing instruction that allows English language learners (ELL) to communicate for social and instructional purposes within the school setting. For the given level of English language proficiency and with visual, graphic, or interactive support, students will interact with grade level words, expressions, sentences and discourse to process or produce language necessary for academic success. The ELD standard should specify a relevant content area concept or topic of study chosen by curriculum developers and teachers which maximizes an ELL's need for communication and social skills. To access an ELL supporting document which delineates performance definitions and descriptors, please click on the following link: cpalms.org/uploads/docs/standards/eld/SI.pdf

GENERAL INFORMATION

Course Number: 1301090

Course Path: Section: Grades PreK to 12 Education Courses > **Grade Group:** Grades 6 to 8 Education Courses > **Subject:** Music Education > **SubSubject:** General Music >
Abbreviated Title: M/J EXPL MUSIC 1
Course Length: Year (Y)
Course Level: 2

Course Status: Draft - Course Pending Approval

Grade Level(s): 6,7,8

Educator Certifications

Vocal Music (Elementary and Secondary Grades K-12)
Instrumental Music (Secondary Grades 7-12)
Instrumental Music (Elementary and Secondary Grades K-12)
Music (Elementary and Secondary Grades K-12)
Elementary Education (Grades K-6)
Elementary Education (Elementary Grades 1-6)

M/J Exploring Music 2 (#1301100) 2022 - And Beyond

Course Standards

Name	Description
MU.68.C.1.2:	Compare, using correct music vocabulary, the aesthetic impact of a performance to one's own hypothesis of the composer's intent. **Clarifications:** e.g., quality recordings, peer group and individual performances, composer notes, instrumentation, expressive elements, title
MU.68.C.1.3:	Identify, aurally, instrumental styles and a variety of instrumental ensembles. **Clarifications:** e.g., Classical, Baroque, Romantic, contemporary, jazz, pop, solo, duet, trio, quartet, small ensembles
MU.68.C.1.4:	Identify, aurally, a variety of vocal styles and ensembles. **Clarifications:** e.g., chant, spiritual, folk, opera, world, jazz, pop, solo, duet, trio, quartet, small ensembles, choirs
MU.68.C.2.2:	Critique, using correct music vocabulary, changes in one's own or others' musical performance resulting from practice or rehearsal. **Clarifications:** e.g., blend, balance, ensemble playing, sonority, technique, tone quality
MU.68.C.3.1:	Apply specific criteria to evaluate why a musical work is an exemplar in a specific style or genre.
MU.68.F.2.1:	Describe several routes a composition or performance could travel from creator to consumer. **Clarifications:** e.g., MIDI and other technology, production, sharing on the Internet, home studios, professional recording studios, sales
MU.68.F.3.1:	Describe how studying music can enhance citizenship, leadership, and global thinking. **Clarifications:** e.g., dedication to mastering a task, problem-solving, self-discipline, dependability, ability to organize, cultural awareness, mutual respect
MU.68.F.3.2:	Investigate and discuss laws that protect intellectual property, and practice safe, legal, and responsible acquisition and use of musical media.
MU.68.H.1.1:	Describe the functions of music from various cultures and time periods.
MU.68.H.1.2:	Identify the works of representative composers within a specific style or time period.
MU.68.H.1.3:	Describe how American music has been influenced by other cultures.
MU.68.H.1.4:	Classify authentic stylistic features in music originating from various cultures. **Clarifications:** e.g., rhythm, layered texture, key patterns, tonality, melodic line, quarter- or semi-tones, national folk melodies, improvisation, instrumentation, aural/oral traditions, drumming patterns
MU.68.H.2.1:	Describe the influence of historical events and periods on music composition and performance.
MU.68.H.2.3:	Classify the literature being studied by genre, style, and/or time period.
MU.68.H.3.1:	Identify connections among music and other content areas and/or contexts through interdisciplinary collaboration. **Clarifications:** e.g., school: other music classes, social studies, dance, physical education, science, health, math, world languages; community: cultural connections and traditions, ceremonial music, sales and advertising, communication
MU.68.O.1.1:	Compare performances of a musical work to identify artistic choices made by performers. **Clarifications:** e.g., rhythm, melody, timbre, form, tonality, harmony, expressive elements; choral, orchestral, band, ensemble
MU.68.O.3.1:	Describe how the combination of instrumentation and expressive elements in a musical work can convey a specific thought, idea, mood, and/or image. **Clarifications:** e.g., tempo markings, expression markings, articulation markings, phrasing, scales, modes, harmonic structure, timbre, rhythm, orchestration
MU.68.S.1.2:	Compose a short musical piece. **Clarifications:** e.g., using traditional, non-traditional, digital, or classroom instruments and/or voice
MU.68.S.1.3:	Arrange a short musical piece by manipulating melody, form, rhythm, and/or voicing.
MU.68.S.2.1:	Perform music from memory to demonstrate knowledge of the musical structure. **Clarifications:** e.g., basic themes, patterns, tonality, melody, harmony
MU.68.S.3.1:	Sing and/or play age-appropriate repertoire expressively. **Clarifications:** e.g., technique, phrasing, dynamics, tone quality, blend, balance, intonation, kinesthetic support/response
MU.68.S.3.2:	Demonstrate proper vocal or instrumental technique. **Clarifications:** e.g., posture, breathing, fingering, embouchure, bow technique, tuning, strumming
MU.68.S.3.4:	Compare written notation to aural examples and analyze for accuracy of rhythm and pitch. **Clarifications:**

e.g., error detection, interval reinforcement

MA.K12.MTR.1.1:

Mathematicians who participate in effortful learning both individually and with others:

- Analyze the problem in a way that makes sense given the task.
- Ask questions that will help with solving the task.
- Build perseverance by modifying methods as needed while solving a challenging task.
- Stay engaged and maintain a positive mindset when working to solve tasks.
- Help and support each other when attempting a new method or approach.

Clarifications:

Teachers who encourage students to participate actively in effortful learning both individually and with others:

- Cultivate a community of growth mindset learners.
- Foster perseverance in students by choosing tasks that are challenging.
- Develop students' ability to analyze and problem solve.
- Recognize students' effort when solving challenging problems.

MA.K12.MTR.2.1:

Demonstrate understanding by representing problems in multiple ways.

Mathematicians who demonstrate understanding by representing problems in multiple ways:

- Build understanding through modeling and using manipulatives.
- Represent solutions to problems in multiple ways using objects, drawings, tables, graphs and equations.
- Progress from modeling problems with objects and drawings to using algorithms and equations.
- Express connections between concepts and representations.
- Choose a representation based on the given context or purpose.

Clarifications:

Teachers who encourage students to demonstrate understanding by representing problems in multiple ways:

- Help students make connections between concepts and representations.
- Provide opportunities for students to use manipulatives when investigating concepts.
- Guide students from concrete to pictorial to abstract representations as understanding progresses.
- Show students that various representations can have different purposes and can be useful in different situations.

MA.K12.MTR.3.1:

Complete tasks with mathematical fluency.

Mathematicians who complete tasks with mathematical fluency:

- Select efficient and appropriate methods for solving problems within the given context.
- Maintain flexibility and accuracy while performing procedures and mental calculations.
- Complete tasks accurately and with confidence.
- Adapt procedures to apply them to a new context.
- Use feedback to improve efficiency when performing calculations.

Clarifications:

Teachers who encourage students to complete tasks with mathematical fluency:

- Provide students with the flexibility to solve problems by selecting a procedure that allows them to solve efficiently and accurately.
- Offer multiple opportunities for students to practice efficient and generalizable methods.
- Provide opportunities for students to reflect on the method they used and determine if a more efficient method could have been used.

MA.K12.MTR.4.1:

Engage in discussions that reflect on the mathematical thinking of self and others.

Mathematicians who engage in discussions that reflect on the mathematical thinking of self and others:

- Communicate mathematical ideas, vocabulary and methods effectively.
- Analyze the mathematical thinking of others.
- Compare the efficiency of a method to those expressed by others.
- Recognize errors and suggest how to correctly solve the task.
- Justify results by explaining methods and processes.
- Construct possible arguments based on evidence.

Clarifications:

Teachers who encourage students to engage in discussions that reflect on the mathematical thinking of self and others:

- Establish a culture in which students ask questions of the teacher and their peers, and error is an opportunity for learning.
- Create opportunities for students to discuss their thinking with peers.
- Select, sequence and present student work to advance and deepen understanding of correct and increasingly efficient methods.
- Develop students' ability to justify methods and compare their responses to the responses of their peers.

MA.K12.MTR.5.1:

Use patterns and structure to help understand and connect mathematical concepts.

Mathematicians who use patterns and structure to help understand and connect mathematical concepts:

- Focus on relevant details within a problem.
- Create plans and procedures to logically order events, steps or ideas to solve problems.
- Decompose a complex problem into manageable parts.
- Relate previously learned concepts to new concepts.
- Look for similarities among problems.
- Connect solutions of problems to more complicated large-scale situations.

Clarifications:

Teachers who encourage students to use patterns and structure to help understand and connect mathematical concepts:

- Help students recognize the patterns in the world around them and connect these patterns to mathematical concepts.
- Support students to develop generalizations based on the similarities found among problems.
- Provide opportunities for students to create plans and procedures to solve problems.
- Develop students' ability to construct relationships between their current understanding and more sophisticated ways of thinking.

MA.K12.MTR.6.1:	Assess the reasonableness of solutions. Mathematicians who assess the reasonableness of solutions: • Estimate to discover possible solutions. • Use benchmark quantities to determine if a solution makes sense. • Check calculations when solving problems. • Verify possible solutions by explaining the methods used. • Evaluate results based on the given context. **Clarifications:** Teachers who encourage students to assess the reasonableness of solutions: • Have students estimate or predict solutions prior to solving. • Prompt students to continually ask, "Does this solution make sense? How do you know?" • Reinforce that students check their work as they progress within and after a task. • Strengthen students' ability to verify solutions through justifications.
MA.K12.MTR.7.1:	Apply mathematics to real-world contexts. Mathematicians who apply mathematics to real-world contexts: • Connect mathematical concepts to everyday experiences. • Use models and methods to understand, represent and solve problems. • Perform investigations to gather data or determine if a method is appropriate. • Redesign models and methods to improve accuracy or efficiency. **Clarifications:** Teachers who encourage students to apply mathematics to real-world contexts: • Provide opportunities for students to create models, both concrete and abstract, and perform investigations. • Challenge students to question the accuracy of their models and methods. • Support students as they validate conclusions by comparing them to the given situation. • Indicate how various concepts can be applied to other disciplines.
ELA.K12.EE.1.1:	Cite evidence to explain and justify reasoning. **Clarifications:** K-1 Students include textual evidence in their oral communication with guidance and support from adults. The evidence can consist of details from the text without naming the text. During 1st grade, students learn how to incorporate the evidence in their writing. 2-3 Students include relevant textual evidence in their written and oral communication. Students should name the text when they refer to it. In 3rd grade, students should use a combination of direct and indirect citations. 4-5 Students continue with previous skills and reference comments made by speakers and peers. Students cite texts that they've directly quoted, paraphrased, or used for information. When writing, students will use the form of citation dictated by the instructor or the style guide referenced by the instructor. 6-8 Students continue with previous skills and use a style guide to create a proper citation. 9-12 Students continue with previous skills and should be aware of existing style guides and the ways in which they differ.
ELA.K12.EE.2.1:	Read and comprehend grade-level complex texts proficiently. **Clarifications:** See Text Complexity for grade-level complexity bands and a text complexity rubric.
ELA.K12.EE.3.1:	Make inferences to support comprehension. **Clarifications:** Students will make inferences before the words infer or inference are introduced. Kindergarten students will answer questions like "Why is the girl smiling?" or make predictions about what will happen based on the title page. Students will use the terms and apply them in 2nd grade and beyond.
ELA.K12.EE.4.1:	Use appropriate collaborative techniques and active listening skills when engaging in discussions in a variety of situations. **Clarifications:** In kindergarten, students learn to listen to one another respectfully. In grades 1-2, students build upon these skills by justifying what they are thinking. For example: "I think _____ because _____." The collaborative conversations are becoming academic conversations. In grades 3-12, students engage in academic conversations discussing claims and justifying their reasoning, refining and applying skills. Students build on ideas, propel the conversation, and support claims and counterclaims with evidence.
ELA.K12.EE.5.1:	Use the accepted rules governing a specific format to create quality work. **Clarifications:** Students will incorporate skills learned into work products to produce quality work. For students to incorporate these skills appropriately, they must receive instruction. A 3rd grade student creating a poster board display must have instruction in how to effectively present information to do quality work.
ELA.K12.EE.6.1:	Use appropriate voice and tone when speaking or writing. **Clarifications:** In kindergarten and 1st grade, students learn the difference between formal and informal language. For example, the way we talk to our friends differs from the way we speak to adults. In 2nd grade and beyond, students practice appropriate social and academic language to discuss texts.
DA.68.S.2.1:	Sustain focused attention, respect, and discipline during classes and performances.
ELD.K12.ELL.SI.1:	English language learners communicate for social and instructional purposes within the school setting.

General Course Information and Notes

VERSION DESCRIPTION

Students survey the growth of American music from its early years to 21st-century consumers, focusing on the settling of the nation and the effects of emigration. Learners explore the historical connections, cultural influences, and innovations of music development from the perspective of Native American music and that which was brought to American shores from other nations. Public performances may serve as a resource for specific instructional goals. Students may be expected to attend one or more performances outside the school day to support, extend, and assess learning in the classroom.

GENERAL NOTES

Florida's Benchmarks for Excellent Student Thinking (B.E.S.T.) Standards
This course includes Florida's B.E.S.T. ELA Expectations (EE) and Mathematical Thinking and Reasoning Standards (MTRs) for students. Florida educators should intentionally embed these standards within the content and their instruction as applicable. For guidance on the implementation of the EEs and MTRs, please visit cpalms.org/Standards/BEST_Standards.aspx and select the appropriate B.E.S.T. Standards package.

English Language Development ELD Standards Special Notes Section:
Teachers are required to provide listening, speaking, reading and writing instruction that allows English language learners (ELL) to communicate for social and instructional purposes within the school setting. For the given level of English language proficiency and with visual, graphic, or interactive support, students will interact with grade level words, expressions, sentences and discourse to process or produce language necessary for academic success. The ELD standard should specify a relevant content area concept or topic of study chosen by curriculum developers and teachers which maximizes an ELL's need for communication and social skills. To access an ELL supporting document which delineates performance definitions and descriptors, please click on the following link: cpalms.org/uploads/docs/standards/eld/SI.pdf

GENERAL INFORMATION

Course Number: 1301100

Course Path: Section: Grades PreK to 12 Education Courses > **Grade Group:** Grades 6 to 8 Education Courses > **Subject:** Music Education > **SubSubject:** General Music >
Abbreviated Title: M/J EXPL MUSIC 2
Course Length: Year (Y)
Course Level: 2

Course Status: Draft - Course Pending Approval
Grade Level(s): 6,7,8

Educator Certifications

Vocal Music (Elementary and Secondary Grades K-12)
Instrumental Music (Secondary Grades 7-12)
Instrumental Music (Elementary and Secondary Grades K-12)
Music (Elementary and Secondary Grades K-12)

M/J Exploring Music 3 (#1301110) 2022 - And Beyond

Course Standards

Name	Description
MU.68.C.1.2:	Compare, using correct music vocabulary, the aesthetic impact of a performance to one's own hypothesis of the composer's intent. **Clarifications:** e.g., quality recordings, peer group and individual performances, composer notes, instrumentation, expressive elements, title
MU.68.C.2.2:	Critique, using correct music vocabulary, changes in one's own or others' musical performance resulting from practice or rehearsal. **Clarifications:** e.g., blend, balance, ensemble playing, sonority, technique, tone quality
MU.68.C.2.3:	Critique personal composition and/or improvisation, using simple criteria, to generate improvements with guidance from teachers and/or peers.
MU.68.C.3.1:	Apply specific criteria to evaluate why a musical work is an exemplar in a specific style or genre.
MU.68.F.1.1:	Create a composition and/or performance, using visual, kinesthetic, digital, and/or acoustic means to manipulate musical elements.
MU.68.F.1.2:	Create an original composition that reflects various performances that use "traditional" and contemporary technologies. **Clarifications:** e.g., MIDI, Internet video resources, personal digital assistants, MP3 players, cell phones, digital recording, music software
MU.68.F.2.1:	Describe several routes a composition or performance could travel from creator to consumer. **Clarifications:** e.g., MIDI and other technology, production, sharing on the Internet, home studios, professional recording studios, sales
MU.68.F.3.2:	Investigate and discuss laws that protect intellectual property, and practice safe, legal, and responsible acquisition and use of musical media.
MU.68.F.3.3:	Identify the tasks involved in the compositional process and discuss how the process might be applied in the work place. **Clarifications:** e.g., idea, development, editing, selling, revising, testing, presenting
MU.68.H.1.1:	Describe the functions of music from various cultures and time periods.
MU.68.H.1.2:	Identify the works of representative composers within a specific style or time period.
MU.68.H.1.4:	Classify authentic stylistic features in music originating from various cultures. **Clarifications:** e.g., rhythm, layered texture, key patterns, tonality, melodic line, quarter- or semi-tones, national folk melodies, improvisation, instrumentation, aural/oral traditions, drumming patterns
MU.68.H.1.5:	Using representative musical works by selected composers, classify compositional characteristics common to a specific time period and/or genre.
MU.68.H.2.1:	Describe the influence of historical events and periods on music composition and performance.
MU.68.H.2.3:	Classify the literature being studied by genre, style, and/or time period.
MU.68.H.3.1:	Identify connections among music and other content areas and/or contexts through interdisciplinary collaboration. **Clarifications:** e.g., school: other music classes, social studies, dance, physical education, science, health, math, world languages; community: cultural connections and traditions, ceremonial music, sales and advertising, communication
MU.68.O.1.1:	Compare performances of a musical work to identify artistic choices made by performers. **Clarifications:** e.g., rhythm, melody, timbre, form, tonality, harmony, expressive elements; choral, orchestral, band, ensemble
MU.68.O.2.1:	Create a composition, manipulating musical elements and exploring the effects of those manipulations. **Clarifications:** e.g., using electronic or paper-and-pencil means to experiment with timbre, melody, rhythm, harmony, form, tonality
MU.68.O.3.1:	Describe how the combination of instrumentation and expressive elements in a musical work can convey a specific thought, idea, mood, and/or image. **Clarifications:** e.g., tempo markings, expression markings, articulation markings, phrasing, scales, modes, harmonic structure, timbre, rhythm, orchestration
MU.68.S.1.2:	Compose a short musical piece. **Clarifications:** e.g., using traditional, non-traditional, digital, or classroom instruments and/or voice
MU.68.S.1.3:	Arrange a short musical piece by manipulating melody, form, rhythm, and/or voicing.
MU.68.S.1.4:	Sing or play melodies by ear with support from the teacher and/or peers. **Clarifications:** e.g., melodies using traditional classroom instruments and/or voice
MU.68.S.2.1:	Perform music from memory to demonstrate knowledge of the musical structure. **Clarifications:** e.g., basic themes, patterns, tonality, melody, harmony
MU.68.S.3.1:	Sing and/or play age-appropriate repertoire expressively. **Clarifications:** e.g., technique, phrasing, dynamics, tone quality, blend, balance, intonation, kinesthetic support/response

	Demonstrate proper vocal or instrumental technique.
MU.68.S.3.2:	**Clarifications:** e.g., posture, breathing, fingering, embouchure, bow technique, tuning, strumming
	Compare written notation to aural examples and analyze for accuracy of rhythm and pitch.
MU.68.S.3.4:	**Clarifications:** e.g., error detection, interval reinforcement
	Mathematicians who participate in effortful learning both individually and with others: • Analyze the problem in a way that makes sense given the task. • Ask questions that will help with solving the task. • Build perseverance by modifying methods as needed while solving a challenging task. • Stay engaged and maintain a positive mindset when working to solve tasks. • Help and support each other when attempting a new method or approach.
MA.K12.MTR.1.1:	**Clarifications:** Teachers who encourage students to participate actively in effortful learning both individually and with others: • Cultivate a community of growth mindset learners. • Foster perseverance in students by choosing tasks that are challenging. • Develop students' ability to analyze and problem solve. • Recognize students' effort when solving challenging problems.
	Demonstrate understanding by representing problems in multiple ways. Mathematicians who demonstrate understanding by representing problems in multiple ways: • Build understanding through modeling and using manipulatives. • Represent solutions to problems in multiple ways using objects, drawings, tables, graphs and equations. • Progress from modeling problems with objects and drawings to using algorithms and equations. • Express connections between concepts and representations. • Choose a representation based on the given context or purpose.
MA.K12.MTR.2.1:	**Clarifications:** Teachers who encourage students to demonstrate understanding by representing problems in multiple ways: • Help students make connections between concepts and representations. • Provide opportunities for students to use manipulatives when investigating concepts. • Guide students from concrete to pictorial to abstract representations as understanding progresses. • Show students that various representations can have different purposes and can be useful in different situations.
	Complete tasks with mathematical fluency. Mathematicians who complete tasks with mathematical fluency: • Select efficient and appropriate methods for solving problems within the given context. • Maintain flexibility and accuracy while performing procedures and mental calculations. • Complete tasks accurately and with confidence. • Adapt procedures to apply them to a new context. • Use feedback to improve efficiency when performing calculations.
MA.K12.MTR.3.1:	**Clarifications:** Teachers who encourage students to complete tasks with mathematical fluency: • Provide students with the flexibility to solve problems by selecting a procedure that allows them to solve efficiently and accurately. • Offer multiple opportunities for students to practice efficient and generalizable methods. • Provide opportunities for students to reflect on the method they used and determine if a more efficient method could have been used.
	Engage in discussions that reflect on the mathematical thinking of self and others. Mathematicians who engage in discussions that reflect on the mathematical thinking of self and others: • Communicate mathematical ideas, vocabulary and methods effectively. • Analyze the mathematical thinking of others. • Compare the efficiency of a method to those expressed by others. • Recognize errors and suggest how to correctly solve the task. • Justify results by explaining methods and processes. • Construct possible arguments based on evidence.
MA.K12.MTR.4.1:	**Clarifications:** Teachers who encourage students to engage in discussions that reflect on the mathematical thinking of self and others: • Establish a culture in which students ask questions of the teacher and their peers, and error is an opportunity for learning. • Create opportunities for students to discuss their thinking with peers. • Select, sequence and present student work to advance and deepen understanding of correct and increasingly efficient methods. • Develop students' ability to justify methods and compare their responses to the responses of their peers.
	Use patterns and structure to help understand and connect mathematical concepts. Mathematicians who use patterns and structure to help understand and connect mathematical concepts: • Focus on relevant details within a problem. • Create plans and procedures to logically order events, steps or ideas to solve problems. • Decompose a complex problem into manageable parts. • Relate previously learned concepts to new concepts. • Look for similarities among problems. • Connect solutions of problems to more complicated large-scale situations.
MA.K12.MTR.5.1:	

	Clarifications: Teachers who encourage students to use patterns and structure to help understand and connect mathematical concepts: • Help students recognize the patterns in the world around them and connect these patterns to mathematical concepts. • Support students to develop generalizations based on the similarities found among problems. • Provide opportunities for students to create plans and procedures to solve problems. • Develop students' ability to construct relationships between their current understanding and more sophisticated ways of thinking.
MA.K12.MTR.6.1:	Assess the reasonableness of solutions. Mathematicians who assess the reasonableness of solutions: • Estimate to discover possible solutions. • Use benchmark quantities to determine if a solution makes sense. • Check calculations when solving problems. • Verify possible solutions by explaining the methods used. • Evaluate results based on the given context. **Clarifications:** Teachers who encourage students to assess the reasonableness of solutions: • Have students estimate or predict solutions prior to solving. • Prompt students to continually ask, "Does this solution make sense? How do you know?" • Reinforce that students check their work as they progress within and after a task. • Strengthen students' ability to verify solutions through justifications.
MA.K12.MTR.7.1:	Apply mathematics to real-world contexts. Mathematicians who apply mathematics to real-world contexts: • Connect mathematical concepts to everyday experiences. • Use models and methods to understand, represent and solve problems. • Perform investigations to gather data or determine if a method is appropriate. • Redesign models and methods to improve accuracy or efficiency. **Clarifications:** Teachers who encourage students to apply mathematics to real-world contexts: • Provide opportunities for students to create models, both concrete and abstract, and perform investigations. • Challenge students to question the accuracy of their models and methods. • Support students as they validate conclusions by comparing them to the given situation. • Indicate how various concepts can be applied to other disciplines.
ELA.K12.EE.1.1:	Cite evidence to explain and justify reasoning. **Clarifications:** K-1 Students include textual evidence in their oral communication with guidance and support from adults. The evidence can consist of details from the text without naming the text. During 1st grade, students learn how to incorporate the evidence in their writing. 2-3 Students include relevant textual evidence in their written and oral communication. Students should name the text when they refer to it. In 3rd grade, students should use a combination of direct and indirect citations. 4-5 Students continue with previous skills and reference comments made by speakers and peers. Students cite texts that they've directly quoted, paraphrased, or used for information. When writing, students will use the form of citation dictated by the instructor or the style guide referenced by the instructor. 6-8 Students continue with previous skills and use a style guide to create a proper citation. 9-12 Students continue with previous skills and should be aware of existing style guides and the ways in which they differ.
ELA.K12.EE.2.1:	Read and comprehend grade-level complex texts proficiently. **Clarifications:** See Text Complexity for grade-level complexity bands and a text complexity rubric.
ELA.K12.EE.3.1:	Make inferences to support comprehension. **Clarifications:** Students will make inferences before the words infer or inference are introduced. Kindergarten students will answer questions like "Why is the girl smiling?" or make predictions about what will happen based on the title page. Students will use the terms and apply them in 2nd grade and beyond.
ELA.K12.EE.4.1:	Use appropriate collaborative techniques and active listening skills when engaging in discussions in a variety of situations. **Clarifications:** In kindergarten, students learn to listen to one another respectfully. In grades 1-2, students build upon these skills by justifying what they are thinking. For example: "I think _____ because _____." The collaborative conversations are becoming academic conversations. In grades 3-12, students engage in academic conversations discussing claims and justifying their reasoning, refining and applying skills. Students build on ideas, propel the conversation, and support claims and counterclaims with evidence.
ELA.K12.EE.5.1:	Use the accepted rules governing a specific format to create quality work. **Clarifications:** Students will incorporate skills learned into work products to produce quality work. For students to incorporate these skills appropriately, they must receive instruction. A 3rd grade student creating a poster board display must have instruction in how to effectively present information to do quality work.
ELA.K12.EE.6.1:	Use appropriate voice and tone when speaking or writing. **Clarifications:** In kindergarten and 1st grade, students learn the difference between formal and informal language. For example, the way we talk to our friends

	differs from the way we speak to adults. In 2nd grade and beyond, students practice appropriate social and academic language to discuss texts.
DA.68.S.2.1:	Sustain focused attention, respect, and discipline during classes and performances.
ELD.K12.ELL.SI.1:	English language learners communicate for social and instructional purposes within the school setting.

General Course Information and Notes

VERSION DESCRIPTION

Students engage in a study of global music traditions through history examining genres, significant composers, and compositions over time. As they review the expressive elements of music and compositional tools, students create music, develop structural mapping skills, self-assess, and connect music to its origins. Public performances may serve as a resource for specific instructional goals. Students may be expected to attend one or more performances outside the school day to support, extend, and assess learning in the classroom.

GENERAL NOTES

Florida's Benchmarks for Excellent Student Thinking (B.E.S.T.) Standards
This course includes Florida's B.E.S.T. ELA Expectations (EE) and Mathematical Thinking and Reasoning Standards (MTRs) for students. Florida educators should intentionally embed these standards within the content and their instruction as applicable. For guidance on the implementation of the EEs and MTRs, please visit cpalms.org/Standards/BEST_Standards.aspx and select the appropriate B.E.S.T. Standards package.

English Language Development ELD Standards Special Notes Section:
Teachers are required to provide listening, speaking, reading and writing instruction that allows English language learners (ELL) to communicate for social and instructional purposes within the school setting. For the given level of English language proficiency and with visual, graphic, or interactive support, students will interact with grade level words, expressions, sentences and discourse to process or produce language necessary for academic success. The ELD standard should specify a relevant content area concept or topic of study chosen by curriculum developers and teachers which maximizes an ELL's need for communication and social skills. To access an ELL supporting document which delineates performance definitions and descriptors, please click on the following link: cpalms.org/uploads/docs/standards/eld/SI.pdf

GENERAL INFORMATION

Course Number: 1301110

Course Path: Section: Grades PreK to 12 Education Courses > **Grade Group:** Grades 6 to 8 Education Courses > **Subject:** Music Education > **SubSubject:** General Music >
Abbreviated Title: M/J EXPL MUSIC 3
Course Length: Year (Y)
Course Level: 2

Course Status: Draft - Course Pending Approval

Grade Level(s): 6,7,8

Educator Certifications

Vocal Music (Elementary and Secondary Grades K-12)
Instrumental Music (Secondary Grades 7-12)
Instrumental Music (Elementary and Secondary Grades K-12)
Music (Elementary and Secondary Grades K-12)

Guitar 1 (#1301320) 2022 - And Beyond

Course Standards

Name	Description
MU.912.C.1.1:	Apply listening strategies to promote appreciation and understanding of unfamiliar musical works. **Clarifications:** e.g., listening maps, active listening, checklists
MU.912.C.2.1:	Evaluate and make appropriate adjustments to personal performance in solo and ensembles.
MU.912.C.3.1:	Make critical evaluations, based on exemplary models, of the quality and effectiveness of performances and apply the criteria to personal development in music.
MU.912.F.3.2:	Summarize copyright laws that govern printed, recorded, and on-line music to promote legal and responsible use of intellectual property and technology.
MU.912.H.1.1:	Investigate and discuss how a culture's traditions are reflected through its music. **Clarifications:** e.g., patriotic, folk, celebration, entertainment, spiritual
MU.912.H.3.1:	Apply knowledge of science, math, and music to demonstrate, through an acoustic or digital performance medium, how sound production affects musical performance. **Clarifications:** e.g., acoustics, sound amplification, materials, mechanics
MU.912.O.1.1:	Evaluate the organizational principles and conventions in musical works and discuss their effect on structure. **Clarifications:** e.g., rhythm, melody, timbre, form, tonality, harmony, texture; solo, chamber ensemble, large ensemble
MU.912.O.3.2:	Interpret and perform expressive elements indicated by the musical score and/or conductor.
MU.912.S.1.3:	Arrange a musical work by manipulating two or more aspects of the composition. **Clarifications:** e.g., texture, mode, form, tempo, voicing
MU.912.S.3.1:	Synthesize a broad range of musical skills by performing a varied repertoire with expression, appropriate stylistic interpretation, technical accuracy, and kinesthetic energy.
MU.912.S.3.4:	Analyze and describe the effect of rehearsal sessions and/or strategies on refinement of skills and techniques.
MU.912.S.3.5:	Develop and demonstrate proper vocal or instrumental technique. **Clarifications:** e.g., posture, breathing, fingering, embouchure, bow technique, tuning, strumming
MA.K12.MTR.1.1:	Mathematicians who participate in effortful learning both individually and with others: • Analyze the problem in a way that makes sense given the task. • Ask questions that will help with solving the task. • Build perseverance by modifying methods as needed while solving a challenging task. • Stay engaged and maintain a positive mindset when working to solve tasks. • Help and support each other when attempting a new method or approach. **Clarifications:** Teachers who encourage students to participate actively in effortful learning both individually and with others: • Cultivate a community of growth mindset learners. • Foster perseverance in students by choosing tasks that are challenging. • Develop students' ability to analyze and problem solve. • Recognize students' effort when solving challenging problems.
MA.K12.MTR.2.1:	Demonstrate understanding by representing problems in multiple ways. Mathematicians who demonstrate understanding by representing problems in multiple ways: • Build understanding through modeling and using manipulatives. • Represent solutions to problems in multiple ways using objects, drawings, tables, graphs and equations. • Progress from modeling problems with objects and drawings to using algorithms and equations. • Express connections between concepts and representations. • Choose a representation based on the given context or purpose. **Clarifications:** Teachers who encourage students to demonstrate understanding by representing problems in multiple ways: • Help students make connections between concepts and representations. • Provide opportunities for students to use manipulatives when investigating concepts. • Guide students from concrete to pictorial to abstract representations as understanding progresses. • Show students that various representations can have different purposes and can be useful in different situations.
	Complete tasks with mathematical fluency. Mathematicians who complete tasks with mathematical fluency: • Select efficient and appropriate methods for solving problems within the given context.

MA.K12.MTR.3.1:	• Maintain flexibility and accuracy while performing procedures and mental calculations. • Complete tasks accurately and with confidence. • Adapt procedures to apply them to a new context. • Use feedback to improve efficiency when performing calculations. **Clarifications:** Teachers who encourage students to complete tasks with mathematical fluency: • Provide students with the flexibility to solve problems by selecting a procedure that allows them to solve efficiently and accurately. • Offer multiple opportunities for students to practice efficient and generalizable methods. • Provide opportunities for students to reflect on the method they used and determine if a more efficient method could have been used.
MA.K12.MTR.4.1:	Engage in discussions that reflect on the mathematical thinking of self and others. Mathematicians who engage in discussions that reflect on the mathematical thinking of self and others: • Communicate mathematical ideas, vocabulary and methods effectively. • Analyze the mathematical thinking of others. • Compare the efficiency of a method to those expressed by others. • Recognize errors and suggest how to correctly solve the task. • Justify results by explaining methods and processes. • Construct possible arguments based on evidence. **Clarifications:** Teachers who encourage students to engage in discussions that reflect on the mathematical thinking of self and others: • Establish a culture in which students ask questions of the teacher and their peers, and error is an opportunity for learning. • Create opportunities for students to discuss their thinking with peers. • Select, sequence and present student work to advance and deepen understanding of correct and increasingly efficient methods. • Develop students' ability to justify methods and compare their responses to the responses of their peers.
MA.K12.MTR.5.1:	Use patterns and structure to help understand and connect mathematical concepts. Mathematicians who use patterns and structure to help understand and connect mathematical concepts: • Focus on relevant details within a problem. • Create plans and procedures to logically order events, steps or ideas to solve problems. • Decompose a complex problem into manageable parts. • Relate previously learned concepts to new concepts. • Look for similarities among problems. • Connect solutions of problems to more complicated large-scale situations. **Clarifications:** Teachers who encourage students to use patterns and structure to help understand and connect mathematical concepts: • Help students recognize the patterns in the world around them and connect these patterns to mathematical concepts. • Support students to develop generalizations based on the similarities found among problems. • Provide opportunities for students to create plans and procedures to solve problems. • Develop students' ability to construct relationships between their current understanding and more sophisticated ways of thinking.
MA.K12.MTR.6.1:	Assess the reasonableness of solutions. Mathematicians who assess the reasonableness of solutions: • Estimate to discover possible solutions. • Use benchmark quantities to determine if a solution makes sense. • Check calculations when solving problems. • Verify possible solutions by explaining the methods used. • Evaluate results based on the given context. **Clarifications:** Teachers who encourage students to assess the reasonableness of solutions: • Have students estimate or predict solutions prior to solving. • Prompt students to continually ask, "Does this solution make sense? How do you know?" • Reinforce that students check their work as they progress within and after a task. • Strengthen students' ability to verify solutions through justifications.
MA.K12.MTR.7.1:	Apply mathematics to real-world contexts. Mathematicians who apply mathematics to real-world contexts: • Connect mathematical concepts to everyday experiences. • Use models and methods to understand, represent and solve problems. • Perform investigations to gather data or determine if a method is appropriate. • Redesign models and methods to improve accuracy or efficiency. **Clarifications:** Teachers who encourage students to apply mathematics to real-world contexts: • Provide opportunities for students to create models, both concrete and abstract, and perform investigations. • Challenge students to question the accuracy of their models and methods. • Support students as they validate conclusions by comparing them to the given situation. • Indicate how various concepts can be applied to other disciplines.
	Cite evidence to explain and justify reasoning. **Clarifications:** K-1 Students include textual evidence in their oral communication with guidance and support from adults. The evidence can consist of details from the text without naming the text. During 1st grade, students learn how to incorporate the evidence in their writing. 2-3 Students include relevant textual evidence in their written and oral communication. Students should name the text when they refer to it.

ELA.K12.EE.1.1:	In 3rd grade, students should use a combination of direct and indirect citations. 4-5 Students continue with previous skills and reference comments made by speakers and peers. Students cite texts that they've directly quoted, paraphrased, or used for information. When writing, students will use the form of citation dictated by the instructor or the style guide referenced by the instructor. 6-8 Students continue with previous skills and use a style guide to create a proper citation. 9-12 Students continue with previous skills and should be aware of existing style guides and the ways in which they differ.
ELA.K12.EE.2.1:	Read and comprehend grade-level complex texts proficiently. **Clarifications:** See Text Complexity for grade-level complexity bands and a text complexity rubric.
ELA.K12.EE.3.1:	Make inferences to support comprehension. **Clarifications:** Students will make inferences before the words infer or inference are introduced. Kindergarten students will answer questions like "Why is the girl smiling?" or make predictions about what will happen based on the title page. Students will use the terms and apply them in 2nd grade and beyond.
ELA.K12.EE.4.1:	Use appropriate collaborative techniques and active listening skills when engaging in discussions in a variety of situations. **Clarifications:** In kindergarten, students learn to listen to one another respectfully. In grades 1-2, students build upon these skills by justifying what they are thinking. For example: "I think _____ because _____." The collaborative conversations are becoming academic conversations. In grades 3-12, students engage in academic conversations discussing claims and justifying their reasoning, refining and applying skills. Students build on ideas, propel the conversation, and support claims and counterclaims with evidence.
ELA.K12.EE.5.1:	Use the accepted rules governing a specific format to create quality work. **Clarifications:** Students will incorporate skills learned into work products to produce quality work. For students to incorporate these skills appropriately, they must receive instruction. A 3rd grade student creating a poster board display must have instruction in how to effectively present information to do quality work.
ELA.K12.EE.6.1:	Use appropriate voice and tone when speaking or writing. **Clarifications:** In kindergarten and 1st grade, students learn the difference between formal and informal language. For example, the way we talk to our friends differs from the way we speak to adults. In 2nd grade and beyond, students practice appropriate social and academic language to discuss texts.
DA.912.S.2.1:	Sustain focused attention, respect, and discipline during class, rehearsal, and performance.
ELD.K12.ELL.SI.1:	English language learners communicate for social and instructional purposes within the school setting.

General Course Information and Notes

VERSION DESCRIPTION

Students with little or no experience develop basic guitar skills and knowledge, including simple and full-strum chords, bass lines and lead sheets, barre and power chords, foundational music literacy and theory, major scales, simple finger-picking patterns, and ensemble skills for a variety of music. Beginning guitarists explore the careers and music of significant performers in a variety of styles. Public performances may serve as a culmination of specific instructional goals. Students may be required to attend and/or participate in rehearsals and performances outside the school day to support, extend, and assess learning in the classroom. This course may also require students to obtain a musical instrument (e.g., borrow, rent, purchase) from an outside source.

GENERAL NOTES

Florida's Benchmarks for Excellent Student Thinking (B.E.S.T.) Standards
This course includes Florida's B.E.S.T. ELA Expectations (EE) and Mathematical Thinking and Reasoning Standards (MTRs) for students. Florida educators should intentionally embed these standards within the content and their instruction as applicable. For guidance on the implementation of the EEs and MTRs, please visit cpalms.org/Standards/BEST_Standards.aspx and select the appropriate B.E.S.T. Standards package.

English Language Development ELD Standards Special Notes Section:
Teachers are required to provide listening, speaking, reading and writing instruction that allows English language learners (ELL) to communicate for social and instructional purposes within the school setting. For the given level of English language proficiency and with visual, graphic, or interactive support, students will interact with grade level words, expressions, sentences and discourse to process or produce language necessary for academic success. The ELD standard should specify a relevant content area concept or topic of study chosen by curriculum developers and teachers which maximizes an ELL's need for communication and social skills. To access an ELL supporting document which delineates performance definitions and descriptors, please click on the following link: cpalms.org/uploads/docs/standards/eld/SI.pdf

GENERAL INFORMATION

Course Number: 1301320

Course Path: Section: Grades PreK to 12 Education Courses > **Grade Group:** Grades 9 to 12 and Adult Education Courses > **Subject:** Music Education > **SubSubject:** Instrumental Music >

Abbreviated Title: GUITAR 1

Number of Credits: One (1) credit

Course Length: Year (Y)

Course Type: Core Academic Course

Course Level: 2

Course Status: Draft - Course Pending Approval

Grade Level(s): 9,10,11,12

Graduation Requirement: Performing/Fine Arts

Educator Certifications

Music (Elementary and Secondary Grades K-12)
Vocal Music (Elementary and Secondary Grades K-12)
Instrumental Music (Secondary Grades 7-12)
Instrumental Music (Elementary and Secondary Grades K-12)

Guitar 2 (#1301330) 2022 - And Beyond

Course Standards

Name	Description
MU.912.C.1.1:	Apply listening strategies to promote appreciation and understanding of unfamiliar musical works. **Clarifications:** e.g., listening maps, active listening, checklists
MU.912.C.1.2:	Compare, using correct music vocabulary, the aesthetic impact of two or more performances of a musical work to one's own hypothesis of the composer's intent. **Clarifications:** e.g., quality recordings, individual and peer-group performances, composer notes, instrumentation, expressive elements, title
MU.912.C.2.1:	Evaluate and make appropriate adjustments to personal performance in solo and ensembles.
MU.912.C.2.2:	Evaluate performance quality in recorded and/or live performances.
MU.912.C.3.1:	Make critical evaluations, based on exemplary models, of the quality and effectiveness of performances and apply the criteria to personal development in music.
MU.912.F.3.2:	Summarize copyright laws that govern printed, recorded, and on-line music to promote legal and responsible use of intellectual property and technology.
MU.912.H.1.1:	Investigate and discuss how a culture's traditions are reflected through its music. **Clarifications:** e.g., patriotic, folk, celebration, entertainment, spiritual
MU.912.H.1.3:	Compare two or more works of a composer across performance media. **Clarifications:** e.g., orchestral and choral; guitar and string quartet; piano solo and piano concerto
MU.912.H.2.1:	Evaluate the social impact of music on specific historical periods.
MU.912.H.3.1:	Apply knowledge of science, math, and music to demonstrate, through an acoustic or digital performance medium, how sound production affects musical performance. **Clarifications:** e.g., acoustics, sound amplification, materials, mechanics
MU.912.O.1.1:	Evaluate the organizational principles and conventions in musical works and discuss their effect on structure. **Clarifications:** e.g., rhythm, melody, timbre, form, tonality, harmony, texture; solo, chamber ensemble, large ensemble
MU.912.O.3.2:	Interpret and perform expressive elements indicated by the musical score and/or conductor.
MU.912.S.1.3:	Arrange a musical work by manipulating two or more aspects of the composition. **Clarifications:** e.g., texture, mode, form, tempo, voicing
MU.912.S.2.1:	Apply the ability to memorize and internalize musical structure, accurate and expressive details, and processing skills to the creation or performance of music literature. **Clarifications:** e.g., memorization, sequential process
MU.912.S.3.1:	Synthesize a broad range of musical skills by performing a varied repertoire with expression, appropriate stylistic interpretation, technical accuracy, and kinesthetic energy.
MU.912.S.3.4:	Analyze and describe the effect of rehearsal sessions and/or strategies on refinement of skills and techniques.
MU.912.S.3.5:	Develop and demonstrate proper vocal or instrumental technique. **Clarifications:** e.g., posture, breathing, fingering, embouchure, bow technique, tuning, strumming
MA.K12.MTR.1.1:	Mathematicians who participate in effortful learning both individually and with others: • Analyze the problem in a way that makes sense given the task. • Ask questions that will help with solving the task. • Build perseverance by modifying methods as needed while solving a challenging task. • Stay engaged and maintain a positive mindset when working to solve tasks. • Help and support each other when attempting a new method or approach. **Clarifications:** Teachers who encourage students to participate actively in effortful learning both individually and with others: • Cultivate a community of growth mindset learners. • Foster perseverance in students by choosing tasks that are challenging. • Develop students' ability to analyze and problem solve. • Recognize students' effort when solving challenging problems.
	Demonstrate understanding by representing problems in multiple ways. Mathematicians who demonstrate understanding by representing problems in multiple ways: • Build understanding through modeling and using manipulatives.

- Represent solutions to problems in multiple ways using objects, drawings, tables, graphs and equations.
- Progress from modeling problems with objects and drawings to using algorithms and equations.
- Express connections between concepts and representations.

MA.K12.MTR.2.1:

- Choose a representation based on the given context or purpose.

Clarifications:
Teachers who encourage students to demonstrate understanding by representing problems in multiple ways:

- Help students make connections between concepts and representations.
- Provide opportunities for students to use manipulatives when investigating concepts.
- Guide students from concrete to pictorial to abstract representations as understanding progresses.
- Show students that various representations can have different purposes and can be useful in different situations.

Complete tasks with mathematical fluency.
Mathematicians who complete tasks with mathematical fluency:

- Select efficient and appropriate methods for solving problems within the given context.
- Maintain flexibility and accuracy while performing procedures and mental calculations.
- Complete tasks accurately and with confidence.
- Adapt procedures to apply them to a new context.

MA.K12.MTR.3.1:

- Use feedback to improve efficiency when performing calculations.

Clarifications:
Teachers who encourage students to complete tasks with mathematical fluency:

- Provide students with the flexibility to solve problems by selecting a procedure that allows them to solve efficiently and accurately.
- Offer multiple opportunities for students to practice efficient and generalizable methods.
- Provide opportunities for students to reflect on the method they used and determine if a more efficient method could have been used.

Engage in discussions that reflect on the mathematical thinking of self and others.
Mathematicians who engage in discussions that reflect on the mathematical thinking of self and others:

- Communicate mathematical ideas, vocabulary and methods effectively.
- Analyze the mathematical thinking of others.
- Compare the efficiency of a method to those expressed by others.
- Recognize errors and suggest how to correctly solve the task.
- Justify results by explaining methods and processes.

MA.K12.MTR.4.1:

- Construct possible arguments based on evidence.

Clarifications:
Teachers who encourage students to engage in discussions that reflect on the mathematical thinking of self and others:

- Establish a culture in which students ask questions of the teacher and their peers, and error is an opportunity for learning.
- Create opportunities for students to discuss their thinking with peers.
- Select, sequence and present student work to advance and deepen understanding of correct and increasingly efficient methods.
- Develop students' ability to justify methods and compare their responses to the responses of their peers.

Use patterns and structure to help understand and connect mathematical concepts.
Mathematicians who use patterns and structure to help understand and connect mathematical concepts:

- Focus on relevant details within a problem.
- Create plans and procedures to logically order events, steps or ideas to solve problems.
- Decompose a complex problem into manageable parts.
- Relate previously learned concepts to new concepts.
- Look for similarities among problems.

MA.K12.MTR.5.1:

- Connect solutions of problems to more complicated large-scale situations.

Clarifications:
Teachers who encourage students to use patterns and structure to help understand and connect mathematical concepts:

- Help students recognize the patterns in the world around them and connect these patterns to mathematical concepts.
- Support students to develop generalizations based on the similarities found among problems.
- Provide opportunities for students to create plans and procedures to solve problems.
- Develop students' ability to construct relationships between their current understanding and more sophisticated ways of thinking.

Assess the reasonableness of solutions.
Mathematicians who assess the reasonableness of solutions:

- Estimate to discover possible solutions.
- Use benchmark quantities to determine if a solution makes sense.
- Check calculations when solving problems.
- Verify possible solutions by explaining the methods used.

MA.K12.MTR.6.1:

- Evaluate results based on the given context.

Clarifications:
Teachers who encourage students to assess the reasonableness of solutions:

- Have students estimate or predict solutions prior to solving.
- Prompt students to continually ask, "Does this solution make sense? How do you know?"
- Reinforce that students check their work as they progress within and after a task.
- Strengthen students' ability to verify solutions through justifications.

Apply mathematics to real-world contexts.
Mathematicians who apply mathematics to real-world contexts:

MA.K12.MTR.7.1:	• Connect mathematical concepts to everyday experiences. • Use models and methods to understand, represent and solve problems. • Perform investigations to gather data or determine if a method is appropriate. • Redesign models and methods to improve accuracy or efficiency. **Clarifications:** Teachers who encourage students to apply mathematics to real-world contexts: • Provide opportunities for students to create models, both concrete and abstract, and perform investigations. • Challenge students to question the accuracy of their models and methods. • Support students as they validate conclusions by comparing them to the given situation. • Indicate how various concepts can be applied to other disciplines.
ELA.K12.EE.1.1:	Cite evidence to explain and justify reasoning. **Clarifications:** K-1 Students include textual evidence in their oral communication with guidance and support from adults. The evidence can consist of details from the text without naming the text. During 1st grade, students learn how to incorporate the evidence in their writing. 2-3 Students include relevant textual evidence in their written and oral communication. Students should name the text when they refer to it. In 3rd grade, students should use a combination of direct and indirect citations. 4-5 Students continue with previous skills and reference comments made by speakers and peers. Students cite texts that they've directly quoted, paraphrased, or used for information. When writing, students will use the form of citation dictated by the instructor or the style guide referenced by the instructor. 6-8 Students continue with previous skills and use a style guide to create a proper citation. 9-12 Students continue with previous skills and should be aware of existing style guides and the ways in which they differ.
ELA.K12.EE.2.1:	Read and comprehend grade-level complex texts proficiently. **Clarifications:** See Text Complexity for grade-level complexity bands and a text complexity rubric.
ELA.K12.EE.3.1:	Make inferences to support comprehension. **Clarifications:** Students will make inferences before the words infer or inference are introduced. Kindergarten students will answer questions like "Why is the girl smiling?" or make predictions about what will happen based on the title page. Students will use the terms and apply them in 2nd grade and beyond.
ELA.K12.EE.4.1:	Use appropriate collaborative techniques and active listening skills when engaging in discussions in a variety of situations. **Clarifications:** In kindergarten, students learn to listen to one another respectfully. In grades 1-2, students build upon these skills by justifying what they are thinking. For example: "I think _____ because _____." The collaborative conversations are becoming academic conversations. In grades 3-12, students engage in academic conversations discussing claims and justifying their reasoning, refining and applying skills. Students build on ideas, propel the conversation, and support claims and counterclaims with evidence.
ELA.K12.EE.5.1:	Use the accepted rules governing a specific format to create quality work. **Clarifications:** Students will incorporate skills learned into work products to produce quality work. For students to incorporate these skills appropriately, they must receive instruction. A 3rd grade student creating a poster board display must have instruction in how to effectively present information to do quality work.
ELA.K12.EE.6.1:	Use appropriate voice and tone when speaking or writing. **Clarifications:** In kindergarten and 1st grade, students learn the difference between formal and informal language. For example, the way we talk to our friends differs from the way we speak to adults. In 2nd grade and beyond, students practice appropriate social and academic language to discuss texts.
DA.912.S.2.1:	Sustain focused attention, respect, and discipline during class, rehearsal, and performance.
ELD.K12.ELL.SI.1:	English language learners communicate for social and instructional purposes within the school setting.

General Course Information and Notes

VERSION DESCRIPTION

Students with previous guitar experience build on their skills and knowledge, adding chords, new strumming and finger-picking patterns, movable major and minor scales, basic music theory, more complex bass lines and lead sheets, and ensemble skills for a variety of music. Beginning guitarists explore the careers and music of significant performers. Public performances may serve as a culmination of specific instructional goals. Students may be required to attend and/or participate in rehearsals and performances outside the school day to support, extend, and assess learning in the classroom. This course may also require students to obtain a musical instrument (e.g., borrow, rent, purchase) from an outside source.

GENERAL NOTES

Florida's Benchmarks for Excellent Student Thinking (B.E.S.T.) Standards
This course includes Florida's B.E.S.T. ELA Expectations (EE) and Mathematical Thinking and Reasoning Standards (MTRs) for students. Florida educators should intentionally embed these standards within the content and their instruction as applicable. For guidance on the implementation of the EEs and MTRs, please visit

cpalms.org/Standards/BEST_Standards.aspx and select the appropriate B.E.S.T. Standards package.

English Language Development ELD Standards Special Notes Section:
Teachers are required to provide listening, speaking, reading and writing instruction that allows English language learners (ELL) to communicate for social and instructional purposes within the school setting. For the given level of English language proficiency and with visual, graphic, or interactive support, students will interact with grade level words, expressions, sentences and discourse to process or produce language necessary for academic success. The ELD standard should specify a relevant content area concept or topic of study chosen by curriculum developers and teachers which maximizes an ELL's need for communication and social skills. To access an ELL supporting document which delineates performance definitions and descriptors, please click on the following link: cpalms.org/uploads/docs/standards/eld/SI.pdf

GENERAL INFORMATION

Course Number: 1301330

Course Path: Section: Grades PreK to 12 Education Courses > **Grade Group:** Grades 9 to 12 and Adult Education Courses > **Subject:** Music Education > **SubSubject:** Instrumental Music >

Abbreviated Title: GUITAR 2

Number of Credits: One (1) credit

Course Length: Year (Y)

Course Type: Core Academic Course

Course Level: 2

Course Status: Draft - Course Pending Approval

Grade Level(s): 9,10,11,12

Graduation Requirement: Performing/Fine Arts

Educator Certifications

Music (Elementary and Secondary Grades K-12)
Vocal Music (Elementary and Secondary Grades K-12)
Instrumental Music (Secondary Grades 7-12)
Instrumental Music (Elementary and Secondary Grades K-12)

Guitar 3 (#1301340) 2022 - And Beyond

Course Standards

Name	Description
MU.912.C.1.1:	Apply listening strategies to promote appreciation and understanding of unfamiliar musical works. **Clarifications:** e.g., listening maps, active listening, checklists
MU.912.C.1.2:	Compare, using correct music vocabulary, the aesthetic impact of two or more performances of a musical work to one's own hypothesis of the composer's intent. **Clarifications:** e.g., quality recordings, individual and peer-group performances, composer notes, instrumentation, expressive elements, title
MU.912.C.2.1:	Evaluate and make appropriate adjustments to personal performance in solo and ensembles.
MU.912.C.2.2:	Evaluate performance quality in recorded and/or live performances.
MU.912.C.3.1:	Make critical evaluations, based on exemplary models, of the quality and effectiveness of performances and apply the criteria to personal development in music.
MU.912.F.3.2:	Summarize copyright laws that govern printed, recorded, and on-line music to promote legal and responsible use of intellectual property and technology.
MU.912.H.1.1:	Investigate and discuss how a culture's traditions are reflected through its music. **Clarifications:** e.g., patriotic, folk, celebration, entertainment, spiritual
MU.912.H.1.3:	Compare two or more works of a composer across performance media. **Clarifications:** e.g., orchestral and choral; guitar and string quartet; piano solo and piano concerto
MU.912.H.2.1:	Evaluate the social impact of music on specific historical periods.
MU.912.H.3.1:	Apply knowledge of science, math, and music to demonstrate, through an acoustic or digital performance medium, how sound production affects musical performance. **Clarifications:** e.g., acoustics, sound amplification, materials, mechanics
MU.912.O.1.1:	Evaluate the organizational principles and conventions in musical works and discuss their effect on structure. **Clarifications:** e.g., rhythm, melody, timbre, form, tonality, harmony, texture; solo, chamber ensemble, large ensemble
MU.912.O.2.1:	Transfer accepted composition conventions and performance practices of a specific style to a contrasting style of music.
MU.912.O.3.2:	Interpret and perform expressive elements indicated by the musical score and/or conductor.
MU.912.S.1.3:	Arrange a musical work by manipulating two or more aspects of the composition. **Clarifications:** e.g., texture, mode, form, tempo, voicing
MU.912.S.2.1:	Apply the ability to memorize and internalize musical structure, accurate and expressive details, and processing skills to the creation or performance of music literature. **Clarifications:** e.g., memorization, sequential process
MU.912.S.2.2:	Transfer expressive elements and performance techniques from one piece of music to another.
MU.912.S.3.1:	Synthesize a broad range of musical skills by performing a varied repertoire with expression, appropriate stylistic interpretation, technical accuracy, and kinesthetic energy.
MU.912.S.3.2:	Sight-read music accurately and expressively to show synthesis of skills. **Clarifications:** e.g., musical elements, expressive qualities, performance technique
MU.912.S.3.4:	Analyze and describe the effect of rehearsal sessions and/or strategies on refinement of skills and techniques.
MU.912.S.3.5:	Develop and demonstrate proper vocal or instrumental technique. **Clarifications:** e.g., posture, breathing, fingering, embouchure, bow technique, tuning, strumming
MA.K12.MTR.1.1:	Mathematicians who participate in effortful learning both individually and with others: • Analyze the problem in a way that makes sense given the task. • Ask questions that will help with solving the task. • Build perseverance by modifying methods as needed while solving a challenging task. • Stay engaged and maintain a positive mindset when working to solve tasks. • Help and support each other when attempting a new method or approach. **Clarifications:** Teachers who encourage students to participate actively in effortful learning both individually and with others: • Cultivate a community of growth mindset learners. • Foster perseverance in students by choosing tasks that are challenging.

- Develop students' ability to analyze and problem solve.
- Recognize students' effort when solving challenging problems.

MA.K12.MTR.2.1:

Demonstrate understanding by representing problems in multiple ways.
Mathematicians who demonstrate understanding by representing problems in multiple ways:

- Build understanding through modeling and using manipulatives.
- Represent solutions to problems in multiple ways using objects, drawings, tables, graphs and equations.
- Progress from modeling problems with objects and drawings to using algorithms and equations.
- Express connections between concepts and representations.
- Choose a representation based on the given context or purpose.

Clarifications:
Teachers who encourage students to demonstrate understanding by representing problems in multiple ways:

- Help students make connections between concepts and representations.
- Provide opportunities for students to use manipulatives when investigating concepts.
- Guide students from concrete to pictorial to abstract representations as understanding progresses.
- Show students that various representations can have different purposes and can be useful in different situations.

MA.K12.MTR.3.1:

Complete tasks with mathematical fluency.
Mathematicians who complete tasks with mathematical fluency:

- Select efficient and appropriate methods for solving problems within the given context.
- Maintain flexibility and accuracy while performing procedures and mental calculations.
- Complete tasks accurately and with confidence.
- Adapt procedures to apply them to a new context.
- Use feedback to improve efficiency when performing calculations.

Clarifications:
Teachers who encourage students to complete tasks with mathematical fluency:

- Provide students with the flexibility to solve problems by selecting a procedure that allows them to solve efficiently and accurately.
- Offer multiple opportunities for students to practice efficient and generalizable methods.
- Provide opportunities for students to reflect on the method they used and determine if a more efficient method could have been used.

MA.K12.MTR.4.1:

Engage in discussions that reflect on the mathematical thinking of self and others.
Mathematicians who engage in discussions that reflect on the mathematical thinking of self and others:

- Communicate mathematical ideas, vocabulary and methods effectively.
- Analyze the mathematical thinking of others.
- Compare the efficiency of a method to those expressed by others.
- Recognize errors and suggest how to correctly solve the task.
- Justify results by explaining methods and processes.
- Construct possible arguments based on evidence.

Clarifications:
Teachers who encourage students to engage in discussions that reflect on the mathematical thinking of self and others:

- Establish a culture in which students ask questions of the teacher and their peers, and error is an opportunity for learning.
- Create opportunities for students to discuss their thinking with peers.
- Select, sequence and present student work to advance and deepen understanding of correct and increasingly efficient methods.
- Develop students' ability to justify methods and compare their responses to the responses of their peers.

MA.K12.MTR.5.1:

Use patterns and structure to help understand and connect mathematical concepts.
Mathematicians who use patterns and structure to help understand and connect mathematical concepts:

- Focus on relevant details within a problem.
- Create plans and procedures to logically order events, steps or ideas to solve problems.
- Decompose a complex problem into manageable parts.
- Relate previously learned concepts to new concepts.
- Look for similarities among problems.
- Connect solutions of problems to more complicated large-scale situations.

Clarifications:
Teachers who encourage students to use patterns and structure to help understand and connect mathematical concepts:

- Help students recognize the patterns in the world around them and connect these patterns to mathematical concepts.
- Support students to develop generalizations based on the similarities found among problems.
- Provide opportunities for students to create plans and procedures to solve problems.
- Develop students' ability to construct relationships between their current understanding and more sophisticated ways of thinking.

MA.K12.MTR.6.1:

Assess the reasonableness of solutions.
Mathematicians who assess the reasonableness of solutions:

- Estimate to discover possible solutions.
- Use benchmark quantities to determine if a solution makes sense.
- Check calculations when solving problems.
- Verify possible solutions by explaining the methods used.
- Evaluate results based on the given context.

Clarifications:
Teachers who encourage students to assess the reasonableness of solutions:

- Have students estimate or predict solutions prior to solving.

	• Prompt students to continually ask, "Does this solution make sense? How do you know?" • Reinforce that students check their work as they progress within and after a task. • Strengthen students' ability to verify solutions through justifications.
MA.K12.MTR.7.1:	Apply mathematics to real-world contexts. Mathematicians who apply mathematics to real-world contexts: • Connect mathematical concepts to everyday experiences. • Use models and methods to understand, represent and solve problems. • Perform investigations to gather data or determine if a method is appropriate. • Redesign models and methods to improve accuracy or efficiency. **Clarifications:** Teachers who encourage students to apply mathematics to real-world contexts: • Provide opportunities for students to create models, both concrete and abstract, and perform investigations. • Challenge students to question the accuracy of their models and methods. • Support students as they validate conclusions by comparing them to the given situation. • Indicate how various concepts can be applied to other disciplines.
ELA.K12.EE.1.1:	Cite evidence to explain and justify reasoning. **Clarifications:** K-1 Students include textual evidence in their oral communication with guidance and support from adults. The evidence can consist of details from the text without naming the text. During 1st grade, students learn how to incorporate the evidence in their writing. 2-3 Students include relevant textual evidence in their written and oral communication. Students should name the text when they refer to it. In 3rd grade, students should use a combination of direct and indirect citations. 4-5 Students continue with previous skills and reference comments made by speakers and peers. Students cite texts that they've directly quoted, paraphrased, or used for information. When writing, students will use the form of citation dictated by the instructor or the style guide referenced by the instructor. 6-8 Students continue with previous skills and use a style guide to create a proper citation. 9-12 Students continue with previous skills and should be aware of existing style guides and the ways in which they differ.
ELA.K12.EE.2.1:	Read and comprehend grade-level complex texts proficiently. **Clarifications:** See Text Complexity for grade-level complexity bands and a text complexity rubric.
ELA.K12.EE.3.1:	Make inferences to support comprehension. **Clarifications:** Students will make inferences before the words infer or inference are introduced. Kindergarten students will answer questions like "Why is the girl smiling?" or make predictions about what will happen based on the title page. Students will use the terms and apply them in 2nd grade and beyond.
ELA.K12.EE.4.1:	Use appropriate collaborative techniques and active listening skills when engaging in discussions in a variety of situations. **Clarifications:** In kindergarten, students learn to listen to one another respectfully. In grades 1-2, students build upon these skills by justifying what they are thinking. For example: "I think _____ because _____." The collaborative conversations are becoming academic conversations. In grades 3-12, students engage in academic conversations discussing claims and justifying their reasoning, refining and applying skills. Students build on ideas, propel the conversation, and support claims and counterclaims with evidence.
ELA.K12.EE.5.1:	Use the accepted rules governing a specific format to create quality work. **Clarifications:** Students will incorporate skills learned into work products to produce quality work. For students to incorporate these skills appropriately, they must receive instruction. A 3rd grade student creating a poster board display must have instruction in how to effectively present information to do quality work.
ELA.K12.EE.6.1:	Use appropriate voice and tone when speaking or writing. **Clarifications:** In kindergarten and 1st grade, students learn the difference between formal and informal language. For example, the way we talk to our friends differs from the way we speak to adults. In 2nd grade and beyond, students practice appropriate social and academic language to discuss texts.
DA.912.S.2.1:	Sustain focused attention, respect, and discipline during class, rehearsal, and performance.
ELD.K12.ELL.SI.1:	English language learners communicate for social and instructional purposes within the school setting.

General Course Information and Notes

VERSION DESCRIPTION

Students with previous experience strengthen their guitar skills and knowledge, adding a variety of chords; refining finger-picking and strumming patterns; reading notation in 1st, 2nd, and 5th position; and learning stylistic nuances, left-hand technique, and alternative fingering. Guitarists readily use tablature and standard notation, study the work of significant musicians, and develop significant self-assessment skills. Public performances may serve as a culmination of specific instructional goals. Students may be required to attend and/or participate in rehearsals and performances outside the school day to support, extend, and assess learning in the classroom. This course may also require students to obtain a musical instrument (e.g., borrow, rent, purchase) from an outside source.

GENERAL NOTES

Florida's Benchmarks for Excellent Student Thinking (B.E.S.T.) Standards
This course includes Florida's B.E.S.T. ELA Expectations (EE) and Mathematical Thinking and Reasoning Standards (MTRs) for students. Florida educators should intentionally embed these standards within the content and their instruction as applicable. For guidance on the implementation of the EEs and MTRs, please visit cpalms.org/Standards/BEST_Standards.aspx and select the appropriate B.E.S.T. Standards package.

English Language Development ELD Standards Special Notes Section:
Teachers are required to provide listening, speaking, reading and writing instruction that allows English language learners (ELL) to communicate for social and instructional purposes within the school setting. For the given level of English language proficiency and with visual, graphic, or interactive support, students will interact with grade level words, expressions, sentences and discourse to process or produce language necessary for academic success. The ELD standard should specify a relevant content area concept or topic of study chosen by curriculum developers and teachers which maximizes an ELL's need for communication and social skills. To access an ELL supporting document which delineates performance definitions and descriptors, please click on the following link: cpalms.org/uploads/docs/standards/eld/SI.pdf

GENERAL INFORMATION

Course Number: 1301340

Course Path: Section: Grades PreK to 12 Education Courses > **Grade Group:** Grades 9 to 12 and Adult Education Courses > **Subject:** Music Education > **SubSubject:** Instrumental Music >
Abbreviated Title: GUITAR 3

Number of Credits: One (1) credit

Course Length: Year (Y)

Course Type: Core Academic Course

Course Level: 2

Course Status: Draft - Course Pending Approval

Grade Level(s): 9,10,11,12

Graduation Requirement: Performing/Fine Arts

Educator Certifications

Music (Elementary and Secondary Grades K-12)
Vocal Music (Elementary and Secondary Grades K-12)
Instrumental Music (Secondary Grades 7-12)
Instrumental Music (Elementary and Secondary Grades K-12)

Guitar 4 Honors (#1301350) 2022 - And Beyond

Course Standards

Name	Description
MU.912.C.1.1:	Apply listening strategies to promote appreciation and understanding of unfamiliar musical works. **Clarifications:** e.g., listening maps, active listening, checklists
MU.912.C.1.2:	Compare, using correct music vocabulary, the aesthetic impact of two or more performances of a musical work to one's own hypothesis of the composer's intent. **Clarifications:** e.g., quality recordings, individual and peer-group performances, composer notes, instrumentation, expressive elements, title
MU.912.C.2.1:	Evaluate and make appropriate adjustments to personal performance in solo and ensembles.
MU.912.C.2.2:	Evaluate performance quality in recorded and/or live performances.
MU.912.C.3.1:	Make critical evaluations, based on exemplary models, of the quality and effectiveness of performances and apply the criteria to personal development in music.
MU.912.F.1.2:	Incorporate or adapt new, emerging, or previously unfamiliar technology to create an innovative composition, music project, or related product.
MU.912.F.2.1:	Design or refine a résumé for application to higher education or the workforce that highlights marketable skills and knowledge gained through music training. **Clarifications:** e.g., repertoire lists, technology-based work, ability to research and analyze, and examples of leadership and collaborative skills
MU.912.F.2.3:	Compare the organizational structure of a professional orchestra, chorus, quintet, or other ensemble to that of a business. **Clarifications:** e.g., leadership, financial needs and structure, marketing, personnel matters, manager, travel
MU.912.F.3.2:	Summarize copyright laws that govern printed, recorded, and on-line music to promote legal and responsible use of intellectual property and technology.
MU.912.F.3.3:	Define, prioritize, monitor, and successfully complete tasks related to individual musical performance or project presentation, without direct oversight, demonstrating skills for use in the workplace.
MU.912.F.3.4:	Design and implement a personal learning plan, related to the study of music, which demonstrates self-assessment, brain-storming, decision-making, and initiative to advance skills and/or knowledge.
MU.912.H.1.3:	Compare two or more works of a composer across performance media. **Clarifications:** e.g., orchestral and choral; guitar and string quartet; piano solo and piano concerto
MU.912.H.1.4:	Analyze how Western music has been influenced by historical and current world cultures.
MU.912.H.2.2:	Analyze current musical trends, including audience environments and music acquisition, to predict possible directions of music.
MU.912.H.3.2:	Combine personal interest with skills and knowledge from a non-music class to explore, design, and present a music-based or music-enhanced topic of interest to demonstrate the ability to make transfers across contexts. **Clarifications:** e.g., music and health, Holocaust, tolerance, African American history, world languages, scientific research, data analysis, problem-solving, public speaking
MU.912.O.1.1:	Evaluate the organizational principles and conventions in musical works and discuss their effect on structure. **Clarifications:** e.g., rhythm, melody, timbre, form, tonality, harmony, texture; solo, chamber ensemble, large ensemble
MU.912.O.2.1:	Transfer accepted composition conventions and performance practices of a specific style to a contrasting style of music.
MU.912.O.2.2:	Transpose melodies into different modalities through performance and composition.
MU.912.O.3.1:	Analyze expressive elements in a musical work and describe how the choices and manipulations of the elements support, for the listener, the implied meaning of the composer/performer. **Clarifications:** e.g., tempo markings, expression markings, articulation markings, phrasing, scales, modes, harmonic structure, timbre choice, rhythm, orchestration
MU.912.O.3.2:	Interpret and perform expressive elements indicated by the musical score and/or conductor.
MU.912.S.1.3:	Arrange a musical work by manipulating two or more aspects of the composition. **Clarifications:** e.g., texture, mode, form, tempo, voicing
MU.912.S.1.4:	Perform and notate, independently and accurately, melodies by ear. **Clarifications:** e.g., singing, playing, writing
MU.912.S.2.1:	Apply the ability to memorize and internalize musical structure, accurate and expressive details, and processing skills to the creation or performance of music literature. **Clarifications:** e.g., memorization, sequential process

MU.912.S.2.2:	Transfer expressive elements and performance techniques from one piece of music to another.
MU.912.S.3.1:	Synthesize a broad range of musical skills by performing a varied repertoire with expression, appropriate stylistic interpretation, technical accuracy, and kinesthetic energy.
MU.912.S.3.2:	Sight-read music accurately and expressively to show synthesis of skills. **Clarifications:** e.g., musical elements, expressive qualities, performance technique
MU.912.S.3.4:	Analyze and describe the effect of rehearsal sessions and/or strategies on refinement of skills and techniques.
MU.912.S.3.5:	Develop and demonstrate proper vocal or instrumental technique. **Clarifications:** e.g., posture, breathing, fingering, embouchure, bow technique, tuning, strumming
MA.K12.MTR.1.1:	Mathematicians who participate in effortful learning both individually and with others: • Analyze the problem in a way that makes sense given the task. • Ask questions that will help with solving the task. • Build perseverance by modifying methods as needed while solving a challenging task. • Stay engaged and maintain a positive mindset when working to solve tasks. • Help and support each other when attempting a new method or approach. **Clarifications:** Teachers who encourage students to participate actively in effortful learning both individually and with others: • Cultivate a community of growth mindset learners. • Foster perseverance in students by choosing tasks that are challenging. • Develop students' ability to analyze and problem solve. • Recognize students' effort when solving challenging problems.
MA.K12.MTR.2.1:	Demonstrate understanding by representing problems in multiple ways. Mathematicians who demonstrate understanding by representing problems in multiple ways: • Build understanding through modeling and using manipulatives. • Represent solutions to problems in multiple ways using objects, drawings, tables, graphs and equations. • Progress from modeling problems with objects and drawings to using algorithms and equations. • Express connections between concepts and representations. • Choose a representation based on the given context or purpose. **Clarifications:** Teachers who encourage students to demonstrate understanding by representing problems in multiple ways: • Help students make connections between concepts and representations. • Provide opportunities for students to use manipulatives when investigating concepts. • Guide students from concrete to pictorial to abstract representations as understanding progresses. • Show students that various representations can have different purposes and can be useful in different situations.
MA.K12.MTR.3.1:	Complete tasks with mathematical fluency. Mathematicians who complete tasks with mathematical fluency: • Select efficient and appropriate methods for solving problems within the given context. • Maintain flexibility and accuracy while performing procedures and mental calculations. • Complete tasks accurately and with confidence. • Adapt procedures to apply them to a new context. • Use feedback to improve efficiency when performing calculations. **Clarifications:** Teachers who encourage students to complete tasks with mathematical fluency: • Provide students with the flexibility to solve problems by selecting a procedure that allows them to solve efficiently and accurately. • Offer multiple opportunities for students to practice efficient and generalizable methods. • Provide opportunities for students to reflect on the method they used and determine if a more efficient method could have been used.
MA.K12.MTR.4.1:	Engage in discussions that reflect on the mathematical thinking of self and others. Mathematicians who engage in discussions that reflect on the mathematical thinking of self and others: • Communicate mathematical ideas, vocabulary and methods effectively. • Analyze the mathematical thinking of others. • Compare the efficiency of a method to those expressed by others. • Recognize errors and suggest how to correctly solve the task. • Justify results by explaining methods and processes. • Construct possible arguments based on evidence. **Clarifications:** Teachers who encourage students to engage in discussions that reflect on the mathematical thinking of self and others: • Establish a culture in which students ask questions of the teacher and their peers, and error is an opportunity for learning. • Create opportunities for students to discuss their thinking with peers. • Select, sequence and present student work to advance and deepen understanding of correct and increasingly efficient methods. • Develop students' ability to justify methods and compare their responses to the responses of their peers.
	Use patterns and structure to help understand and connect mathematical concepts. Mathematicians who use patterns and structure to help understand and connect mathematical concepts: • Focus on relevant details within a problem. • Create plans and procedures to logically order events, steps or ideas to solve problems. • Decompose a complex problem into manageable parts.

MA.K12.MTR.5.1:	• Relate previously learned concepts to new concepts. • Look for similarities among problems. • Connect solutions of problems to more complicated large-scale situations. **Clarifications:** Teachers who encourage students to use patterns and structure to help understand and connect mathematical concepts: • Help students recognize the patterns in the world around them and connect these patterns to mathematical concepts. • Support students to develop generalizations based on the similarities found among problems. • Provide opportunities for students to create plans and procedures to solve problems. • Develop students' ability to construct relationships between their current understanding and more sophisticated ways of thinking.
MA.K12.MTR.6.1:	Assess the reasonableness of solutions. Mathematicians who assess the reasonableness of solutions: • Estimate to discover possible solutions. • Use benchmark quantities to determine if a solution makes sense. • Check calculations when solving problems. • Verify possible solutions by explaining the methods used. • Evaluate results based on the given context. **Clarifications:** Teachers who encourage students to assess the reasonableness of solutions: • Have students estimate or predict solutions prior to solving. • Prompt students to continually ask, "Does this solution make sense? How do you know?" • Reinforce that students check their work as they progress within and after a task. • Strengthen students' ability to verify solutions through justifications.
MA.K12.MTR.7.1:	Apply mathematics to real-world contexts. Mathematicians who apply mathematics to real-world contexts: • Connect mathematical concepts to everyday experiences. • Use models and methods to understand, represent and solve problems. • Perform investigations to gather data or determine if a method is appropriate. • Redesign models and methods to improve accuracy or efficiency. **Clarifications:** Teachers who encourage students to apply mathematics to real-world contexts: • Provide opportunities for students to create models, both concrete and abstract, and perform investigations. • Challenge students to question the accuracy of their models and methods. • Support students as they validate conclusions by comparing them to the given situation. • Indicate how various concepts can be applied to other disciplines.
ELA.K12.EE.1.1:	Cite evidence to explain and justify reasoning. **Clarifications:** K-1 Students include textual evidence in their oral communication with guidance and support from adults. The evidence can consist of details from the text without naming the text. During 1st grade, students learn how to incorporate the evidence in their writing. 2-3 Students include relevant textual evidence in their written and oral communication. Students should name the text when they refer to it. In 3rd grade, students should use a combination of direct and indirect citations. 4-5 Students continue with previous skills and reference comments made by speakers and peers. Students cite texts that they've directly quoted, paraphrased, or used for information. When writing, students will use the form of citation dictated by the instructor or the style guide referenced by the instructor. 6-8 Students continue with previous skills and use a style guide to create a proper citation. 9-12 Students continue with previous skills and should be aware of existing style guides and the ways in which they differ.
ELA.K12.EE.2.1:	Read and comprehend grade-level complex texts proficiently. **Clarifications:** See Text Complexity for grade-level complexity bands and a text complexity rubric.
ELA.K12.EE.3.1:	Make inferences to support comprehension. **Clarifications:** Students will make inferences before the words infer or inference are introduced. Kindergarten students will answer questions like "Why is the girl smiling?" or make predictions about what will happen based on the title page. Students will use the terms and apply them in 2nd grade and beyond.
ELA.K12.EE.4.1:	Use appropriate collaborative techniques and active listening skills when engaging in discussions in a variety of situations. **Clarifications:** In kindergarten, students learn to listen to one another respectfully. In grades 1-2, students build upon these skills by justifying what they are thinking. For example: "I think _____ because _____." The collaborative conversations are becoming academic conversations. In grades 3-12, students engage in academic conversations discussing claims and justifying their reasoning, refining and applying skills. Students build on ideas, propel the conversation, and support claims and counterclaims with evidence.
ELA.K12.EE.5.1:	Use the accepted rules governing a specific format to create quality work. **Clarifications:** Students will incorporate skills learned into work products to produce quality work. For students to incorporate these skills appropriately, they must receive instruction. A 3rd grade student creating a poster board display must have instruction in how to effectively present information to do quality work.

ELA.K12.EE.6.1:	Use appropriate voice and tone when speaking or writing. **Clarifications:** In kindergarten and 1st grade, students learn the difference between formal and informal language. For example, the way we talk to our friends differs from the way we speak to adults. In 2nd grade and beyond, students practice appropriate social and academic language to discuss texts.
DA.912.S.2.1:	Sustain focused attention, respect, and discipline during class, rehearsal, and performance.
ELD.K12.ELL.SI.1:	English language learners communicate for social and instructional purposes within the school setting.

General Course Information and Notes

VERSION DESCRIPTION

Students with considerable experience broaden their guitar skills and knowledge, adding left- and right-hand techniques and stylistic nuances; work with classical etudes and ensemble performance literature; and become familiar with modes and jazz chords. Guitarists extend their reading and theory skills and add to their knowledge of significant musicians through history. In keeping with the rigor expected in an Honors course, students undertake independent study that includes synthesis of learning and experience. Public performances may serve as a culmination of specific instructional goals. Students may be required to attend and/or participate in rehearsals and performances outside the school day to support, extend, and assess learning in the classroom. This course may also require students to obtain a musical instrument (e.g., borrow, rent, purchase) from an outside source.

GENERAL NOTES

Honors and Advanced Level Course Note: Advanced courses require a greater demand on students through increased academic rigor. Academic rigor is obtained through the application, analysis, evaluation, and creation of complex ideas that are often abstract and multi-faceted. Students are challenged to think and collaborate critically on the content they are learning. Honors level rigor will be achieved by increasing text complexity through text selection, focus on high-level qualitative measures, and complexity of task. Instruction will be structured to give students a deeper understanding of conceptual themes and organization within and across disciplines. Academic rigor is more than simply assigning to students a greater quantity of work.

Florida's Benchmarks for Excellent Student Thinking (B.E.S.T.) Standards
This course includes Florida's B.E.S.T. ELA Expectations (EE) and Mathematical Thinking and Reasoning Standards (MTRs) for students. Florida educators should intentionally embed these standards within the content and their instruction as applicable. For guidance on the implementation of the EEs and MTRs, please visit cpalms.org/Standards/BEST_Standards.aspx and select the appropriate B.E.S.T. Standards package.

English Language Development ELD Standards Special Notes Section:
Teachers are required to provide listening, speaking, reading and writing instruction that allows English language learners (ELL) to communicate for social and instructional purposes within the school setting. For the given level of English language proficiency and with visual, graphic, or interactive support, students will interact with grade level words, expressions, sentences and discourse to process or produce language necessary for academic success. The ELD standard should specify a relevant content area concept or topic of study chosen by curriculum developers and teachers which maximizes an ELL's need for communication and social skills. To access an ELL supporting document which delineates performance definitions and descriptors, please click on the following link: cpalms.org/uploads/docs/standards/eld/SI.pdf

GENERAL INFORMATION

Course Number: 1301350

Course Path: Section: Grades PreK to 12 Education Courses > **Grade Group:** Grades 9 to 12 and Adult Education Courses > **Subject:** Music Education > **SubSubject:** Instrumental Music >

Abbreviated Title: GUITAR 4 HONORS

Number of Credits: One (1) credit

Course Length: Year (Y)

Course Attributes:

- Honors

Course Type: Core Academic Course

Course Level: 3

Course Status: Draft - Course Pending Approval

Grade Level(s): 9,10,11,12

Graduation Requirement: Performing/Fine Arts

Educator Certifications

Music (Elementary and Secondary Grades K-12)
Vocal Music (Elementary and Secondary Grades K-12)
Instrumental Music (Secondary Grades 7-12)
Instrumental Music (Elementary and Secondary Grades K-12)

Keyboard 1 (#1301360) 2022 - And Beyond

Course Standards

Name	Description
MU.912.C.1.1:	Apply listening strategies to promote appreciation and understanding of unfamiliar musical works. **Clarifications:** e.g., listening maps, active listening, checklists
MU.912.C.2.1:	Evaluate and make appropriate adjustments to personal performance in solo and ensembles.
MU.912.C.2.2:	Evaluate performance quality in recorded and/or live performances.
MU.912.C.3.1:	Make critical evaluations, based on exemplary models, of the quality and effectiveness of performances and apply the criteria to personal development in music.
MU.912.F.1.1:	Analyze and evaluate the effect of "traditional" and contemporary technologies on the development of music.
MU.912.F.3.2:	Summarize copyright laws that govern printed, recorded, and on-line music to promote legal and responsible use of intellectual property and technology.
MU.912.F.3.3:	Define, prioritize, monitor, and successfully complete tasks related to individual musical performance or project presentation, without direct oversight, demonstrating skills for use in the workplace.
MU.912.H.1.1:	Investigate and discuss how a culture's traditions are reflected through its music. **Clarifications:** e.g., patriotic, folk, celebration, entertainment, spiritual
MU.912.H.1.2:	Compare the work of, and influences on, two or more exemplary composers in the performance medium studied in class. **Clarifications:** e.g., vocal, instrumental, guitar, keyboard, electronic, handbells
MU.912.H.1.5:	Analyze music within cultures to gain understanding of authentic performance practices.
MU.912.H.3.1:	Apply knowledge of science, math, and music to demonstrate, through an acoustic or digital performance medium, how sound production affects musical performance. **Clarifications:** e.g., acoustics, sound amplification, materials, mechanics
MU.912.O.1.1:	Evaluate the organizational principles and conventions in musical works and discuss their effect on structure. **Clarifications:** e.g., rhythm, melody, timbre, form, tonality, harmony, texture; solo, chamber ensemble, large ensemble
MU.912.O.3.2:	Interpret and perform expressive elements indicated by the musical score and/or conductor.
MU.912.S.1.1:	Improvise rhythmic and melodic phrases over harmonic progressions. **Clarifications:** e.g., using text or scat syllables
MU.912.S.1.3:	Arrange a musical work by manipulating two or more aspects of the composition. **Clarifications:** e.g., texture, mode, form, tempo, voicing
MU.912.S.3.1:	Synthesize a broad range of musical skills by performing a varied repertoire with expression, appropriate stylistic interpretation, technical accuracy, and kinesthetic energy.
MU.912.S.3.4:	Analyze and describe the effect of rehearsal sessions and/or strategies on refinement of skills and techniques.
MU.912.S.3.5:	Develop and demonstrate proper vocal or instrumental technique. **Clarifications:** e.g., posture, breathing, fingering, embouchure, bow technique, tuning, strumming
MA.K12.MTR.1.1:	Mathematicians who participate in effortful learning both individually and with others: • Analyze the problem in a way that makes sense given the task. • Ask questions that will help with solving the task. • Build perseverance by modifying methods as needed while solving a challenging task. • Stay engaged and maintain a positive mindset when working to solve tasks. • Help and support each other when attempting a new method or approach. **Clarifications:** Teachers who encourage students to participate actively in effortful learning both individually and with others: • Cultivate a community of growth mindset learners. • Foster perseverance in students by choosing tasks that are challenging. • Develop students' ability to analyze and problem solve. • Recognize students' effort when solving challenging problems.
	Demonstrate understanding by representing problems in multiple ways. Mathematicians who demonstrate understanding by representing problems in multiple ways: • Build understanding through modeling and using manipulatives. • Represent solutions to problems in multiple ways using objects, drawings, tables, graphs and equations. • Progress from modeling problems with objects and drawings to using algorithms and equations.

- Express connections between concepts and representations.

MA.K12.MTR.2.1:

- Choose a representation based on the given context or purpose.

Clarifications:
Teachers who encourage students to demonstrate understanding by representing problems in multiple ways:

- Help students make connections between concepts and representations.
- Provide opportunities for students to use manipulatives when investigating concepts.
- Guide students from concrete to pictorial to abstract representations as understanding progresses.
- Show students that various representations can have different purposes and can be useful in different situations.

Complete tasks with mathematical fluency.
Mathematicians who complete tasks with mathematical fluency:

- Select efficient and appropriate methods for solving problems within the given context.
- Maintain flexibility and accuracy while performing procedures and mental calculations.
- Complete tasks accurately and with confidence.
- Adapt procedures to apply them to a new context.

MA.K12.MTR.3.1:

- Use feedback to improve efficiency when performing calculations.

Clarifications:
Teachers who encourage students to complete tasks with mathematical fluency:

- Provide students with the flexibility to solve problems by selecting a procedure that allows them to solve efficiently and accurately.
- Offer multiple opportunities for students to practice efficient and generalizable methods.
- Provide opportunities for students to reflect on the method they used and determine if a more efficient method could have been used.

Engage in discussions that reflect on the mathematical thinking of self and others.
Mathematicians who engage in discussions that reflect on the mathematical thinking of self and others:

- Communicate mathematical ideas, vocabulary and methods effectively.
- Analyze the mathematical thinking of others.
- Compare the efficiency of a method to those expressed by others.
- Recognize errors and suggest how to correctly solve the task.
- Justify results by explaining methods and processes.

MA.K12.MTR.4.1:

- Construct possible arguments based on evidence.

Clarifications:
Teachers who encourage students to engage in discussions that reflect on the mathematical thinking of self and others:

- Establish a culture in which students ask questions of the teacher and their peers, and error is an opportunity for learning.
- Create opportunities for students to discuss their thinking with peers.
- Select, sequence and present student work to advance and deepen understanding of correct and increasingly efficient methods.
- Develop students' ability to justify methods and compare their responses to the responses of their peers.

Use patterns and structure to help understand and connect mathematical concepts.
Mathematicians who use patterns and structure to help understand and connect mathematical concepts:

- Focus on relevant details within a problem.
- Create plans and procedures to logically order events, steps or ideas to solve problems.
- Decompose a complex problem into manageable parts.
- Relate previously learned concepts to new concepts.
- Look for similarities among problems.

MA.K12.MTR.5.1:

- Connect solutions of problems to more complicated large-scale situations.

Clarifications:
Teachers who encourage students to use patterns and structure to help understand and connect mathematical concepts:

- Help students recognize the patterns in the world around them and connect these patterns to mathematical concepts.
- Support students to develop generalizations based on the similarities found among problems.
- Provide opportunities for students to create plans and procedures to solve problems.
- Develop students' ability to construct relationships between their current understanding and more sophisticated ways of thinking.

Assess the reasonableness of solutions.
Mathematicians who assess the reasonableness of solutions:

- Estimate to discover possible solutions.
- Use benchmark quantities to determine if a solution makes sense.
- Check calculations when solving problems.
- Verify possible solutions by explaining the methods used.

MA.K12.MTR.6.1:

- Evaluate results based on the given context.

Clarifications:
Teachers who encourage students to assess the reasonableness of solutions:

- Have students estimate or predict solutions prior to solving.
- Prompt students to continually ask, "Does this solution make sense? How do you know?"
- Reinforce that students check their work as they progress within and after a task.
- Strengthen students' ability to verify solutions through justifications.

Apply mathematics to real-world contexts.
Mathematicians who apply mathematics to real-world contexts:

- Connect mathematical concepts to everyday experiences.
- Use models and methods to understand, represent and solve problems.

MA.K12.MTR.7.1:	• Perform investigations to gather data or determine if a method is appropriate. • Redesign models and methods to improve accuracy or efficiency. **Clarifications:** Teachers who encourage students to apply mathematics to real-world contexts: • Provide opportunities for students to create models, both concrete and abstract, and perform investigations. • Challenge students to question the accuracy of their models and methods. • Support students as they validate conclusions by comparing them to the given situation. • Indicate how various concepts can be applied to other disciplines.
ELA.K12.EE.1.1:	Cite evidence to explain and justify reasoning. **Clarifications:** K-1 Students include textual evidence in their oral communication with guidance and support from adults. The evidence can consist of details from the text without naming the text. During 1st grade, students learn how to incorporate the evidence in their writing. 2-3 Students include relevant textual evidence in their written and oral communication. Students should name the text when they refer to it. In 3rd grade, students should use a combination of direct and indirect citations. 4-5 Students continue with previous skills and reference comments made by speakers and peers. Students cite texts that they've directly quoted, paraphrased, or used for information. When writing, students will use the form of citation dictated by the instructor or the style guide referenced by the instructor. 6-8 Students continue with previous skills and use a style guide to create a proper citation. 9-12 Students continue with previous skills and should be aware of existing style guides and the ways in which they differ.
ELA.K12.EE.2.1:	Read and comprehend grade-level complex texts proficiently. **Clarifications:** See Text Complexity for grade-level complexity bands and a text complexity rubric.
ELA.K12.EE.3.1:	Make inferences to support comprehension. **Clarifications:** Students will make inferences before the words infer or inference are introduced. Kindergarten students will answer questions like "Why is the girl smiling?" or make predictions about what will happen based on the title page. Students will use the terms and apply them in 2nd grade and beyond.
ELA.K12.EE.4.1:	Use appropriate collaborative techniques and active listening skills when engaging in discussions in a variety of situations. **Clarifications:** In kindergarten, students learn to listen to one another respectfully. In grades 1-2, students build upon these skills by justifying what they are thinking. For example: "I think _____ because _____." The collaborative conversations are becoming academic conversations. In grades 3-12, students engage in academic conversations discussing claims and justifying their reasoning, refining and applying skills. Students build on ideas, propel the conversation, and support claims and counterclaims with evidence.
ELA.K12.EE.5.1:	Use the accepted rules governing a specific format to create quality work. **Clarifications:** Students will incorporate skills learned into work products to produce quality work. For students to incorporate these skills appropriately, they must receive instruction. A 3rd grade student creating a poster board display must have instruction in how to effectively present information to do quality work.
ELA.K12.EE.6.1:	Use appropriate voice and tone when speaking or writing. **Clarifications:** In kindergarten and 1st grade, students learn the difference between formal and informal language. For example, the way we talk to our friends differs from the way we speak to adults. In 2nd grade and beyond, students practice appropriate social and academic language to discuss texts.
DA.912.S.2.1:	Sustain focused attention, respect, and discipline during class, rehearsal, and performance.
ELD.K12.ELL.SI.1:	English language learners communicate for social and instructional purposes within the school setting.

General Course Information and Notes

VERSION DESCRIPTION

Students build fundamental piano techniques while learning to read music, acquire and apply knowledge of basic music theory, and explore the role of keyboard music in history and culture. Beginning pianists develop skills in analytical listening and explore musical creativity in the form of basic improvisation and basic composition. Public performances may serve as a culmination of specific instructional goals. Students may be required to attend and/or participate in rehearsals and performances outside the school day to support, extend, and assess learning in the classroom.

GENERAL NOTES

Florida's Benchmarks for Excellent Student Thinking (B.E.S.T.) Standards
This course includes Florida's B.E.S.T. ELA Expectations (EE) and Mathematical Thinking and Reasoning Standards (MTRs) for students. Florida educators should intentionally embed these standards within the content and their instruction as applicable. For guidance on the implementation of the EEs and MTRs, please visit cpalms.org/Standards/BEST_Standards.aspx and select the appropriate B.E.S.T. Standards package.

English Language Development ELD Standards Special Notes Section:

Teachers are required to provide listening, speaking, reading and writing instruction that allows English language learners (ELL) to communicate for social and instructional purposes within the school setting. For the given level of English language proficiency and with visual, graphic, or interactive support, students will interact with grade level words, expressions, sentences and discourse to process or produce language necessary for academic success. The ELD standard should specify a relevant content area concept or topic of study chosen by curriculum developers and teachers which maximizes an ELL's need for communication and social skills. To access an ELL supporting document which delineates performance definitions and descriptors, please click on the following link: cpalms.org/uploads/docs/standards/eld/SI.pdf

GENERAL INFORMATION

Course Number: 1301360

Course Path: Section: Grades PreK to 12 Education Courses > **Grade Group:** Grades 9 to 12 and Adult Education Courses > **Subject:** Music Education > **SubSubject:** Instrumental Music >

Abbreviated Title: KEYBD 1

Number of Credits: One (1) credit

Course Length: Year (Y)

Course Type: Core Academic Course

Course Level: 2

Course Status: Draft - Course Pending Approval

Grade Level(s): 9,10,11,12

Graduation Requirement: Performing/Fine Arts

Educator Certifications

Music (Elementary and Secondary Grades K-12)
Vocal Music (Elementary and Secondary Grades K-12)
Instrumental Music (Secondary Grades 7-12)
Instrumental Music (Elementary and Secondary Grades K-12)

Keyboard 2 (#1301370) 2022 - And Beyond

Course Standards

Name	Description
MU.912.C.1.1:	Apply listening strategies to promote appreciation and understanding of unfamiliar musical works. **Clarifications:** e.g., listening maps, active listening, checklists
MU.912.C.1.2:	Compare, using correct music vocabulary, the aesthetic impact of two or more performances of a musical work to one's own hypothesis of the composer's intent. **Clarifications:** e.g., quality recordings, individual and peer-group performances, composer notes, instrumentation, expressive elements, title
MU.912.C.2.1:	Evaluate and make appropriate adjustments to personal performance in solo and ensembles.
MU.912.C.2.2:	Evaluate performance quality in recorded and/or live performances.
MU.912.C.3.1:	Make critical evaluations, based on exemplary models, of the quality and effectiveness of performances and apply the criteria to personal development in music.
MU.912.F.1.1:	Analyze and evaluate the effect of "traditional" and contemporary technologies on the development of music.
MU.912.F.3.2:	Summarize copyright laws that govern printed, recorded, and on-line music to promote legal and responsible use of intellectual property and technology.
MU.912.F.3.3:	Define, prioritize, monitor, and successfully complete tasks related to individual musical performance or project presentation, without direct oversight, demonstrating skills for use in the workplace.
MU.912.F.3.4:	Design and implement a personal learning plan, related to the study of music, which demonstrates self-assessment, brain-storming, decision-making, and initiative to advance skills and/or knowledge.
MU.912.H.1.1:	Investigate and discuss how a culture's traditions are reflected through its music. **Clarifications:** e.g., patriotic, folk, celebration, entertainment, spiritual
MU.912.H.1.2:	Compare the work of, and influences on, two or more exemplary composers in the performance medium studied in class. **Clarifications:** e.g., vocal, instrumental, guitar, keyboard, electronic, handbells
MU.912.H.1.3:	Compare two or more works of a composer across performance media. **Clarifications:** e.g., orchestral and choral; guitar and string quartet; piano solo and piano concerto
MU.912.H.1.5:	Analyze music within cultures to gain understanding of authentic performance practices.
MU.912.H.2.4:	Examine the effects of developing technology on composition, performance, and acquisition of music.
MU.912.H.3.1:	Apply knowledge of science, math, and music to demonstrate, through an acoustic or digital performance medium, how sound production affects musical performance. **Clarifications:** e.g., acoustics, sound amplification, materials, mechanics
MU.912.O.1.1:	Evaluate the organizational principles and conventions in musical works and discuss their effect on structure. **Clarifications:** e.g., rhythm, melody, timbre, form, tonality, harmony, texture; solo, chamber ensemble, large ensemble
MU.912.O.3.2:	Interpret and perform expressive elements indicated by the musical score and/or conductor.
MU.912.S.1.1:	Improvise rhythmic and melodic phrases over harmonic progressions. **Clarifications:** e.g., using text or scat syllables
MU.912.S.1.2:	Compose music for voices and/or acoustic, digital, or electronic instruments.
MU.912.S.1.3:	Arrange a musical work by manipulating two or more aspects of the composition. **Clarifications:** e.g., texture, mode, form, tempo, voicing
MU.912.S.1.4:	Perform and notate, independently and accurately, melodies by ear. **Clarifications:** e.g., singing, playing, writing
MU.912.S.2.1:	Apply the ability to memorize and internalize musical structure, accurate and expressive details, and processing skills to the creation or performance of music literature. **Clarifications:** e.g., memorization, sequential process
MU.912.S.3.1:	Synthesize a broad range of musical skills by performing a varied repertoire with expression, appropriate stylistic interpretation, technical accuracy, and kinesthetic energy.
MU.912.S.3.4:	Analyze and describe the effect of rehearsal sessions and/or strategies on refinement of skills and techniques.
MU.912.S.3.5:	Develop and demonstrate proper vocal or instrumental technique. **Clarifications:**

e.g., posture, breathing, fingering, embouchure, bow technique, tuning, strumming

MA.K12.MTR.1.1:

Mathematicians who participate in effortful learning both individually and with others:

- Analyze the problem in a way that makes sense given the task.
- Ask questions that will help with solving the task.
- Build perseverance by modifying methods as needed while solving a challenging task.
- Stay engaged and maintain a positive mindset when working to solve tasks.
- Help and support each other when attempting a new method or approach.

Clarifications:

Teachers who encourage students to participate actively in effortful learning both individually and with others:

- Cultivate a community of growth mindset learners.
- Foster perseverance in students by choosing tasks that are challenging.
- Develop students' ability to analyze and problem solve.
- Recognize students' effort when solving challenging problems.

MA.K12.MTR.2.1:

Demonstrate understanding by representing problems in multiple ways.

Mathematicians who demonstrate understanding by representing problems in multiple ways:

- Build understanding through modeling and using manipulatives.
- Represent solutions to problems in multiple ways using objects, drawings, tables, graphs and equations.
- Progress from modeling problems with objects and drawings to using algorithms and equations.
- Express connections between concepts and representations.
- Choose a representation based on the given context or purpose.

Clarifications:

Teachers who encourage students to demonstrate understanding by representing problems in multiple ways:

- Help students make connections between concepts and representations.
- Provide opportunities for students to use manipulatives when investigating concepts.
- Guide students from concrete to pictorial to abstract representations as understanding progresses.
- Show students that various representations can have different purposes and can be useful in different situations.

MA.K12.MTR.3.1:

Complete tasks with mathematical fluency.

Mathematicians who complete tasks with mathematical fluency:

- Select efficient and appropriate methods for solving problems within the given context.
- Maintain flexibility and accuracy while performing procedures and mental calculations.
- Complete tasks accurately and with confidence.
- Adapt procedures to apply them to a new context.
- Use feedback to improve efficiency when performing calculations.

Clarifications:

Teachers who encourage students to complete tasks with mathematical fluency:

- Provide students with the flexibility to solve problems by selecting a procedure that allows them to solve efficiently and accurately.
- Offer multiple opportunities for students to practice efficient and generalizable methods.
- Provide opportunities for students to reflect on the method they used and determine if a more efficient method could have been used.

MA.K12.MTR.4.1:

Engage in discussions that reflect on the mathematical thinking of self and others.

Mathematicians who engage in discussions that reflect on the mathematical thinking of self and others:

- Communicate mathematical ideas, vocabulary and methods effectively.
- Analyze the mathematical thinking of others.
- Compare the efficiency of a method to those expressed by others.
- Recognize errors and suggest how to correctly solve the task.
- Justify results by explaining methods and processes.
- Construct possible arguments based on evidence.

Clarifications:

Teachers who encourage students to engage in discussions that reflect on the mathematical thinking of self and others:

- Establish a culture in which students ask questions of the teacher and their peers, and error is an opportunity for learning.
- Create opportunities for students to discuss their thinking with peers.
- Select, sequence and present student work to advance and deepen understanding of correct and increasingly efficient methods.
- Develop students' ability to justify methods and compare their responses to the responses of their peers.

MA.K12.MTR.5.1:

Use patterns and structure to help understand and connect mathematical concepts.

Mathematicians who use patterns and structure to help understand and connect mathematical concepts:

- Focus on relevant details within a problem.
- Create plans and procedures to logically order events, steps or ideas to solve problems.
- Decompose a complex problem into manageable parts.
- Relate previously learned concepts to new concepts.
- Look for similarities among problems.
- Connect solutions of problems to more complicated large-scale situations.

Clarifications:

Teachers who encourage students to use patterns and structure to help understand and connect mathematical concepts:

- Help students recognize the patterns in the world around them and connect these patterns to mathematical concepts.
- Support students to develop generalizations based on the similarities found among problems.
- Provide opportunities for students to create plans and procedures to solve problems.
- Develop students' ability to construct relationships between their current understanding and more sophisticated ways of thinking.

MA.K12.MTR.6.1:	Assess the reasonableness of solutions. Mathematicians who assess the reasonableness of solutions: • Estimate to discover possible solutions. • Use benchmark quantities to determine if a solution makes sense. • Check calculations when solving problems. • Verify possible solutions by explaining the methods used. • Evaluate results based on the given context. **Clarifications:** Teachers who encourage students to assess the reasonableness of solutions: • Have students estimate or predict solutions prior to solving. • Prompt students to continually ask, "Does this solution make sense? How do you know?" • Reinforce that students check their work as they progress within and after a task. • Strengthen students' ability to verify solutions through justifications.
MA.K12.MTR.7.1:	Apply mathematics to real-world contexts. Mathematicians who apply mathematics to real-world contexts: • Connect mathematical concepts to everyday experiences. • Use models and methods to understand, represent and solve problems. • Perform investigations to gather data or determine if a method is appropriate. • Redesign models and methods to improve accuracy or efficiency. **Clarifications:** Teachers who encourage students to apply mathematics to real-world contexts: • Provide opportunities for students to create models, both concrete and abstract, and perform investigations. • Challenge students to question the accuracy of their models and methods. • Support students as they validate conclusions by comparing them to the given situation. • Indicate how various concepts can be applied to other disciplines.
ELA.K12.EE.1.1:	Cite evidence to explain and justify reasoning. **Clarifications:** K-1 Students include textual evidence in their oral communication with guidance and support from adults. The evidence can consist of details from the text without naming the text. During 1st grade, students learn how to incorporate the evidence in their writing. 2-3 Students include relevant textual evidence in their written and oral communication. Students should name the text when they refer to it. In 3rd grade, students should use a combination of direct and indirect citations. 4-5 Students continue with previous skills and reference comments made by speakers and peers. Students cite texts that they've directly quoted, paraphrased, or used for information. When writing, students will use the form of citation dictated by the instructor or the style guide referenced by the instructor. 6-8 Students continue with previous skills and use a style guide to create a proper citation. 9-12 Students continue with previous skills and should be aware of existing style guides and the ways in which they differ.
ELA.K12.EE.2.1:	Read and comprehend grade-level complex texts proficiently. **Clarifications:** See Text Complexity for grade-level complexity bands and a text complexity rubric.
ELA.K12.EE.3.1:	Make inferences to support comprehension. **Clarifications:** Students will make inferences before the words infer or inference are introduced. Kindergarten students will answer questions like "Why is the girl smiling?" or make predictions about what will happen based on the title page. Students will use the terms and apply them in 2nd grade and beyond.
ELA.K12.EE.4.1:	Use appropriate collaborative techniques and active listening skills when engaging in discussions in a variety of situations. **Clarifications:** In kindergarten, students learn to listen to one another respectfully. In grades 1-2, students build upon these skills by justifying what they are thinking. For example: "I think _____ because _____." The collaborative conversations are becoming academic conversations. In grades 3-12, students engage in academic conversations discussing claims and justifying their reasoning, refining and applying skills. Students build on ideas, propel the conversation, and support claims and counterclaims with evidence.
ELA.K12.EE.5.1:	Use the accepted rules governing a specific format to create quality work. **Clarifications:** Students will incorporate skills learned into work products to produce quality work. For students to incorporate these skills appropriately, they must receive instruction. A 3rd grade student creating a poster board display must have instruction in how to effectively present information to do quality work.
ELA.K12.EE.6.1:	Use appropriate voice and tone when speaking or writing. **Clarifications:** In kindergarten and 1st grade, students learn the difference between formal and informal language. For example, the way we talk to our friends differs from the way we speak to adults. In 2nd grade and beyond, students practice appropriate social and academic language to discuss texts.
DA.912.S.2.1:	Sustain focused attention, respect, and discipline during class, rehearsal, and performance.
ELD.K12.ELL.SI.1:	English language learners communicate for social and instructional purposes within the school setting.

General Course Information and Notes

VERSION DESCRIPTION

Students build on previous piano techniques and skills through reading music, acquiring and applying knowledge of music theory, and exploring the role of keyboard music in history and culture. Students learn repertoire from various styles and time periods, exploring the historical influence keyboards have had on music performance and composition. Students explore the basic tools of music technology (i.e., MIDI keyboards). Public performances may serve as a culmination of specific instructional goals. Students may be required to attend and/or participate in rehearsals and performances outside the school day to support, extend, and assess learning in the classroom.

GENERAL NOTES

Florida's Benchmarks for Excellent Student Thinking (B.E.S.T.) Standards
This course includes Florida's B.E.S.T. ELA Expectations (EE) and Mathematical Thinking and Reasoning Standards (MTRs) for students. Florida educators should intentionally embed these standards within the content and their instruction as applicable. For guidance on the implementation of the EEs and MTRs, please visit cpalms.org/Standards/BEST_Standards.aspx and select the appropriate B.E.S.T. Standards package.

English Language Development ELD Standards Special Notes Section:
Teachers are required to provide listening, speaking, reading and writing instruction that allows English language learners (ELL) to communicate for social and instructional purposes within the school setting. For the given level of English language proficiency and with visual, graphic, or interactive support, students will interact with grade level words, expressions, sentences and discourse to process or produce language necessary for academic success. The ELD standard should specify a relevant content area concept or topic of study chosen by curriculum developers and teachers which maximizes an ELL's need for communication and social skills. To access an ELL supporting document which delineates performance definitions and descriptors, please click on the following link: cpalms.org/uploads/docs/standards/eld/SI.pdf

GENERAL INFORMATION

Course Number: 1301370

Course Path: Section: Grades PreK to 12 Education Courses > **Grade Group:** Grades 9 to 12 and Adult Education Courses > **Subject:** Music Education > **SubSubject:** Instrumental Music > **Abbreviated Title:** KEYBD 2

Number of Credits: One (1) credit

Course Length: Year (Y)

Course Type: Core Academic Course

Course Level: 2

Course Status: Draft - Course Pending Approval

Grade Level(s): 9,10,11,12

Graduation Requirement: Performing/Fine Arts

Educator Certifications

Music (Elementary and Secondary Grades K-12)
Vocal Music (Elementary and Secondary Grades K-12)
Instrumental Music (Secondary Grades 7-12)
Instrumental Music (Elementary and Secondary Grades K-12)

Keyboard 3 (#1301380) 2022 - And Beyond

Course Standards

Name	Description
MU.912.C.1.1:	Apply listening strategies to promote appreciation and understanding of unfamiliar musical works. **Clarifications:** e.g., listening maps, active listening, checklists
MU.912.C.1.2:	Compare, using correct music vocabulary, the aesthetic impact of two or more performances of a musical work to one's own hypothesis of the composer's intent. **Clarifications:** e.g., quality recordings, individual and peer-group performances, composer notes, instrumentation, expressive elements, title
MU.912.C.2.1:	Evaluate and make appropriate adjustments to personal performance in solo and ensembles.
MU.912.C.2.2:	Evaluate performance quality in recorded and/or live performances.
MU.912.C.2.3:	Evaluate one's own or other's compositions and/or improvisations and generate improvements independently or cooperatively.
MU.912.C.3.1:	Make critical evaluations, based on exemplary models, of the quality and effectiveness of performances and apply the criteria to personal development in music.
MU.912.F.1.1:	Analyze and evaluate the effect of "traditional" and contemporary technologies on the development of music.
MU.912.F.2.1:	Design or refine a résumé for application to higher education or the workforce that highlights marketable skills and knowledge gained through music training. **Clarifications:** e.g., repertoire lists, technology-based work, ability to research and analyze, and examples of leadership and collaborative skills
MU.912.F.3.1:	Analyze and describe how meeting one's responsibilities in music offers opportunities to develop leadership skills, and identify personal examples of leadership in school and/or non-school settings.
MU.912.F.3.2:	Summarize copyright laws that govern printed, recorded, and on-line music to promote legal and responsible use of intellectual property and technology.
MU.912.F.3.3:	Define, prioritize, monitor, and successfully complete tasks related to individual musical performance or project presentation, without direct oversight, demonstrating skills for use in the workplace.
MU.912.F.3.4:	Design and implement a personal learning plan, related to the study of music, which demonstrates self-assessment, brain-storming, decision-making, and initiative to advance skills and/or knowledge.
MU.912.H.1.1:	Investigate and discuss how a culture's traditions are reflected through its music. **Clarifications:** e.g., patriotic, folk, celebration, entertainment, spiritual
MU.912.H.1.2:	Compare the work of, and influences on, two or more exemplary composers in the performance medium studied in class. **Clarifications:** e.g., vocal, instrumental, guitar, keyboard, electronic, handbells
MU.912.H.1.3:	Compare two or more works of a composer across performance media. **Clarifications:** e.g., orchestral and choral; guitar and string quartet; piano solo and piano concerto
MU.912.H.1.5:	Analyze music within cultures to gain understanding of authentic performance practices.
MU.912.H.2.1:	Evaluate the social impact of music on specific historical periods.
MU.912.H.2.4:	Examine the effects of developing technology on composition, performance, and acquisition of music.
MU.912.H.3.1:	Apply knowledge of science, math, and music to demonstrate, through an acoustic or digital performance medium, how sound production affects musical performance. **Clarifications:** e.g., acoustics, sound amplification, materials, mechanics
MU.912.H.3.2:	Combine personal interest with skills and knowledge from a non-music class to explore, design, and present a music-based or music-enhanced topic of interest to demonstrate the ability to make transfers across contexts. **Clarifications:** e.g., music and health, Holocaust, tolerance, African American history, world languages, scientific research, data analysis, problem-solving, public speaking
MU.912.O.1.1:	Evaluate the organizational principles and conventions in musical works and discuss their effect on structure. **Clarifications:** e.g., rhythm, melody, timbre, form, tonality, harmony, texture; solo, chamber ensemble, large ensemble
MU.912.O.2.1:	Transfer accepted composition conventions and performance practices of a specific style to a contrasting style of music.
MU.912.O.3.2:	Interpret and perform expressive elements indicated by the musical score and/or conductor.
MU.912.S.1.1:	Improvise rhythmic and melodic phrases over harmonic progressions. **Clarifications:** e.g., using text or scat syllables
MU.912.S.1.2:	Compose music for voices and/or acoustic, digital, or electronic instruments.
MU.912.S.1.3:	Arrange a musical work by manipulating two or more aspects of the composition. **Clarifications:**

	e.g., texture, mode, form, tempo, voicing
MU.912.S.1.4:	Perform and notate, independently and accurately, melodies by ear. **Clarifications:** e.g., singing, playing, writing
MU.912.S.2.1:	Apply the ability to memorize and internalize musical structure, accurate and expressive details, and processing skills to the creation or performance of music literature. **Clarifications:** e.g., memorization, sequential process
MU.912.S.2.2:	Transfer expressive elements and performance techniques from one piece of music to another.
MU.912.S.3.1:	Synthesize a broad range of musical skills by performing a varied repertoire with expression, appropriate stylistic interpretation, technical accuracy, and kinesthetic energy.
MU.912.S.3.2:	Sight-read music accurately and expressively to show synthesis of skills. **Clarifications:** e.g., musical elements, expressive qualities, performance technique
MU.912.S.3.4:	Analyze and describe the effect of rehearsal sessions and/or strategies on refinement of skills and techniques.
MU.912.S.3.5:	Develop and demonstrate proper vocal or instrumental technique. **Clarifications:** e.g., posture, breathing, fingering, embouchure, bow technique, tuning, strumming
MA.K12.MTR.1.1:	Mathematicians who participate in effortful learning both individually and with others: • Analyze the problem in a way that makes sense given the task. • Ask questions that will help with solving the task. • Build perseverance by modifying methods as needed while solving a challenging task. • Stay engaged and maintain a positive mindset when working to solve tasks. • Help and support each other when attempting a new method or approach. **Clarifications:** Teachers who encourage students to participate actively in effortful learning both individually and with others: • Cultivate a community of growth mindset learners. • Foster perseverance in students by choosing tasks that are challenging. • Develop students' ability to analyze and problem solve. • Recognize students' effort when solving challenging problems.
MA.K12.MTR.2.1:	Demonstrate understanding by representing problems in multiple ways. Mathematicians who demonstrate understanding by representing problems in multiple ways: • Build understanding through modeling and using manipulatives. • Represent solutions to problems in multiple ways using objects, drawings, tables, graphs and equations. • Progress from modeling problems with objects and drawings to using algorithms and equations. • Express connections between concepts and representations. • Choose a representation based on the given context or purpose. **Clarifications:** Teachers who encourage students to demonstrate understanding by representing problems in multiple ways: • Help students make connections between concepts and representations. • Provide opportunities for students to use manipulatives when investigating concepts. • Guide students from concrete to pictorial to abstract representations as understanding progresses. • Show students that various representations can have different purposes and can be useful in different situations.
MA.K12.MTR.3.1:	Complete tasks with mathematical fluency. Mathematicians who complete tasks with mathematical fluency: • Select efficient and appropriate methods for solving problems within the given context. • Maintain flexibility and accuracy while performing procedures and mental calculations. • Complete tasks accurately and with confidence. • Adapt procedures to apply them to a new context. • Use feedback to improve efficiency when performing calculations. **Clarifications:** Teachers who encourage students to complete tasks with mathematical fluency: • Provide students with the flexibility to solve problems by selecting a procedure that allows them to solve efficiently and accurately. • Offer multiple opportunities for students to practice efficient and generalizable methods. • Provide opportunities for students to reflect on the method they used and determine if a more efficient method could have been used.
MA.K12.MTR.4.1:	Engage in discussions that reflect on the mathematical thinking of self and others. Mathematicians who engage in discussions that reflect on the mathematical thinking of self and others: • Communicate mathematical ideas, vocabulary and methods effectively. • Analyze the mathematical thinking of others. • Compare the efficiency of a method to those expressed by others. • Recognize errors and suggest how to correctly solve the task. • Justify results by explaining methods and processes. • Construct possible arguments based on evidence. **Clarifications:** Teachers who encourage students to engage in discussions that reflect on the mathematical thinking of self and others:

	• Establish a culture in which students ask questions of the teacher and their peers, and error is an opportunity for learning. • Create opportunities for students to discuss their thinking with peers. • Select, sequence and present student work to advance and deepen understanding of correct and increasingly efficient methods. • Develop students' ability to justify methods and compare their responses to the responses of their peers.
MA.K12.MTR.5.1:	Use patterns and structure to help understand and connect mathematical concepts. Mathematicians who use patterns and structure to help understand and connect mathematical concepts: • Focus on relevant details within a problem. • Create plans and procedures to logically order events, steps or ideas to solve problems. • Decompose a complex problem into manageable parts. • Relate previously learned concepts to new concepts. • Look for similarities among problems. • Connect solutions of problems to more complicated large-scale situations. **Clarifications:** Teachers who encourage students to use patterns and structure to help understand and connect mathematical concepts: • Help students recognize the patterns in the world around them and connect these patterns to mathematical concepts. • Support students to develop generalizations based on the similarities found among problems. • Provide opportunities for students to create plans and procedures to solve problems. • Develop students' ability to construct relationships between their current understanding and more sophisticated ways of thinking.
MA.K12.MTR.6.1:	Assess the reasonableness of solutions. Mathematicians who assess the reasonableness of solutions: • Estimate to discover possible solutions. • Use benchmark quantities to determine if a solution makes sense. • Check calculations when solving problems. • Verify possible solutions by explaining the methods used. • Evaluate results based on the given context. **Clarifications:** Teachers who encourage students to assess the reasonableness of solutions: • Have students estimate or predict solutions prior to solving. • Prompt students to continually ask, "Does this solution make sense? How do you know?" • Reinforce that students check their work as they progress within and after a task. • Strengthen students' ability to verify solutions through justifications.
MA.K12.MTR.7.1:	Apply mathematics to real-world contexts. Mathematicians who apply mathematics to real-world contexts: • Connect mathematical concepts to everyday experiences. • Use models and methods to understand, represent and solve problems. • Perform investigations to gather data or determine if a method is appropriate. • Redesign models and methods to improve accuracy or efficiency. **Clarifications:** Teachers who encourage students to apply mathematics to real-world contexts: • Provide opportunities for students to create models, both concrete and abstract, and perform investigations. • Challenge students to question the accuracy of their models and methods. • Support students as they validate conclusions by comparing them to the given situation. • Indicate how various concepts can be applied to other disciplines.
ELA.K12.EE.1.1:	Cite evidence to explain and justify reasoning. **Clarifications:** K-1 Students include textual evidence in their oral communication with guidance and support from adults. The evidence can consist of details from the text without naming the text. During 1st grade, students learn how to incorporate the evidence in their writing. 2-3 Students include relevant textual evidence in their written and oral communication. Students should name the text when they refer to it. In 3rd grade, students should use a combination of direct and indirect citations. 4-5 Students continue with previous skills and reference comments made by speakers and peers. Students cite texts that they've directly quoted, paraphrased, or used for information. When writing, students will use the form of citation dictated by the instructor or the style guide referenced by the instructor. 6-8 Students continue with previous skills and use a style guide to create a proper citation. 9-12 Students continue with previous skills and should be aware of existing style guides and the ways in which they differ.
ELA.K12.EE.2.1:	Read and comprehend grade-level complex texts proficiently. **Clarifications:** See Text Complexity for grade-level complexity bands and a text complexity rubric.
ELA.K12.EE.3.1:	Make inferences to support comprehension. **Clarifications:** Students will make inferences before the words infer or inference are introduced. Kindergarten students will answer questions like "Why is the girl smiling?" or make predictions about what will happen based on the title page. Students will use the terms and apply them in 2nd grade and beyond.
	Use appropriate collaborative techniques and active listening skills when engaging in discussions in a variety of situations. **Clarifications:** In kindergarten, students learn to listen to one another respectfully.

ELA.K12.EE.4.1:	In grades 1-2, students build upon these skills by justifying what they are thinking. For example: "I think _____ because _____." The collaborative conversations are becoming academic conversations. In grades 3-12, students engage in academic conversations discussing claims and justifying their reasoning, refining and applying skills. Students build on ideas, propel the conversation, and support claims and counterclaims with evidence.
ELA.K12.EE.5.1:	Use the accepted rules governing a specific format to create quality work. **Clarifications:** Students will incorporate skills learned into work products to produce quality work. For students to incorporate these skills appropriately, they must receive instruction. A 3rd grade student creating a poster board display must have instruction in how to effectively present information to do quality work.
ELA.K12.EE.6.1:	Use appropriate voice and tone when speaking or writing. **Clarifications:** In kindergarten and 1st grade, students learn the difference between formal and informal language. For example, the way we talk to our friends differs from the way we speak to adults. In 2nd grade and beyond, students practice appropriate social and academic language to discuss texts.
DA.912.S.2.1:	Sustain focused attention, respect, and discipline during class, rehearsal, and performance.
ELD.K12.ELL.SI.1:	English language learners communicate for social and instructional purposes within the school setting.

General Course Information and Notes

VERSION DESCRIPTION

Students further develop advanced knowledge of piano techniques, musical literacy, solo and ensemble performance skills, and related musical knowledge, using a variety of advanced piano literature. Students explore the historical influence keyboards have had on music performance and composition, and apply criteria to assess their own and others' piano performances. Students extend their knowledge of music technology (i.e., MIDI keyboards) and its connection to the computer and other sound-generating devices. Public performances may serve as a culmination of specific instructional goals. Students may be required to attend and/or participate in rehearsals and performances outside the school day to support, extend, and assess learning in the classroom.

GENERAL NOTES

Florida's Benchmarks for Excellent Student Thinking (B.E.S.T.) Standards
This course includes Florida's B.E.S.T. ELA Expectations (EE) and Mathematical Thinking and Reasoning Standards (MTRs) for students. Florida educators should intentionally embed these standards within the content and their instruction as applicable. For guidance on the implementation of the EEs and MTRs, please visit cpalms.org/Standards/BEST_Standards.aspx and select the appropriate B.E.S.T. Standards package.

English Language Development ELD Standards Special Notes Section:
Teachers are required to provide listening, speaking, reading and writing instruction that allows English language learners (ELL) to communicate for social and instructional purposes within the school setting. For the given level of English language proficiency and with visual, graphic, or interactive support, students will interact with grade level words, expressions, sentences and discourse to process or produce language necessary for academic success. The ELD standard should specify a relevant content area concept or topic of study chosen by curriculum developers and teachers which maximizes an ELL's need for communication and social skills. To access an ELL supporting document which delineates performance definitions and descriptors, please click on the following link: cpalms.org/uploads/docs/standards/eld/SI.pdf

GENERAL INFORMATION

Course Number: 1301380

Course Path: Section: Grades PreK to 12 Education Courses > **Grade Group:** Grades 9 to 12 and Adult Education Courses > **Subject:** Music Education > **SubSubject:** Instrumental Music > **Abbreviated Title:** KEYBD 3

Number of Credits: One (1) credit

Course Length: Year (Y)

Course Type: Core Academic Course

Course Level: 2

Course Status: Draft - Course Pending Approval

Grade Level(s): 9,10,11,12

Graduation Requirement: Performing/Fine Arts

Educator Certifications

Music (Elementary and Secondary Grades K-12)
Vocal Music (Elementary and Secondary Grades K-12)
Instrumental Music (Secondary Grades 7-12)
Instrumental Music (Elementary and Secondary Grades K-12)

Keyboard 4 Honors (#1301390) 2022 - And Beyond

Course Standards

Name	Description
MU.912.C.1.1:	Apply listening strategies to promote appreciation and understanding of unfamiliar musical works. **Clarifications:** e.g., listening maps, active listening, checklists
MU.912.C.1.2:	Compare, using correct music vocabulary, the aesthetic impact of two or more performances of a musical work to one's own hypothesis of the composer's intent. **Clarifications:** e.g., quality recordings, individual and peer-group performances, composer notes, instrumentation, expressive elements, title
MU.912.C.2.1:	Evaluate and make appropriate adjustments to personal performance in solo and ensembles.
MU.912.C.2.2:	Evaluate performance quality in recorded and/or live performances.
MU.912.C.2.3:	Evaluate one's own or other's compositions and/or improvisations and generate improvements independently or cooperatively.
MU.912.C.3.1:	Make critical evaluations, based on exemplary models, of the quality and effectiveness of performances and apply the criteria to personal development in music.
MU.912.F.1.1:	Analyze and evaluate the effect of "traditional" and contemporary technologies on the development of music.
MU.912.F.1.2:	Incorporate or adapt new, emerging, or previously unfamiliar technology to create an innovative composition, music project, or related product.
MU.912.F.2.1:	Design or refine a résumé for application to higher education or the workforce that highlights marketable skills and knowledge gained through music training. **Clarifications:** e.g., repertoire lists, technology-based work, ability to research and analyze, and examples of leadership and collaborative skills
MU.912.F.2.2:	Analyze the effect of the arts and entertainment industry on the economic and social health of communities and regions. **Clarifications:** e.g., community revitalization, industry choosing new locations, cultural and social enrichment
MU.912.F.2.3:	Compare the organizational structure of a professional orchestra, chorus, quintet, or other ensemble to that of a business. **Clarifications:** e.g., leadership, financial needs and structure, marketing, personnel matters, manager, travel
MU.912.F.3.1:	Analyze and describe how meeting one's responsibilities in music offers opportunities to develop leadership skills, and identify personal examples of leadership in school and/or non-school settings.
MU.912.F.3.2:	Summarize copyright laws that govern printed, recorded, and on-line music to promote legal and responsible use of intellectual property and technology.
MU.912.F.3.3:	Define, prioritize, monitor, and successfully complete tasks related to individual musical performance or project presentation, without direct oversight, demonstrating skills for use in the workplace.
MU.912.F.3.4:	Design and implement a personal learning plan, related to the study of music, which demonstrates self-assessment, brain-storming, decision-making, and initiative to advance skills and/or knowledge.
MU.912.H.1.1:	Investigate and discuss how a culture's traditions are reflected through its music. **Clarifications:** e.g., patriotic, folk, celebration, entertainment, spiritual
MU.912.H.1.2:	Compare the work of, and influences on, two or more exemplary composers in the performance medium studied in class. **Clarifications:** e.g., vocal, instrumental, guitar, keyboard, electronic, handbells
MU.912.H.1.3:	Compare two or more works of a composer across performance media. **Clarifications:** e.g., orchestral and choral; guitar and string quartet; piano solo and piano concerto
MU.912.H.1.4:	Analyze how Western music has been influenced by historical and current world cultures.
MU.912.H.1.5:	Analyze music within cultures to gain understanding of authentic performance practices.
MU.912.H.2.1:	Evaluate the social impact of music on specific historical periods.
MU.912.H.2.2:	Analyze current musical trends, including audience environments and music acquisition, to predict possible directions of music.
MU.912.H.2.3:	Analyze the evolution of a music genre. **Clarifications:** e.g., jazz, blues
MU.912.H.2.4:	Examine the effects of developing technology on composition, performance, and acquisition of music.
MU.912.H.3.1:	Apply knowledge of science, math, and music to demonstrate, through an acoustic or digital performance medium, how sound production affects musical performance. **Clarifications:** e.g., acoustics, sound amplification, materials, mechanics
MU.912.H.3.2:	Combine personal interest with skills and knowledge from a non-music class to explore, design, and present a music-based or music-enhanced topic of interest to demonstrate the ability to make transfers across contexts. **Clarifications:** e.g., music and health, Holocaust, tolerance, African American history, world languages, scientific research, data analysis, problem-solving, public

	speaking
MU.912.O.1.1:	Evaluate the organizational principles and conventions in musical works and discuss their effect on structure. **Clarifications:** e.g., rhythm, melody, timbre, form, tonality, harmony, texture; solo, chamber ensemble, large ensemble
MU.912.O.2.1:	Transfer accepted composition conventions and performance practices of a specific style to a contrasting style of music.
MU.912.O.2.2:	Transpose melodies into different modalities through performance and composition.
MU.912.O.3.1:	Analyze expressive elements in a musical work and describe how the choices and manipulations of the elements support, for the listener, the implied meaning of the composer/performer. **Clarifications:** e.g., tempo markings, expression markings, articulation markings, phrasing, scales, modes, harmonic structure, timbre choice, rhythm, orchestration
MU.912.O.3.2:	Interpret and perform expressive elements indicated by the musical score and/or conductor.
MU.912.S.1.2:	Compose music for voices and/or acoustic, digital, or electronic instruments.
MU.912.S.1.4:	Perform and notate, independently and accurately, melodies by ear. **Clarifications:** e.g., singing, playing, writing
MU.912.S.1.6:	Synthesize music, MIDI, pod-casting, webpage-development, and/or similar technology-based skills to share knowledge. **Clarifications:** e.g., history of electronic music and musicians; physics of sound; signal flow; effects of MIDI on studios, instruments, musicians, and producers
MU.912.S.1.7:	Combine and/or create virtual and audio instruments.
MU.912.S.2.1:	Apply the ability to memorize and internalize musical structure, accurate and expressive details, and processing skills to the creation or performance of music literature. **Clarifications:** e.g., memorization, sequential process
MU.912.S.2.2:	Transfer expressive elements and performance techniques from one piece of music to another.
MU.912.S.3.1:	Synthesize a broad range of musical skills by performing a varied repertoire with expression, appropriate stylistic interpretation, technical accuracy, and kinesthetic energy.
MU.912.S.3.2:	Sight-read music accurately and expressively to show synthesis of skills. **Clarifications:** e.g., musical elements, expressive qualities, performance technique
MU.912.S.3.3:	Transcribe aurally presented songs into melodic and/or rhythmic notation to show synthesis of aural and notational skills.
MU.912.S.3.4:	Analyze and describe the effect of rehearsal sessions and/or strategies on refinement of skills and techniques.
MU.912.S.3.5:	Develop and demonstrate proper vocal or instrumental technique. **Clarifications:** e.g., posture, breathing, fingering, embouchure, bow technique, tuning, strumming
MA.K12.MTR.1.1:	Mathematicians who participate in effortful learning both individually and with others: • Analyze the problem in a way that makes sense given the task. • Ask questions that will help with solving the task. • Build perseverance by modifying methods as needed while solving a challenging task. • Stay engaged and maintain a positive mindset when working to solve tasks. • Help and support each other when attempting a new method or approach. **Clarifications:** Teachers who encourage students to participate actively in effortful learning both individually and with others: • Cultivate a community of growth mindset learners. • Foster perseverance in students by choosing tasks that are challenging. • Develop students' ability to analyze and problem solve. • Recognize students' effort when solving challenging problems.
MA.K12.MTR.2.1:	Demonstrate understanding by representing problems in multiple ways. Mathematicians who demonstrate understanding by representing problems in multiple ways: • Build understanding through modeling and using manipulatives. • Represent solutions to problems in multiple ways using objects, drawings, tables, graphs and equations. • Progress from modeling problems with objects and drawings to using algorithms and equations. • Express connections between concepts and representations. • Choose a representation based on the given context or purpose. **Clarifications:** Teachers who encourage students to demonstrate understanding by representing problems in multiple ways: • Help students make connections between concepts and representations. • Provide opportunities for students to use manipulatives when investigating concepts. • Guide students from concrete to pictorial to abstract representations as understanding progresses. • Show students that various representations can have different purposes and can be useful in different situations.
	Complete tasks with mathematical fluency. Mathematicians who complete tasks with mathematical fluency: • Select efficient and appropriate methods for solving problems within the given context. • Maintain flexibility and accuracy while performing procedures and mental calculations. • Complete tasks accurately and with confidence.

MA.K12.MTR.3.1:	• Adapt procedures to apply them to a new context. • Use feedback to improve efficiency when performing calculations. **Clarifications:** Teachers who encourage students to complete tasks with mathematical fluency: • Provide students with the flexibility to solve problems by selecting a procedure that allows them to solve efficiently and accurately. • Offer multiple opportunities for students to practice efficient and generalizable methods. • Provide opportunities for students to reflect on the method they used and determine if a more efficient method could have been used.
MA.K12.MTR.4.1:	Engage in discussions that reflect on the mathematical thinking of self and others. Mathematicians who engage in discussions that reflect on the mathematical thinking of self and others: • Communicate mathematical ideas, vocabulary and methods effectively. • Analyze the mathematical thinking of others. • Compare the efficiency of a method to those expressed by others. • Recognize errors and suggest how to correctly solve the task. • Justify results by explaining methods and processes. • Construct possible arguments based on evidence. **Clarifications:** Teachers who encourage students to engage in discussions that reflect on the mathematical thinking of self and others: • Establish a culture in which students ask questions of the teacher and their peers, and error is an opportunity for learning. • Create opportunities for students to discuss their thinking with peers. • Select, sequence and present student work to advance and deepen understanding of correct and increasingly efficient methods. • Develop students' ability to justify methods and compare their responses to the responses of their peers.
MA.K12.MTR.5.1:	Use patterns and structure to help understand and connect mathematical concepts. Mathematicians who use patterns and structure to help understand and connect mathematical concepts: • Focus on relevant details within a problem. • Create plans and procedures to logically order events, steps or ideas to solve problems. • Decompose a complex problem into manageable parts. • Relate previously learned concepts to new concepts. • Look for similarities among problems. • Connect solutions of problems to more complicated large-scale situations. **Clarifications:** Teachers who encourage students to use patterns and structure to help understand and connect mathematical concepts: • Help students recognize the patterns in the world around them and connect these patterns to mathematical concepts. • Support students to develop generalizations based on the similarities found among problems. • Provide opportunities for students to create plans and procedures to solve problems. • Develop students' ability to construct relationships between their current understanding and more sophisticated ways of thinking.
MA.K12.MTR.6.1:	Assess the reasonableness of solutions. Mathematicians who assess the reasonableness of solutions: • Estimate to discover possible solutions. • Use benchmark quantities to determine if a solution makes sense. • Check calculations when solving problems. • Verify possible solutions by explaining the methods used. • Evaluate results based on the given context. **Clarifications:** Teachers who encourage students to assess the reasonableness of solutions: • Have students estimate or predict solutions prior to solving. • Prompt students to continually ask, "Does this solution make sense? How do you know?" • Reinforce that students check their work as they progress within and after a task. • Strengthen students' ability to verify solutions through justifications.
MA.K12.MTR.7.1:	Apply mathematics to real-world contexts. Mathematicians who apply mathematics to real-world contexts: • Connect mathematical concepts to everyday experiences. • Use models and methods to understand, represent and solve problems. • Perform investigations to gather data or determine if a method is appropriate. • Redesign models and methods to improve accuracy or efficiency. **Clarifications:** Teachers who encourage students to apply mathematics to real-world contexts: • Provide opportunities for students to create models, both concrete and abstract, and perform investigations. • Challenge students to question the accuracy of their models and methods. • Support students as they validate conclusions by comparing them to the given situation. • Indicate how various concepts can be applied to other disciplines.
ELA.K12.EE.1.1:	Cite evidence to explain and justify reasoning. **Clarifications:** K-1 Students include textual evidence in their oral communication with guidance and support from adults. The evidence can consist of details from the text without naming the text. During 1st grade, students learn how to incorporate the evidence in their writing. 2-3 Students include relevant textual evidence in their written and oral communication. Students should name the text when they refer to it. In 3rd grade, students should use a combination of direct and indirect citations. 4-5 Students continue with previous skills and reference comments made by speakers and peers. Students cite texts that they've directly

	quoted, paraphrased, or used for information. When writing, students will use the form of citation dictated by the instructor or the style guide referenced by the instructor. 6-8 Students continue with previous skills and use a style guide to create a proper citation. 9-12 Students continue with previous skills and should be aware of existing style guides and the ways in which they differ.
ELA.K12.EE.2.1:	Read and comprehend grade-level complex texts proficiently. **Clarifications:** See Text Complexity for grade-level complexity bands and a text complexity rubric.
ELA.K12.EE.3.1:	Make inferences to support comprehension. **Clarifications:** Students will make inferences before the words infer or inference are introduced. Kindergarten students will answer questions like "Why is the girl smiling?" or make predictions about what will happen based on the title page. Students will use the terms and apply them in 2nd grade and beyond.
ELA.K12.EE.4.1:	Use appropriate collaborative techniques and active listening skills when engaging in discussions in a variety of situations. **Clarifications:** In kindergarten, students learn to listen to one another respectfully. In grades 1-2, students build upon these skills by justifying what they are thinking. For example: "I think _____ because _____." The collaborative conversations are becoming academic conversations. In grades 3-12, students engage in academic conversations discussing claims and justifying their reasoning, refining and applying skills. Students build on ideas, propel the conversation, and support claims and counterclaims with evidence.
ELA.K12.EE.5.1:	Use the accepted rules governing a specific format to create quality work. **Clarifications:** Students will incorporate skills learned into work products to produce quality work. For students to incorporate these skills appropriately, they must receive instruction. A 3rd grade student creating a poster board display must have instruction in how to effectively present information to do quality work.
ELA.K12.EE.6.1:	Use appropriate voice and tone when speaking or writing. **Clarifications:** In kindergarten and 1st grade, students learn the difference between formal and informal language. For example, the way we talk to our friends differs from the way we speak to adults. In 2nd grade and beyond, students practice appropriate social and academic language to discuss texts.
DA.912.S.2.1:	Sustain focused attention, respect, and discipline during class, rehearsal, and performance.
ELD.K12.ELL.SI.1:	English language learners communicate for social and instructional purposes within the school setting.

General Course Information and Notes

VERSION DESCRIPTION

Students develop highly advanced piano techniques, music literacy, solo performance skills, and related musical knowledge through a variety of advanced piano literature. Students work toward greater musical independence through accompanying other musicians, performing solos, and/or creating original music compositions. In keeping with the rigor expected in an Honors course, students undertake independent study that includes synthesis of learning and experience. Public performances may serve as a culmination of specific instructional goals. Students may be required to attend and/or participate in rehearsals and performances outside the school day to support, extend, and assess learning in the classroom.

GENERAL NOTES

Honors and Advanced Level Course Note: Advanced courses require a greater demand on students through increased academic rigor. Academic rigor is obtained through the application, analysis, evaluation, and creation of complex ideas that are often abstract and multi-faceted. Students are challenged to think and collaborate critically on the content they are learning. Honors level rigor will be achieved by increasing text complexity through text selection, focus on high-level qualitative measures, and complexity of task. Instruction will be structured to give students a deeper understanding of conceptual themes and organization within and across disciplines. Academic rigor is more than simply assigning to students a greater quantity of work.

Florida's Benchmarks for Excellent Student Thinking (B.E.S.T.) Standards
This course includes Florida's B.E.S.T. ELA Expectations (EE) and Mathematical Thinking and Reasoning Standards (MTRs) for students. Florida educators should intentionally embed these standards within the content and their instruction as applicable. For guidance on the implementation of the EEs and MTRs, please visit cpalms.org/Standards/BEST_Standards.aspx and select the appropriate B.E.S.T. Standards package.

English Language Development ELD Standards Special Notes Section:
Teachers are required to provide listening, speaking, reading and writing instruction that allows English language learners (ELL) to communicate for social and instructional purposes within the school setting. For the given level of English language proficiency and with visual, graphic, or interactive support, students will interact with grade level words, expressions, sentences and discourse to process or produce language necessary for academic success. The ELD standard should specify a relevant content area concept or topic of study chosen by curriculum developers and teachers which maximizes an ELL's need for communication and social skills. To access an ELL supporting document which delineates performance definitions and descriptors, please click on the following link: cpalms.org/uploads/docs/standards/eld/SI.pdf

GENERAL INFORMATION

Course Number: 1301390

Course Path: Section: Grades PreK to 12 Education Courses > **Grade Group:** Grades 9 to 12 and Adult Education Courses > **Subject:** Music Education > **SubSubject:** Instrumental Music >

Abbreviated Title: KEYBD 4 HONORS

Number of Credits: One (1) credit

Course Length: Year (Y)

Course Attributes:

- Honors

Course Type: Core Academic Course

Course Level: 3

Course Status: Draft - Course Pending Approval

Grade Level(s): 9,10,11,12

Graduation Requirement: Performing/Fine Arts

Educator Certifications

Music (Elementary and Secondary Grades K-12)
Vocal Music (Elementary and Secondary Grades K-12)
Instrumental Music (Secondary Grades 7-12)
Instrumental Music (Elementary and Secondary Grades K-12)

M/J Band 1 (#1302000) 2022 - And Beyond

Course Standards

Name	Description
MU.68.C.1.1:	Develop strategies for listening to unfamiliar musical works. **Clarifications:** e.g., listening maps, active listening, checklists
MU.68.C.2.1:	Critique personal performance, experiment with a variety of solutions, and make appropriate adjustments with guidance from teachers and peers. **Clarifications:** e.g., intonation, balance, blend, phrasing, rhythm
MU.68.C.2.2:	Critique, using correct music vocabulary, changes in one's own or others' musical performance resulting from practice or rehearsal. **Clarifications:** e.g., blend, balance, ensemble playing, sonority, technique, tone quality
MU.68.F.3.2:	Investigate and discuss laws that protect intellectual property, and practice safe, legal, and responsible acquisition and use of musical media.
MU.68.H.1.2:	Identify the works of representative composers within a specific style or time period.
MU.68.H.2.3:	Classify the literature being studied by genre, style, and/or time period.
MU.68.H.3.1:	Identify connections among music and other content areas and/or contexts through interdisciplinary collaboration. **Clarifications:** e.g., school: other music classes, social studies, dance, physical education, science, health, math, world languages; community: cultural connections and traditions, ceremonial music, sales and advertising, communication
MU.68.O.3.1:	Describe how the combination of instrumentation and expressive elements in a musical work can convey a specific thought, idea, mood, and/or image. **Clarifications:** e.g., tempo markings, expression markings, articulation markings, phrasing, scales, modes, harmonic structure, timbre, rhythm, orchestration
MU.68.O.3.2:	Perform the expressive elements of a musical work indicated by the musical score and/or conductor, and transfer new knowledge and experiences to other musical works.
MU.68.S.1.1:	Improvise rhythmic and melodic phrases to accompany familiar songs and/or standard harmonic progressions. **Clarifications:** e.g., blues, rock
MU.68.S.1.3:	Arrange a short musical piece by manipulating melody, form, rhythm, and/or voicing.
MU.68.S.1.4:	Sing or play melodies by ear with support from the teacher and/or peers. **Clarifications:** e.g., melodies using traditional classroom instruments and/or voice
MU.68.S.2.2:	Transfer performance techniques from familiar to unfamiliar pieces.
MU.68.S.3.1:	Sing and/or play age-appropriate repertoire expressively. **Clarifications:** e.g., technique, phrasing, dynamics, tone quality, blend, balance, intonation, kinesthetic support/response
MU.68.S.3.2:	Demonstrate proper vocal or instrumental technique. **Clarifications:** e.g., posture, breathing, fingering, embouchure, bow technique, tuning, strumming
MU.68.S.3.3:	Sight-read standard exercises and simple repertoire. **Clarifications:** e.g., note and rest values, key signatures, time signatures, expressive markings, special harmonic and/or notation symbols
MU.68.S.3.4:	Compare written notation to aural examples and analyze for accuracy of rhythm and pitch. **Clarifications:** e.g., error detection, interval reinforcement
MU.68.S.3.6:	Develop and demonstrate efficient rehearsal strategies to apply skills and techniques. **Clarifications:** e.g., independently, collaboratively
MA.K12.MTR.1.1:	Mathematicians who participate in effortful learning both individually and with others: • Analyze the problem in a way that makes sense given the task. • Ask questions that will help with solving the task. • Build perseverance by modifying methods as needed while solving a challenging task. • Stay engaged and maintain a positive mindset when working to solve tasks. • Help and support each other when attempting a new method or approach. **Clarifications:** Teachers who encourage students to participate actively in effortful learning both individually and with others: • Cultivate a community of growth mindset learners. • Foster perseverance in students by choosing tasks that are challenging. • Develop students' ability to analyze and problem solve.

- Recognize students' effort when solving challenging problems.

MA.K12.MTR.2.1:

Demonstrate understanding by representing problems in multiple ways.
Mathematicians who demonstrate understanding by representing problems in multiple ways:

- Build understanding through modeling and using manipulatives.
- Represent solutions to problems in multiple ways using objects, drawings, tables, graphs and equations.
- Progress from modeling problems with objects and drawings to using algorithms and equations.
- Express connections between concepts and representations.
- Choose a representation based on the given context or purpose.

Clarifications:
Teachers who encourage students to demonstrate understanding by representing problems in multiple ways:

- Help students make connections between concepts and representations.
- Provide opportunities for students to use manipulatives when investigating concepts.
- Guide students from concrete to pictorial to abstract representations as understanding progresses.
- Show students that various representations can have different purposes and can be useful in different situations.

MA.K12.MTR.3.1:

Complete tasks with mathematical fluency.
Mathematicians who complete tasks with mathematical fluency:

- Select efficient and appropriate methods for solving problems within the given context.
- Maintain flexibility and accuracy while performing procedures and mental calculations.
- Complete tasks accurately and with confidence.
- Adapt procedures to apply them to a new context.
- Use feedback to improve efficiency when performing calculations.

Clarifications:
Teachers who encourage students to complete tasks with mathematical fluency:

- Provide students with the flexibility to solve problems by selecting a procedure that allows them to solve efficiently and accurately.
- Offer multiple opportunities for students to practice efficient and generalizable methods.
- Provide opportunities for students to reflect on the method they used and determine if a more efficient method could have been used.

MA.K12.MTR.4.1:

Engage in discussions that reflect on the mathematical thinking of self and others.
Mathematicians who engage in discussions that reflect on the mathematical thinking of self and others:

- Communicate mathematical ideas, vocabulary and methods effectively.
- Analyze the mathematical thinking of others.
- Compare the efficiency of a method to those expressed by others.
- Recognize errors and suggest how to correctly solve the task.
- Justify results by explaining methods and processes.
- Construct possible arguments based on evidence.

Clarifications:
Teachers who encourage students to engage in discussions that reflect on the mathematical thinking of self and others:

- Establish a culture in which students ask questions of the teacher and their peers, and error is an opportunity for learning.
- Create opportunities for students to discuss their thinking with peers.
- Select, sequence and present student work to advance and deepen understanding of correct and increasingly efficient methods.
- Develop students' ability to justify methods and compare their responses to the responses of their peers.

MA.K12.MTR.5.1:

Use patterns and structure to help understand and connect mathematical concepts.
Mathematicians who use patterns and structure to help understand and connect mathematical concepts:

- Focus on relevant details within a problem.
- Create plans and procedures to logically order events, steps or ideas to solve problems.
- Decompose a complex problem into manageable parts.
- Relate previously learned concepts to new concepts.
- Look for similarities among problems.
- Connect solutions of problems to more complicated large-scale situations.

Clarifications:
Teachers who encourage students to use patterns and structure to help understand and connect mathematical concepts:

- Help students recognize the patterns in the world around them and connect these patterns to mathematical concepts.
- Support students to develop generalizations based on the similarities found among problems.
- Provide opportunities for students to create plans and procedures to solve problems.
- Develop students' ability to construct relationships between their current understanding and more sophisticated ways of thinking.

MA.K12.MTR.6.1:

Assess the reasonableness of solutions.
Mathematicians who assess the reasonableness of solutions:

- Estimate to discover possible solutions.
- Use benchmark quantities to determine if a solution makes sense.
- Check calculations when solving problems.
- Verify possible solutions by explaining the methods used.
- Evaluate results based on the given context.

Clarifications:
Teachers who encourage students to assess the reasonableness of solutions:

- Have students estimate or predict solutions prior to solving.
- Prompt students to continually ask, "Does this solution make sense? How do you know?"

	• Reinforce that students check their work as they progress within and after a task. • Strengthen students' ability to verify solutions through justifications.
MA.K12.MTR.7.1:	Apply mathematics to real-world contexts. Mathematicians who apply mathematics to real-world contexts: • Connect mathematical concepts to everyday experiences. • Use models and methods to understand, represent and solve problems. • Perform investigations to gather data or determine if a method is appropriate. • Redesign models and methods to improve accuracy or efficiency. **Clarifications:** Teachers who encourage students to apply mathematics to real-world contexts: • Provide opportunities for students to create models, both concrete and abstract, and perform investigations. • Challenge students to question the accuracy of their models and methods. • Support students as they validate conclusions by comparing them to the given situation. • Indicate how various concepts can be applied to other disciplines.
ELA.K12.EE.1.1:	Cite evidence to explain and justify reasoning. **Clarifications:** K-1 Students include textual evidence in their oral communication with guidance and support from adults. The evidence can consist of details from the text without naming the text. During 1st grade, students learn how to incorporate the evidence in their writing. 2-3 Students include relevant textual evidence in their written and oral communication. Students should name the text when they refer to it. In 3rd grade, students should use a combination of direct and indirect citations. 4-5 Students continue with previous skills and reference comments made by speakers and peers. Students cite texts that they've directly quoted, paraphrased, or used for information. When writing, students will use the form of citation dictated by the instructor or the style guide referenced by the instructor. 6-8 Students continue with previous skills and use a style guide to create a proper citation. 9-12 Students continue with previous skills and should be aware of existing style guides and the ways in which they differ.
ELA.K12.EE.2.1:	Read and comprehend grade-level complex texts proficiently. **Clarifications:** See Text Complexity for grade-level complexity bands and a text complexity rubric.
ELA.K12.EE.3.1:	Make inferences to support comprehension. **Clarifications:** Students will make inferences before the words infer or inference are introduced. Kindergarten students will answer questions like "Why is the girl smiling?" or make predictions about what will happen based on the title page. Students will use the terms and apply them in 2nd grade and beyond.
ELA.K12.EE.4.1:	Use appropriate collaborative techniques and active listening skills when engaging in discussions in a variety of situations. **Clarifications:** In kindergarten, students learn to listen to one another respectfully. In grades 1-2, students build upon these skills by justifying what they are thinking. For example: "I think _____ because _____." The collaborative conversations are becoming academic conversations. In grades 3-12, students engage in academic conversations discussing claims and justifying their reasoning, refining and applying skills. Students build on ideas, propel the conversation, and support claims and counterclaims with evidence.
ELA.K12.EE.5.1:	Use the accepted rules governing a specific format to create quality work. **Clarifications:** Students will incorporate skills learned into work products to produce quality work. For students to incorporate these skills appropriately, they must receive instruction. A 3rd grade student creating a poster board display must have instruction in how to effectively present information to do quality work.
ELA.K12.EE.6.1:	Use appropriate voice and tone when speaking or writing. **Clarifications:** In kindergarten and 1st grade, students learn the difference between formal and informal language. For example, the way we talk to our friends differs from the way we speak to adults. In 2nd grade and beyond, students practice appropriate social and academic language to discuss texts.
DA.68.S.2.1:	Sustain focused attention, respect, and discipline during classes and performances.
ELD.K12.ELL.SI.1:	English language learners communicate for social and instructional purposes within the school setting.

General Course Information and Notes

VERSION DESCRIPTION

Students with little or no instrumental experience develop foundational instrumental technique, foundational music literacy, and aesthetic musical awareness through rehearsal, performance, and study of high-quality band literature. Instrumentalists work on the fundamentals of music notation, sound production, instrument care and maintenance, and personal and group rehearsal strategies. Public performances may serve as a culmination of specific instructional goals. Students may be required to attend and/or participate in rehearsals and performances outside the school day to support, extend, and assess learning in the classroom. This course may also require students to obtain a musical instrument (e.g., borrow, rent, purchase) from an outside source.

GENERAL NOTES

Florida's Benchmarks for Excellent Student Thinking (B.E.S.T.) Standards
This course includes Florida's B.E.S.T. ELA Expectations (EE) and Mathematical Thinking and Reasoning Standards (MTRs) for students. Florida educators should intentionally embed these standards within the content and their instruction as applicable. For guidance on the implementation of the EEs and MTRs, please visit cpalms.org/Standards/BEST_Standards.aspx and select the appropriate B.E.S.T. Standards package.

English Language Development ELD Standards Special Notes Section:
Teachers are required to provide listening, speaking, reading and writing instruction that allows English language learners (ELL) to communicate for social and instructional purposes within the school setting. For the given level of English language proficiency and with visual, graphic, or interactive support, students will interact with grade level words, expressions, sentences and discourse to process or produce language necessary for academic success. The ELD standard should specify a relevant content area concept or topic of study chosen by curriculum developers and teachers which maximizes an ELL's need for communication and social skills. To access an ELL supporting document which delineates performance definitions and descriptors, please click on the following link: cpalms.org/uploads/docs/standards/eld/SI.pdf

GENERAL INFORMATION

Course Number: 1302000

Course Path: Section: Grades PreK to 12 Education Courses > **Grade Group:** Grades 6 to 8 Education Courses > **Subject:** Music Education > **SubSubject:** Instrumental Music >

Abbreviated Title: M/J BAND 1

Course Length: Year (Y)

Course Level: 2

Course Status: Draft - Course Pending Approval

Grade Level(s): 6,7,8

Educator Certifications

Instrumental Music (Secondary Grades 7-12)
Instrumental Music (Elementary and Secondary Grades K-12)
Music (Elementary and Secondary Grades K-12)

M/J Band 2 (#1302010) 2022 - And Beyond

Course Standards

Name	Description
MU.68.C.1.1:	Develop strategies for listening to unfamiliar musical works. **Clarifications:** e.g., listening maps, active listening, checklists
MU.68.C.1.3:	Identify, aurally, instrumental styles and a variety of instrumental ensembles. **Clarifications:** e.g., Classical, Baroque, Romantic, contemporary, jazz, pop, solo, duet, trio, quartet, small ensembles
MU.68.C.2.1:	Critique personal performance, experiment with a variety of solutions, and make appropriate adjustments with guidance from teachers and peers. **Clarifications:** e.g., intonation, balance, blend, phrasing, rhythm
MU.68.C.2.2:	Critique, using correct music vocabulary, changes in one's own or others' musical performance resulting from practice or rehearsal. **Clarifications:** e.g., blend, balance, ensemble playing, sonority, technique, tone quality
MU.68.C.2.3:	Critique personal composition and/or improvisation, using simple criteria, to generate improvements with guidance from teachers and/or peers.
MU.68.F.3.2:	Investigate and discuss laws that protect intellectual property, and practice safe, legal, and responsible acquisition and use of musical media.
MU.68.H.1.2:	Identify the works of representative composers within a specific style or time period.
MU.68.H.1.3:	Describe how American music has been influenced by other cultures.
MU.68.H.2.3:	Classify the literature being studied by genre, style, and/or time period.
MU.68.H.3.1:	Identify connections among music and other content areas and/or contexts through interdisciplinary collaboration. **Clarifications:** e.g., school: other music classes, social studies, dance, physical education, science, health, math, world languages; community: cultural connections and traditions, ceremonial music, sales and advertising, communication
MU.68.O.3.1:	Describe how the combination of instrumentation and expressive elements in a musical work can convey a specific thought, idea, mood, and/or image. **Clarifications:** e.g., tempo markings, expression markings, articulation markings, phrasing, scales, modes, harmonic structure, timbre, rhythm, orchestration
MU.68.O.3.2:	Perform the expressive elements of a musical work indicated by the musical score and/or conductor, and transfer new knowledge and experiences to other musical works.
MU.68.S.1.1:	Improvise rhythmic and melodic phrases to accompany familiar songs and/or standard harmonic progressions. **Clarifications:** e.g., blues, rock
MU.68.S.1.3:	Arrange a short musical piece by manipulating melody, form, rhythm, and/or voicing.
MU.68.S.1.4:	Sing or play melodies by ear with support from the teacher and/or peers. **Clarifications:** e.g., melodies using traditional classroom instruments and/or voice
MU.68.S.1.5:	Perform melodies with chord progressions. **Clarifications:** e.g., keyboard/piano, keyboard/piano and voice, guitar, voice and guitar
MU.68.S.2.1:	Perform music from memory to demonstrate knowledge of the musical structure. **Clarifications:** e.g., basic themes, patterns, tonality, melody, harmony
MU.68.S.2.2:	Transfer performance techniques from familiar to unfamiliar pieces.
MU.68.S.3.1:	Sing and/or play age-appropriate repertoire expressively. **Clarifications:** e.g., technique, phrasing, dynamics, tone quality, blend, balance, intonation, kinesthetic support/response
MU.68.S.3.2:	Demonstrate proper vocal or instrumental technique. **Clarifications:** e.g., posture, breathing, fingering, embouchure, bow technique, tuning, strumming
MU.68.S.3.3:	Sight-read standard exercises and simple repertoire. **Clarifications:** e.g., note and rest values, key signatures, time signatures, expressive markings, special harmonic and/or notation symbols
MU.68.S.3.4:	Compare written notation to aural examples and analyze for accuracy of rhythm and pitch. **Clarifications:** e.g., error detection, interval reinforcement
MU.68.S.3.5:	Notate rhythmic phrases and/or melodies, in varying simple meters, performed by someone else.
	Develop and demonstrate efficient rehearsal strategies to apply skills and techniques.

MU.68.S.3.6:	**Clarifications:** e.g., independently, collaboratively
MA.K12.MTR.1.1:	Mathematicians who participate in effortful learning both individually and with others: • Analyze the problem in a way that makes sense given the task. • Ask questions that will help with solving the task. • Build perseverance by modifying methods as needed while solving a challenging task. • Stay engaged and maintain a positive mindset when working to solve tasks. • Help and support each other when attempting a new method or approach. **Clarifications:** Teachers who encourage students to participate actively in effortful learning both individually and with others: • Cultivate a community of growth mindset learners. • Foster perseverance in students by choosing tasks that are challenging. • Develop students' ability to analyze and problem solve. • Recognize students' effort when solving challenging problems.
MA.K12.MTR.2.1:	Demonstrate understanding by representing problems in multiple ways. Mathematicians who demonstrate understanding by representing problems in multiple ways: • Build understanding through modeling and using manipulatives. • Represent solutions to problems in multiple ways using objects, drawings, tables, graphs and equations. • Progress from modeling problems with objects and drawings to using algorithms and equations. • Express connections between concepts and representations. • Choose a representation based on the given context or purpose. **Clarifications:** Teachers who encourage students to demonstrate understanding by representing problems in multiple ways: • Help students make connections between concepts and representations. • Provide opportunities for students to use manipulatives when investigating concepts. • Guide students from concrete to pictorial to abstract representations as understanding progresses. • Show students that various representations can have different purposes and can be useful in different situations.
MA.K12.MTR.3.1:	Complete tasks with mathematical fluency. Mathematicians who complete tasks with mathematical fluency: • Select efficient and appropriate methods for solving problems within the given context. • Maintain flexibility and accuracy while performing procedures and mental calculations. • Complete tasks accurately and with confidence. • Adapt procedures to apply them to a new context. • Use feedback to improve efficiency when performing calculations. **Clarifications:** Teachers who encourage students to complete tasks with mathematical fluency: • Provide students with the flexibility to solve problems by selecting a procedure that allows them to solve efficiently and accurately. • Offer multiple opportunities for students to practice efficient and generalizable methods. • Provide opportunities for students to reflect on the method they used and determine if a more efficient method could have been used.
MA.K12.MTR.4.1:	Engage in discussions that reflect on the mathematical thinking of self and others. Mathematicians who engage in discussions that reflect on the mathematical thinking of self and others: • Communicate mathematical ideas, vocabulary and methods effectively. • Analyze the mathematical thinking of others. • Compare the efficiency of a method to those expressed by others. • Recognize errors and suggest how to correctly solve the task. • Justify results by explaining methods and processes. • Construct possible arguments based on evidence. **Clarifications:** Teachers who encourage students to engage in discussions that reflect on the mathematical thinking of self and others: • Establish a culture in which students ask questions of the teacher and their peers, and error is an opportunity for learning. • Create opportunities for students to discuss their thinking with peers. • Select, sequence and present student work to advance and deepen understanding of correct and increasingly efficient methods. • Develop students' ability to justify methods and compare their responses to the responses of their peers.
MA.K12.MTR.5.1:	Use patterns and structure to help understand and connect mathematical concepts. Mathematicians who use patterns and structure to help understand and connect mathematical concepts: • Focus on relevant details within a problem. • Create plans and procedures to logically order events, steps or ideas to solve problems. • Decompose a complex problem into manageable parts. • Relate previously learned concepts to new concepts. • Look for similarities among problems. • Connect solutions of problems to more complicated large-scale situations. **Clarifications:** Teachers who encourage students to use patterns and structure to help understand and connect mathematical concepts: • Help students recognize the patterns in the world around them and connect these patterns to mathematical concepts. • Support students to develop generalizations based on the similarities found among problems. • Provide opportunities for students to create plans and procedures to solve problems.

	• Develop students' ability to construct relationships between their current understanding and more sophisticated ways of thinking.
MA.K12.MTR.6.1:	Assess the reasonableness of solutions. Mathematicians who assess the reasonableness of solutions: • Estimate to discover possible solutions. • Use benchmark quantities to determine if a solution makes sense. • Check calculations when solving problems. • Verify possible solutions by explaining the methods used. • Evaluate results based on the given context. **Clarifications:** Teachers who encourage students to assess the reasonableness of solutions: • Have students estimate or predict solutions prior to solving. • Prompt students to continually ask, "Does this solution make sense? How do you know?" • Reinforce that students check their work as they progress within and after a task. • Strengthen students' ability to verify solutions through justifications.
MA.K12.MTR.7.1:	Apply mathematics to real-world contexts. Mathematicians who apply mathematics to real-world contexts: • Connect mathematical concepts to everyday experiences. • Use models and methods to understand, represent and solve problems. • Perform investigations to gather data or determine if a method is appropriate. • Redesign models and methods to improve accuracy or efficiency. **Clarifications:** Teachers who encourage students to apply mathematics to real-world contexts: • Provide opportunities for students to create models, both concrete and abstract, and perform investigations. • Challenge students to question the accuracy of their models and methods. • Support students as they validate conclusions by comparing them to the given situation. • Indicate how various concepts can be applied to other disciplines.
ELA.K12.EE.1.1:	Cite evidence to explain and justify reasoning. **Clarifications:** K-1 Students include textual evidence in their oral communication with guidance and support from adults. The evidence can consist of details from the text without naming the text. During 1st grade, students learn how to incorporate the evidence in their writing. 2-3 Students include relevant textual evidence in their written and oral communication. Students should name the text when they refer to it. In 3rd grade, students should use a combination of direct and indirect citations. 4-5 Students continue with previous skills and reference comments made by speakers and peers. Students cite texts that they've directly quoted, paraphrased, or used for information. When writing, students will use the form of citation dictated by the instructor or the style guide referenced by the instructor. 6-8 Students continue with previous skills and use a style guide to create a proper citation. 9-12 Students continue with previous skills and should be aware of existing style guides and the ways in which they differ.
ELA.K12.EE.2.1:	Read and comprehend grade-level complex texts proficiently. **Clarifications:** See Text Complexity for grade-level complexity bands and a text complexity rubric.
ELA.K12.EE.3.1:	Make inferences to support comprehension. **Clarifications:** Students will make inferences before the words infer or inference are introduced. Kindergarten students will answer questions like "Why is the girl smiling?" or make predictions about what will happen based on the title page. Students will use the terms and apply them in 2nd grade and beyond.
ELA.K12.EE.4.1:	Use appropriate collaborative techniques and active listening skills when engaging in discussions in a variety of situations. **Clarifications:** In kindergarten, students learn to listen to one another respectfully. In grades 1-2, students build upon these skills by justifying what they are thinking. For example: "I think _____ because _____." The collaborative conversations are becoming academic conversations. In grades 3-12, students engage in academic conversations discussing claims and justifying their reasoning, refining and applying skills. Students build on ideas, propel the conversation, and support claims and counterclaims with evidence.
ELA.K12.EE.5.1:	Use the accepted rules governing a specific format to create quality work. **Clarifications:** Students will incorporate skills learned into work products to produce quality work. For students to incorporate these skills appropriately, they must receive instruction. A 3rd grade student creating a poster board display must have instruction in how to effectively present information to do quality work.
ELA.K12.EE.6.1:	Use appropriate voice and tone when speaking or writing. **Clarifications:** In kindergarten and 1st grade, students learn the difference between formal and informal language. For example, the way we talk to our friends differs from the way we speak to adults. In 2nd grade and beyond, students practice appropriate social and academic language to discuss texts.
DA.68.S.2.1:	Sustain focused attention, respect, and discipline during classes and performances.
ELD.K12.ELL.SI.1:	English language learners communicate for social and instructional purposes within the school setting.

General Course Information and Notes

VERSION DESCRIPTION

Students with previous band experience build on instrumental technique, music literacy, and aesthetic response through rehearsal, performance, and study of a variety of high-quality band literature. Instrumentalists expand their knowledge of music notation, music theory, sound production, and personal and group rehearsal strategies. Public performances may serve as a culmination of specific instructional goals. Students may be required to attend and/or participate in rehearsals and performances outside the school day to support, extend, and assess learning in the classroom. This course may also require students to obtain a musical instrument (e.g., borrow, rent, purchase) from an outside source.

GENERAL NOTES

Florida's Benchmarks for Excellent Student Thinking (B.E.S.T.) Standards
This course includes Florida's B.E.S.T. ELA Expectations (EE) and Mathematical Thinking and Reasoning Standards (MTRs) for students. Florida educators should intentionally embed these standards within the content and their instruction as applicable. For guidance on the implementation of the EEs and MTRs, please visit cpalms.org/Standards/BEST_Standards.aspx and select the appropriate B.E.S.T. Standards package.

English Language Development ELD Standards Special Notes Section:
Teachers are required to provide listening, speaking, reading and writing instruction that allows English language learners (ELL) to communicate for social and instructional purposes within the school setting. For the given level of English language proficiency and with visual, graphic, or interactive support, students will interact with grade level words, expressions, sentences and discourse to process or produce language necessary for academic success. The ELD standard should specify a relevant content area concept or topic of study chosen by curriculum developers and teachers which maximizes an ELL's need for communication and social skills. To access an ELL supporting document which delineates performance definitions and descriptors, please click on the following link: cpalms.org/uploads/docs/standards/eld/SI.pdf

GENERAL INFORMATION

Course Number: 1302010

Course Path: Section: Grades PreK to 12 Education Courses > **Grade Group:** Grades 6 to 8 Education Courses > **Subject:** Music Education > **SubSubject:** Instrumental Music >
Abbreviated Title: M/J BAND 2
Course Length: Year (Y)
Course Level: 2

Course Status: Draft - Course Pending Approval
Grade Level(s): 6,7,8

Educator Certifications

Music (Elementary and Secondary Grades K-12)
Instrumental Music (Secondary Grades 7-12)
Instrumental Music (Elementary and Secondary Grades K-12)

M/J Band 3 (#1302020) 2022 - And Beyond

Course Standards

Name	Description
MU.68.C.1.1:	Develop strategies for listening to unfamiliar musical works. **Clarifications:** e.g., listening maps, active listening, checklists
MU.68.C.1.2:	Compare, using correct music vocabulary, the aesthetic impact of a performance to one's own hypothesis of the composer's intent. **Clarifications:** e.g., quality recordings, peer group and individual performances, composer notes, instrumentation, expressive elements, title
MU.68.C.1.3:	Identify, aurally, instrumental styles and a variety of instrumental ensembles. **Clarifications:** e.g., Classical, Baroque, Romantic, contemporary, jazz, pop, solo, duet, trio, quartet, small ensembles
MU.68.C.2.1:	Critique personal performance, experiment with a variety of solutions, and make appropriate adjustments with guidance from teachers and peers. **Clarifications:** e.g., intonation, balance, blend, phrasing, rhythm
MU.68.C.2.2:	Critique, using correct music vocabulary, changes in one's own or others' musical performance resulting from practice or rehearsal. **Clarifications:** e.g., blend, balance, ensemble playing, sonority, technique, tone quality
MU.68.C.2.3:	Critique personal composition and/or improvisation, using simple criteria, to generate improvements with guidance from teachers and/or peers.
MU.68.C.3.1:	Apply specific criteria to evaluate why a musical work is an exemplar in a specific style or genre.
MU.68.F.2.2:	Describe how concert attendance can financially impact a community. **Clarifications:** e.g., increased revenues at restaurants, hotels, and travel agencies; venue maintenance, parking attendants
MU.68.F.3.1:	Describe how studying music can enhance citizenship, leadership, and global thinking. **Clarifications:** e.g., dedication to mastering a task, problem-solving, self-discipline, dependability, ability to organize, cultural awareness, mutual respect
MU.68.F.3.2:	Investigate and discuss laws that protect intellectual property, and practice safe, legal, and responsible acquisition and use of musical media.
MU.68.H.1.1:	Describe the functions of music from various cultures and time periods.
MU.68.H.1.2:	Identify the works of representative composers within a specific style or time period.
MU.68.H.1.4:	Classify authentic stylistic features in music originating from various cultures. **Clarifications:** e.g., rhythm, layered texture, key patterns, tonality, melodic line, quarter- or semi-tones, national folk melodies, improvisation, instrumentation, aural/oral traditions, drumming patterns
MU.68.H.2.2:	Analyze how technology has changed the way music is created, performed, acquired, and experienced. **Clarifications:** e.g., from harpsichord to piano; from phonograph to CD
MU.68.H.2.3:	Classify the literature being studied by genre, style, and/or time period.
MU.68.H.3.1:	Identify connections among music and other content areas and/or contexts through interdisciplinary collaboration. **Clarifications:** e.g., school: other music classes, social studies, dance, physical education, science, health, math, world languages; community: cultural connections and traditions, ceremonial music, sales and advertising, communication
MU.68.H.3.2:	Discuss how the absence of music would affect other content areas and contexts. **Clarifications:** e.g., theatre and dance, movies, sporting events, video games, commercial advertising, social gatherings, civic and religious ceremonies, plays
MU.68.O.1.1:	Compare performances of a musical work to identify artistic choices made by performers. **Clarifications:** e.g., rhythm, melody, timbre, form, tonality, harmony, expressive elements; choral, orchestral, band, ensemble
MU.68.O.2.2:	Demonstrate knowledge of major and minor tonalities through performance and composition. **Clarifications:** e.g., scales; key signatures; relative major/minor; parallel major/minor
MU.68.O.3.1:	Describe how the combination of instrumentation and expressive elements in a musical work can convey a specific thought, idea, mood, and/or image. **Clarifications:** e.g., tempo markings, expression markings, articulation markings, phrasing, scales, modes, harmonic structure, timbre, rhythm, orchestration
MU.68.O.3.2:	Perform the expressive elements of a musical work indicated by the musical score and/or conductor, and transfer new knowledge and experiences to other musical works.
MU.68.S.1.1:	Improvise rhythmic and melodic phrases to accompany familiar songs and/or standard harmonic progressions. **Clarifications:**

	e.g., blues, rock
MU.68.S.1.3:	Arrange a short musical piece by manipulating melody, form, rhythm, and/or voicing.
MU.68.S.1.4:	Sing or play melodies by ear with support from the teacher and/or peers. **Clarifications:** e.g., melodies using traditional classroom instruments and/or voice
MU.68.S.2.1:	Perform music from memory to demonstrate knowledge of the musical structure. **Clarifications:** e.g., basic themes, patterns, tonality, melody, harmony
MU.68.S.2.2:	Transfer performance techniques from familiar to unfamiliar pieces.
MU.68.S.3.1:	Sing and/or play age-appropriate repertoire expressively. **Clarifications:** e.g., technique, phrasing, dynamics, tone quality, blend, balance, intonation, kinesthetic support/response
MU.68.S.3.2:	Demonstrate proper vocal or instrumental technique. **Clarifications:** e.g., posture, breathing, fingering, embouchure, bow technique, tuning, strumming
MU.68.S.3.3:	Sight-read standard exercises and simple repertoire. **Clarifications:** e.g., note and rest values, key signatures, time signatures, expressive markings, special harmonic and/or notation symbols
MU.68.S.3.4:	Compare written notation to aural examples and analyze for accuracy of rhythm and pitch. **Clarifications:** e.g., error detection, interval reinforcement
MU.68.S.3.5:	Notate rhythmic phrases and/or melodies, in varying simple meters, performed by someone else.
MU.68.S.3.6:	Develop and demonstrate efficient rehearsal strategies to apply skills and techniques. **Clarifications:** e.g., independently, collaboratively
MA.K12.MTR.1.1:	Mathematicians who participate in effortful learning both individually and with others: • Analyze the problem in a way that makes sense given the task. • Ask questions that will help with solving the task. • Build perseverance by modifying methods as needed while solving a challenging task. • Stay engaged and maintain a positive mindset when working to solve tasks. • Help and support each other when attempting a new method or approach. **Clarifications:** Teachers who encourage students to participate actively in effortful learning both individually and with others: • Cultivate a community of growth mindset learners. • Foster perseverance in students by choosing tasks that are challenging. • Develop students' ability to analyze and problem solve. • Recognize students' effort when solving challenging problems.
MA.K12.MTR.2.1:	Demonstrate understanding by representing problems in multiple ways. Mathematicians who demonstrate understanding by representing problems in multiple ways: • Build understanding through modeling and using manipulatives. • Represent solutions to problems in multiple ways using objects, drawings, tables, graphs and equations. • Progress from modeling problems with objects and drawings to using algorithms and equations. • Express connections between concepts and representations. • Choose a representation based on the given context or purpose. **Clarifications:** Teachers who encourage students to demonstrate understanding by representing problems in multiple ways: • Help students make connections between concepts and representations. • Provide opportunities for students to use manipulatives when investigating concepts. • Guide students from concrete to pictorial to abstract representations as understanding progresses. • Show students that various representations can have different purposes and can be useful in different situations.
MA.K12.MTR.3.1:	Complete tasks with mathematical fluency. Mathematicians who complete tasks with mathematical fluency: • Select efficient and appropriate methods for solving problems within the given context. • Maintain flexibility and accuracy while performing procedures and mental calculations. • Complete tasks accurately and with confidence. • Adapt procedures to apply them to a new context. • Use feedback to improve efficiency when performing calculations. **Clarifications:** Teachers who encourage students to complete tasks with mathematical fluency: • Provide students with the flexibility to solve problems by selecting a procedure that allows them to solve efficiently and accurately. • Offer multiple opportunities for students to practice efficient and generalizable methods. • Provide opportunities for students to reflect on the method they used and determine if a more efficient method could have been used.
	Engage in discussions that reflect on the mathematical thinking of self and others. Mathematicians who engage in discussions that reflect on the mathematical thinking of self and others:

MA.K12.MTR.4.1:	• Communicate mathematical ideas, vocabulary and methods effectively. • Analyze the mathematical thinking of others. • Compare the efficiency of a method to those expressed by others. • Recognize errors and suggest how to correctly solve the task. • Justify results by explaining methods and processes. • Construct possible arguments based on evidence. **Clarifications:** Teachers who encourage students to engage in discussions that reflect on the mathematical thinking of self and others: • Establish a culture in which students ask questions of the teacher and their peers, and error is an opportunity for learning. • Create opportunities for students to discuss their thinking with peers. • Select, sequence and present student work to advance and deepen understanding of correct and increasingly efficient methods. • Develop students' ability to justify methods and compare their responses to the responses of their peers.
MA.K12.MTR.5.1:	Use patterns and structure to help understand and connect mathematical concepts. Mathematicians who use patterns and structure to help understand and connect mathematical concepts: • Focus on relevant details within a problem. • Create plans and procedures to logically order events, steps or ideas to solve problems. • Decompose a complex problem into manageable parts. • Relate previously learned concepts to new concepts. • Look for similarities among problems. • Connect solutions of problems to more complicated large-scale situations. **Clarifications:** Teachers who encourage students to use patterns and structure to help understand and connect mathematical concepts: • Help students recognize the patterns in the world around them and connect these patterns to mathematical concepts. • Support students to develop generalizations based on the similarities found among problems. • Provide opportunities for students to create plans and procedures to solve problems. • Develop students' ability to construct relationships between their current understanding and more sophisticated ways of thinking.
MA.K12.MTR.6.1:	Assess the reasonableness of solutions. Mathematicians who assess the reasonableness of solutions: • Estimate to discover possible solutions. • Use benchmark quantities to determine if a solution makes sense. • Check calculations when solving problems. • Verify possible solutions by explaining the methods used. • Evaluate results based on the given context. **Clarifications:** Teachers who encourage students to assess the reasonableness of solutions: • Have students estimate or predict solutions prior to solving. • Prompt students to continually ask, "Does this solution make sense? How do you know?" • Reinforce that students check their work as they progress within and after a task. • Strengthen students' ability to verify solutions through justifications.
MA.K12.MTR.7.1:	Apply mathematics to real-world contexts. Mathematicians who apply mathematics to real-world contexts: • Connect mathematical concepts to everyday experiences. • Use models and methods to understand, represent and solve problems. • Perform investigations to gather data or determine if a method is appropriate. • Redesign models and methods to improve accuracy or efficiency. **Clarifications:** Teachers who encourage students to apply mathematics to real-world contexts: • Provide opportunities for students to create models, both concrete and abstract, and perform investigations. • Challenge students to question the accuracy of their models and methods. • Support students as they validate conclusions by comparing them to the given situation. • Indicate how various concepts can be applied to other disciplines.
ELA.K12.EE.1.1:	Cite evidence to explain and justify reasoning. **Clarifications:** K-1 Students include textual evidence in their oral communication with guidance and support from adults. The evidence can consist of details from the text without naming the text. During 1st grade, students learn how to incorporate the evidence in their writing. 2-3 Students include relevant textual evidence in their written and oral communication. Students should name the text when they refer to it. In 3rd grade, students should use a combination of direct and indirect citations. 4-5 Students continue with previous skills and reference comments made by speakers and peers. Students cite texts that they've directly quoted, paraphrased, or used for information. When writing, students will use the form of citation dictated by the instructor or the style guide referenced by the instructor. 6-8 Students continue with previous skills and use a style guide to create a proper citation. 9-12 Students continue with previous skills and should be aware of existing style guides and the ways in which they differ.
ELA.K12.EE.2.1:	Read and comprehend grade-level complex texts proficiently. **Clarifications:** See Text Complexity for grade-level complexity bands and a text complexity rubric.
	Make inferences to support comprehension.

ELA.K12.EE.3.1:	**Clarifications:** Students will make inferences before the words infer or inference are introduced. Kindergarten students will answer questions like "Why is the girl smiling?" or make predictions about what will happen based on the title page. Students will use the terms and apply them in 2nd grade and beyond.
ELA.K12.EE.4.1:	Use appropriate collaborative techniques and active listening skills when engaging in discussions in a variety of situations. **Clarifications:** In kindergarten, students learn to listen to one another respectfully. In grades 1-2, students build upon these skills by justifying what they are thinking. For example: "I think _____ because _____." The collaborative conversations are becoming academic conversations. In grades 3-12, students engage in academic conversations discussing claims and justifying their reasoning, refining and applying skills. Students build on ideas, propel the conversation, and support claims and counterclaims with evidence.
ELA.K12.EE.5.1:	Use the accepted rules governing a specific format to create quality work. **Clarifications:** Students will incorporate skills learned into work products to produce quality work. For students to incorporate these skills appropriately, they must receive instruction. A 3rd grade student creating a poster board display must have instruction in how to effectively present information to do quality work.
ELA.K12.EE.6.1:	Use appropriate voice and tone when speaking or writing. **Clarifications:** In kindergarten and 1st grade, students learn the difference between formal and informal language. For example, the way we talk to our friends differs from the way we speak to adults. In 2nd grade and beyond, students practice appropriate social and academic language to discuss texts.
DA.68.S.2.1:	Sustain focused attention, respect, and discipline during classes and performances.
ELD.K12.ELL.SI.1:	English language learners communicate for social and instructional purposes within the school setting.

General Course Information and Notes

VERSION DESCRIPTION

Students with previous band experience expand on their instrumental technique, music literacy, and aesthetic response through rehearsal, performance, and study of a variety of intermediate-level, high-quality band literature. Instrumentalists extend their knowledge of music notation and theory, sound production, and personal and group rehearsal strategies. Public performances may serve as a culmination of specific instructional goals. Students may be required to attend and/or participate in rehearsals and performances outside the school day to support, extend, and assess learning in the classroom. This course may also require students to obtain a musical instrument (e.g., borrow, rent, purchase) from an outside source.

GENERAL NOTES

Florida's Benchmarks for Excellent Student Thinking (B.E.S.T.) Standards
This course includes Florida's B.E.S.T. ELA Expectations (EE) and Mathematical Thinking and Reasoning Standards (MTRs) for students. Florida educators should intentionally embed these standards within the content and their instruction as applicable. For guidance on the implementation of the EEs and MTRs, please visit cpalms.org/Standards/BEST_Standards.aspx and select the appropriate B.E.S.T. Standards package.

English Language Development ELD Standards Special Notes Section:
Teachers are required to provide listening, speaking, reading and writing instruction that allows English language learners (ELL) to communicate for social and instructional purposes within the school setting. For the given level of English language proficiency and with visual, graphic, or interactive support, students will interact with grade level words, expressions, sentences and discourse to process or produce language necessary for academic success. The ELD standard should specify a relevant content area concept or topic of study chosen by curriculum developers and teachers which maximizes an ELL's need for communication and social skills. To access an ELL supporting document which delineates performance definitions and descriptors, please click on the following link: cpalms.org/uploads/docs/standards/eld/SI.pdf

GENERAL INFORMATION

Course Number: 1302020

Course Path: Section: Grades PreK to 12 Education Courses > **Grade Group:** Grades 6 to 8 Education Courses > **Subject:** Music Education > **SubSubject:** Instrumental Music >

Abbreviated Title: M/J BAND 3

Course Length: Year (Y)

Course Level: 2

Course Status: Draft - Course Pending Approval

Grade Level(s): 6,7,8

Educator Certifications

Instrumental Music (Secondary Grades 7-12)
Instrumental Music (Elementary and Secondary Grades K-12)
Music (Elementary and Secondary Grades K-12)

M/J Band 4 (#1302030) 2022 - And Beyond

Course Standards

Name	Description
MU.68.C.1.1:	Develop strategies for listening to unfamiliar musical works. **Clarifications:** e.g., listening maps, active listening, checklists
MU.68.C.1.2:	Compare, using correct music vocabulary, the aesthetic impact of a performance to one's own hypothesis of the composer's intent. **Clarifications:** e.g., quality recordings, peer group and individual performances, composer notes, instrumentation, expressive elements, title
MU.68.C.1.3:	Identify, aurally, instrumental styles and a variety of instrumental ensembles. **Clarifications:** e.g., Classical, Baroque, Romantic, contemporary, jazz, pop, solo, duet, trio, quartet, small ensembles
MU.68.C.2.1:	Critique personal performance, experiment with a variety of solutions, and make appropriate adjustments with guidance from teachers and peers. **Clarifications:** e.g., intonation, balance, blend, phrasing, rhythm
MU.68.C.2.2:	Critique, using correct music vocabulary, changes in one's own or others' musical performance resulting from practice or rehearsal. **Clarifications:** e.g., blend, balance, ensemble playing, sonority, technique, tone quality
MU.68.C.2.3:	Critique personal composition and/or improvisation, using simple criteria, to generate improvements with guidance from teachers and/or peers.
MU.68.C.3.1:	Apply specific criteria to evaluate why a musical work is an exemplar in a specific style or genre.
MU.68.F.1.1:	Create a composition and/or performance, using visual, kinesthetic, digital, and/or acoustic means to manipulate musical elements.
MU.68.F.2.1:	Describe several routes a composition or performance could travel from creator to consumer. **Clarifications:** e.g., MIDI and other technology, production, sharing on the Internet, home studios, professional recording studios, sales
MU.68.F.2.2:	Describe how concert attendance can financially impact a community. **Clarifications:** e.g., increased revenues at restaurants, hotels, and travel agencies; venue maintenance, parking attendants
MU.68.F.3.2:	Investigate and discuss laws that protect intellectual property, and practice safe, legal, and responsible acquisition and use of musical media.
MU.68.F.3.3:	Identify the tasks involved in the compositional process and discuss how the process might be applied in the work place. **Clarifications:** e.g., idea, development, editing, selling, revising, testing, presenting
MU.68.H.1.2:	Identify the works of representative composers within a specific style or time period.
MU.68.H.1.3:	Describe how American music has been influenced by other cultures.
MU.68.H.1.4:	Classify authentic stylistic features in music originating from various cultures. **Clarifications:** e.g., rhythm, layered texture, key patterns, tonality, melodic line, quarter- or semi-tones, national folk melodies, improvisation, instrumentation, aural/oral traditions, drumming patterns
MU.68.H.1.5:	Using representative musical works by selected composers, classify compositional characteristics common to a specific time period and/or genre.
MU.68.H.2.1:	Describe the influence of historical events and periods on music composition and performance.
MU.68.H.2.2:	Analyze how technology has changed the way music is created, performed, acquired, and experienced. **Clarifications:** e.g., from harpsichord to piano; from phonograph to CD
MU.68.H.2.3:	Classify the literature being studied by genre, style, and/or time period.
MU.68.H.3.2:	Discuss how the absence of music would affect other content areas and contexts. **Clarifications:** e.g., theatre and dance, movies, sporting events, video games, commercial advertising, social gatherings, civic and religious ceremonies, plays
MU.68.O.1.1:	Compare performances of a musical work to identify artistic choices made by performers. **Clarifications:** e.g., rhythm, melody, timbre, form, tonality, harmony, expressive elements; choral, orchestral, band, ensemble
MU.68.O.2.1:	Create a composition, manipulating musical elements and exploring the effects of those manipulations. **Clarifications:** e.g., using electronic or paper-and-pencil means to experiment with timbre, melody, rhythm, harmony, form, tonality
MU.68.O.2.2:	Demonstrate knowledge of major and minor tonalities through performance and composition. **Clarifications:** e.g., scales; key signatures; relative major/minor; parallel major/minor
MU.68.O.3.1:	Describe how the combination of instrumentation and expressive elements in a musical work can convey a specific thought, idea, mood, and/or image. **Clarifications:**

	e.g., tempo markings, expression markings, articulation markings, phrasing, scales, modes, harmonic structure, timbre, rhythm, orchestration
MU.68.O.3.2:	Perform the expressive elements of a musical work indicated by the musical score and/or conductor, and transfer new knowledge and experiences to other musical works.
MU.68.S.1.1:	Improvise rhythmic and melodic phrases to accompany familiar songs and/or standard harmonic progressions. **Clarifications:** e.g., blues, rock
MU.68.S.1.2:	Compose a short musical piece. **Clarifications:** e.g., using traditional, non-traditional, digital, or classroom instruments and/or voice
MU.68.S.1.4:	Sing or play melodies by ear with support from the teacher and/or peers. **Clarifications:** e.g., melodies using traditional classroom instruments and/or voice
MU.68.S.2.1:	Perform music from memory to demonstrate knowledge of the musical structure. **Clarifications:** e.g., basic themes, patterns, tonality, melody, harmony
MU.68.S.2.2:	Transfer performance techniques from familiar to unfamiliar pieces.
MU.68.S.3.1:	Sing and/or play age-appropriate repertoire expressively. **Clarifications:** e.g., technique, phrasing, dynamics, tone quality, blend, balance, intonation, kinesthetic support/response
MU.68.S.3.2:	Demonstrate proper vocal or instrumental technique. **Clarifications:** e.g., posture, breathing, fingering, embouchure, bow technique, tuning, strumming
MU.68.S.3.3:	Sight-read standard exercises and simple repertoire. **Clarifications:** e.g., note and rest values, key signatures, time signatures, expressive markings, special harmonic and/or notation symbols
MU.68.S.3.4:	Compare written notation to aural examples and analyze for accuracy of rhythm and pitch. **Clarifications:** e.g., error detection, interval reinforcement
MU.68.S.3.5:	Notate rhythmic phrases and/or melodies, in varying simple meters, performed by someone else.
MU.68.S.3.6:	Develop and demonstrate efficient rehearsal strategies to apply skills and techniques. **Clarifications:** e.g., independently, collaboratively
MA.K12.MTR.1.1:	Mathematicians who participate in effortful learning both individually and with others: • Analyze the problem in a way that makes sense given the task. • Ask questions that will help with solving the task. • Build perseverance by modifying methods as needed while solving a challenging task. • Stay engaged and maintain a positive mindset when working to solve tasks. • Help and support each other when attempting a new method or approach. **Clarifications:** Teachers who encourage students to participate actively in effortful learning both individually and with others: • Cultivate a community of growth mindset learners. • Foster perseverance in students by choosing tasks that are challenging. • Develop students' ability to analyze and problem solve. • Recognize students' effort when solving challenging problems.
MA.K12.MTR.2.1:	Demonstrate understanding by representing problems in multiple ways. Mathematicians who demonstrate understanding by representing problems in multiple ways: • Build understanding through modeling and using manipulatives. • Represent solutions to problems in multiple ways using objects, drawings, tables, graphs and equations. • Progress from modeling problems with objects and drawings to using algorithms and equations. • Express connections between concepts and representations. • Choose a representation based on the given context or purpose. **Clarifications:** Teachers who encourage students to demonstrate understanding by representing problems in multiple ways: • Help students make connections between concepts and representations. • Provide opportunities for students to use manipulatives when investigating concepts. • Guide students from concrete to pictorial to abstract representations as understanding progresses. • Show students that various representations can have different purposes and can be useful in different situations.
MA.K12.MTR.3.1:	Complete tasks with mathematical fluency. Mathematicians who complete tasks with mathematical fluency: • Select efficient and appropriate methods for solving problems within the given context. • Maintain flexibility and accuracy while performing procedures and mental calculations. • Complete tasks accurately and with confidence. • Adapt procedures to apply them to a new context. • Use feedback to improve efficiency when performing calculations.

	Clarifications: Teachers who encourage students to complete tasks with mathematical fluency: • Provide students with the flexibility to solve problems by selecting a procedure that allows them to solve efficiently and accurately. • Offer multiple opportunities for students to practice efficient and generalizable methods. • Provide opportunities for students to reflect on the method they used and determine if a more efficient method could have been used.
MA.K12.MTR.4.1:	Engage in discussions that reflect on the mathematical thinking of self and others. Mathematicians who engage in discussions that reflect on the mathematical thinking of self and others: • Communicate mathematical ideas, vocabulary and methods effectively. • Analyze the mathematical thinking of others. • Compare the efficiency of a method to those expressed by others. • Recognize errors and suggest how to correctly solve the task. • Justify results by explaining methods and processes. • Construct possible arguments based on evidence. **Clarifications:** Teachers who encourage students to engage in discussions that reflect on the mathematical thinking of self and others: • Establish a culture in which students ask questions of the teacher and their peers, and error is an opportunity for learning. • Create opportunities for students to discuss their thinking with peers. • Select, sequence and present student work to advance and deepen understanding of correct and increasingly efficient methods. • Develop students' ability to justify methods and compare their responses to the responses of their peers.
MA.K12.MTR.5.1:	Use patterns and structure to help understand and connect mathematical concepts. Mathematicians who use patterns and structure to help understand and connect mathematical concepts: • Focus on relevant details within a problem. • Create plans and procedures to logically order events, steps or ideas to solve problems. • Decompose a complex problem into manageable parts. • Relate previously learned concepts to new concepts. • Look for similarities among problems. • Connect solutions of problems to more complicated large-scale situations. **Clarifications:** Teachers who encourage students to use patterns and structure to help understand and connect mathematical concepts: • Help students recognize the patterns in the world around them and connect these patterns to mathematical concepts. • Support students to develop generalizations based on the similarities found among problems. • Provide opportunities for students to create plans and procedures to solve problems. • Develop students' ability to construct relationships between their current understanding and more sophisticated ways of thinking.
MA.K12.MTR.6.1:	Assess the reasonableness of solutions. Mathematicians who assess the reasonableness of solutions: • Estimate to discover possible solutions. • Use benchmark quantities to determine if a solution makes sense. • Check calculations when solving problems. • Verify possible solutions by explaining the methods used. • Evaluate results based on the given context. **Clarifications:** Teachers who encourage students to assess the reasonableness of solutions: • Have students estimate or predict solutions prior to solving. • Prompt students to continually ask, "Does this solution make sense? How do you know?" • Reinforce that students check their work as they progress within and after a task. • Strengthen students' ability to verify solutions through justifications.
MA.K12.MTR.7.1:	Apply mathematics to real-world contexts. Mathematicians who apply mathematics to real-world contexts: • Connect mathematical concepts to everyday experiences. • Use models and methods to understand, represent and solve problems. • Perform investigations to gather data or determine if a method is appropriate. • Redesign models and methods to improve accuracy or efficiency. **Clarifications:** Teachers who encourage students to apply mathematics to real-world contexts: • Provide opportunities for students to create models, both concrete and abstract, and perform investigations. • Challenge students to question the accuracy of their models and methods. • Support students as they validate conclusions by comparing them to the given situation. • Indicate how various concepts can be applied to other disciplines.
ELA.K12.EE.1.1:	Cite evidence to explain and justify reasoning. **Clarifications:** K-1 Students include textual evidence in their oral communication with guidance and support from adults. The evidence can consist of details from the text without naming the text. During 1st grade, students learn how to incorporate the evidence in their writing. 2-3 Students include relevant textual evidence in their written and oral communication. Students should name the text when they refer to it. In 3rd grade, students should use a combination of direct and indirect citations. 4-5 Students continue with previous skills and reference comments made by speakers and peers. Students cite texts that they've directly quoted, paraphrased, or used for information. When writing, students will use the form of citation dictated by the instructor or the style guide referenced by the instructor.

	6-8 Students continue with previous skills and use a style guide to create a proper citation. 9-12 Students continue with previous skills and should be aware of existing style guides and the ways in which they differ.
ELA.K12.EE.2.1:	Read and comprehend grade-level complex texts proficiently. **Clarifications:** See Text Complexity for grade-level complexity bands and a text complexity rubric.
ELA.K12.EE.3.1:	Make inferences to support comprehension. **Clarifications:** Students will make inferences before the words infer or inference are introduced. Kindergarten students will answer questions like "Why is the girl smiling?" or make predictions about what will happen based on the title page. Students will use the terms and apply them in 2nd grade and beyond.
ELA.K12.EE.4.1:	Use appropriate collaborative techniques and active listening skills when engaging in discussions in a variety of situations. **Clarifications:** In kindergarten, students learn to listen to one another respectfully. In grades 1-2, students build upon these skills by justifying what they are thinking. For example: "I think _____ because _____." The collaborative conversations are becoming academic conversations. In grades 3-12, students engage in academic conversations discussing claims and justifying their reasoning, refining and applying skills. Students build on ideas, propel the conversation, and support claims and counterclaims with evidence.
ELA.K12.EE.5.1:	Use the accepted rules governing a specific format to create quality work. **Clarifications:** Students will incorporate skills learned into work products to produce quality work. For students to incorporate these skills appropriately, they must receive instruction. A 3rd grade student creating a poster board display must have instruction in how to effectively present information to do quality work.
ELA.K12.EE.6.1:	Use appropriate voice and tone when speaking or writing. **Clarifications:** In kindergarten and 1st grade, students learn the difference between formal and informal language. For example, the way we talk to our friends differs from the way we speak to adults. In 2nd grade and beyond, students practice appropriate social and academic language to discuss texts.
DA.68.S.2.1:	Sustain focused attention, respect, and discipline during classes and performances.
ELD.K12.ELL.SI.1:	English language learners communicate for social and instructional purposes within the school setting.

General Course Information and Notes

VERSION DESCRIPTION

Students with considerable band experience strengthen their instrumental technique, music literacy, and aesthetic response through rehearsal, performance, and study of a variety of advanced, high-quality band literature. Instrumentalists refine their knowledge of music notation and theory, sound production, and personal and group rehearsal strategies. Public performances may serve as a culmination of specific instructional goals. Students may be required to attend and/or participate in rehearsals and performances outside the school day to support, extend, and assess learning in the classroom. This course may also require students to obtain a musical instrument (e.g., borrow, rent, purchase) from an outside source.

GENERAL NOTES

Florida's Benchmarks for Excellent Student Thinking (B.E.S.T.) Standards
This course includes Florida's B.E.S.T. ELA Expectations (EE) and Mathematical Thinking and Reasoning Standards (MTRs) for students. Florida educators should intentionally embed these standards within the content and their instruction as applicable. For guidance on the implementation of the EEs and MTRs, please visit cpalms.org/Standards/BEST_Standards.aspx and select the appropriate B.E.S.T. Standards package.

English Language Development ELD Standards Special Notes Section:
Teachers are required to provide listening, speaking, reading and writing instruction that allows English language learners (ELL) to communicate for social and instructional purposes within the school setting. For the given level of English language proficiency and with visual, graphic, or interactive support, students will interact with grade level words, expressions, sentences and discourse to process or produce language necessary for academic success. The ELD standard should specify a relevant content area concept or topic of study chosen by curriculum developers and teachers which maximizes an ELL's need for communication and social skills. To access an ELL supporting document which delineates performance definitions and descriptors, please click on the following link: cpalms.org/uploads/docs/standards/eld/SI.pdf

GENERAL INFORMATION

Course Number: 1302030

Course Path: Section: Grades PreK to 12 Education Courses > **Grade Group:** Grades 6 to 8 Education Courses > **Subject:** Music Education > **SubSubject:** Instrumental Music >
Abbreviated Title: M/J BAND 4

Course Length: Year (Y)

Course Level: 2

Course Status: Draft - Course Pending Approval

Grade Level(s): 6,7,8

Educator Certifications

Instrumental Music (Secondary Grades 7-12)
Instrumental Music (Elementary and Secondary Grades K-12)
Music (Elementary and Secondary Grades K-12)

M/J Orchestra 1 (#1302040) 2022 - And Beyond

Course Standards

Name	Description
MU.68.C.1.1:	Develop strategies for listening to unfamiliar musical works. **Clarifications:** e.g., listening maps, active listening, checklists
MU.68.C.2.1:	Critique personal performance, experiment with a variety of solutions, and make appropriate adjustments with guidance from teachers and peers. **Clarifications:** e.g., intonation, balance, blend, phrasing, rhythm
MU.68.F.3.2:	Investigate and discuss laws that protect intellectual property, and practice safe, legal, and responsible acquisition and use of musical media.
MU.68.H.2.3:	Classify the literature being studied by genre, style, and/or time period.
MU.68.H.3.1:	Identify connections among music and other content areas and/or contexts through interdisciplinary collaboration. **Clarifications:** e.g., school: other music classes, social studies, dance, physical education, science, health, math, world languages; community: cultural connections and traditions, ceremonial music, sales and advertising, communication
MU.68.O.1.1:	Compare performances of a musical work to identify artistic choices made by performers. **Clarifications:** e.g., rhythm, melody, timbre, form, tonality, harmony, expressive elements; choral, orchestral, band, ensemble
MU.68.O.3.1:	Describe how the combination of instrumentation and expressive elements in a musical work can convey a specific thought, idea, mood, and/or image. **Clarifications:** e.g., tempo markings, expression markings, articulation markings, phrasing, scales, modes, harmonic structure, timbre, rhythm, orchestration
MU.68.O.3.2:	Perform the expressive elements of a musical work indicated by the musical score and/or conductor, and transfer new knowledge and experiences to other musical works.
MU.68.S.1.3:	Arrange a short musical piece by manipulating melody, form, rhythm, and/or voicing.
MU.68.S.1.4:	Sing or play melodies by ear with support from the teacher and/or peers. **Clarifications:** e.g., melodies using traditional classroom instruments and/or voice
MU.68.S.2.1:	Perform music from memory to demonstrate knowledge of the musical structure. **Clarifications:** e.g., basic themes, patterns, tonality, melody, harmony
MU.68.S.2.2:	Transfer performance techniques from familiar to unfamiliar pieces.
MU.68.S.3.1:	Sing and/or play age-appropriate repertoire expressively. **Clarifications:** e.g., technique, phrasing, dynamics, tone quality, blend, balance, intonation, kinesthetic support/response
MU.68.S.3.2:	Demonstrate proper vocal or instrumental technique. **Clarifications:** e.g., posture, breathing, fingering, embouchure, bow technique, tuning, strumming
MU.68.S.3.3:	Sight-read standard exercises and simple repertoire. **Clarifications:** e.g., note and rest values, key signatures, time signatures, expressive markings, special harmonic and/or notation symbols
MU.68.S.3.4:	Compare written notation to aural examples and analyze for accuracy of rhythm and pitch. **Clarifications:** e.g., error detection, interval reinforcement
MU.68.S.3.6:	Develop and demonstrate efficient rehearsal strategies to apply skills and techniques. **Clarifications:** e.g., independently, collaboratively
MA.K12.MTR.1.1:	Mathematicians who participate in effortful learning both individually and with others: • Analyze the problem in a way that makes sense given the task. • Ask questions that will help with solving the task. • Build perseverance by modifying methods as needed while solving a challenging task. • Stay engaged and maintain a positive mindset when working to solve tasks. • Help and support each other when attempting a new method or approach. **Clarifications:** Teachers who encourage students to participate actively in effortful learning both individually and with others: • Cultivate a community of growth mindset learners. • Foster perseverance in students by choosing tasks that are challenging. • Develop students' ability to analyze and problem solve. • Recognize students' effort when solving challenging problems.

Demonstrate understanding by representing problems in multiple ways.
Mathematicians who demonstrate understanding by representing problems in multiple ways:

- Build understanding through modeling and using manipulatives.
- Represent solutions to problems in multiple ways using objects, drawings, tables, graphs and equations.
- Progress from modeling problems with objects and drawings to using algorithms and equations.
- Express connections between concepts and representations.

MA.K12.MTR.2.1:

- Choose a representation based on the given context or purpose.

Clarifications:
Teachers who encourage students to demonstrate understanding by representing problems in multiple ways:

- Help students make connections between concepts and representations.
- Provide opportunities for students to use manipulatives when investigating concepts.
- Guide students from concrete to pictorial to abstract representations as understanding progresses.
- Show students that various representations can have different purposes and can be useful in different situations.

Complete tasks with mathematical fluency.
Mathematicians who complete tasks with mathematical fluency:

- Select efficient and appropriate methods for solving problems within the given context.
- Maintain flexibility and accuracy while performing procedures and mental calculations.
- Complete tasks accurately and with confidence.
- Adapt procedures to apply them to a new context.

MA.K12.MTR.3.1:

- Use feedback to improve efficiency when performing calculations.

Clarifications:
Teachers who encourage students to complete tasks with mathematical fluency:

- Provide students with the flexibility to solve problems by selecting a procedure that allows them to solve efficiently and accurately.
- Offer multiple opportunities for students to practice efficient and generalizable methods.
- Provide opportunities for students to reflect on the method they used and determine if a more efficient method could have been used.

Engage in discussions that reflect on the mathematical thinking of self and others.
Mathematicians who engage in discussions that reflect on the mathematical thinking of self and others:

- Communicate mathematical ideas, vocabulary and methods effectively.
- Analyze the mathematical thinking of others.
- Compare the efficiency of a method to those expressed by others.
- Recognize errors and suggest how to correctly solve the task.
- Justify results by explaining methods and processes.

MA.K12.MTR.4.1:

- Construct possible arguments based on evidence.

Clarifications:
Teachers who encourage students to engage in discussions that reflect on the mathematical thinking of self and others:

- Establish a culture in which students ask questions of the teacher and their peers, and error is an opportunity for learning.
- Create opportunities for students to discuss their thinking with peers.
- Select, sequence and present student work to advance and deepen understanding of correct and increasingly efficient methods.
- Develop students' ability to justify methods and compare their responses to the responses of their peers.

Use patterns and structure to help understand and connect mathematical concepts.
Mathematicians who use patterns and structure to help understand and connect mathematical concepts:

- Focus on relevant details within a problem.
- Create plans and procedures to logically order events, steps or ideas to solve problems.
- Decompose a complex problem into manageable parts.
- Relate previously learned concepts to new concepts.
- Look for similarities among problems.

MA.K12.MTR.5.1:

- Connect solutions of problems to more complicated large-scale situations.

Clarifications:
Teachers who encourage students to use patterns and structure to help understand and connect mathematical concepts:

- Help students recognize the patterns in the world around them and connect these patterns to mathematical concepts.
- Support students to develop generalizations based on the similarities found among problems.
- Provide opportunities for students to create plans and procedures to solve problems.
- Develop students' ability to construct relationships between their current understanding and more sophisticated ways of thinking.

Assess the reasonableness of solutions.
Mathematicians who assess the reasonableness of solutions:

- Estimate to discover possible solutions.
- Use benchmark quantities to determine if a solution makes sense.
- Check calculations when solving problems.
- Verify possible solutions by explaining the methods used.

MA.K12.MTR.6.1:

- Evaluate results based on the given context.

Clarifications:
Teachers who encourage students to assess the reasonableness of solutions:

- Have students estimate or predict solutions prior to solving.
- Prompt students to continually ask, "Does this solution make sense? How do you know?"
- Reinforce that students check their work as they progress within and after a task.
- Strengthen students' ability to verify solutions through justifications.

MA.K12.MTR.7.1:	Apply mathematics to real-world contexts. Mathematicians who apply mathematics to real-world contexts: • Connect mathematical concepts to everyday experiences. • Use models and methods to understand, represent and solve problems. • Perform investigations to gather data or determine if a method is appropriate. • Redesign models and methods to improve accuracy or efficiency. **Clarifications:** Teachers who encourage students to apply mathematics to real-world contexts: • Provide opportunities for students to create models, both concrete and abstract, and perform investigations. • Challenge students to question the accuracy of their models and methods. • Support students as they validate conclusions by comparing them to the given situation. • Indicate how various concepts can be applied to other disciplines.
ELA.K12.EE.1.1:	Cite evidence to explain and justify reasoning. **Clarifications:** K-1 Students include textual evidence in their oral communication with guidance and support from adults. The evidence can consist of details from the text without naming the text. During 1st grade, students learn how to incorporate the evidence in their writing. 2-3 Students include relevant textual evidence in their written and oral communication. Students should name the text when they refer to it. In 3rd grade, students should use a combination of direct and indirect citations. 4-5 Students continue with previous skills and reference comments made by speakers and peers. Students cite texts that they've directly quoted, paraphrased, or used for information. When writing, students will use the form of citation dictated by the instructor or the style guide referenced by the instructor. 6-8 Students continue with previous skills and use a style guide to create a proper citation. 9-12 Students continue with previous skills and should be aware of existing style guides and the ways in which they differ.
ELA.K12.EE.2.1:	Read and comprehend grade-level complex texts proficiently. **Clarifications:** See Text Complexity for grade-level complexity bands and a text complexity rubric.
ELA.K12.EE.3.1:	Make inferences to support comprehension. **Clarifications:** Students will make inferences before the words infer or inference are introduced. Kindergarten students will answer questions like "Why is the girl smiling?" or make predictions about what will happen based on the title page. Students will use the terms and apply them in 2nd grade and beyond.
ELA.K12.EE.4.1:	Use appropriate collaborative techniques and active listening skills when engaging in discussions in a variety of situations. **Clarifications:** In kindergarten, students learn to listen to one another respectfully. In grades 1-2, students build upon these skills by justifying what they are thinking. For example: "I think _____ because _____." The collaborative conversations are becoming academic conversations. In grades 3-12, students engage in academic conversations discussing claims and justifying their reasoning, refining and applying skills. Students build on ideas, propel the conversation, and support claims and counterclaims with evidence.
ELA.K12.EE.5.1:	Use the accepted rules governing a specific format to create quality work. **Clarifications:** Students will incorporate skills learned into work products to produce quality work. For students to incorporate these skills appropriately, they must receive instruction. A 3rd grade student creating a poster board display must have instruction in how to effectively present information to do quality work.
ELA.K12.EE.6.1:	Use appropriate voice and tone when speaking or writing. **Clarifications:** In kindergarten and 1st grade, students learn the difference between formal and informal language. For example, the way we talk to our friends differs from the way we speak to adults. In 2nd grade and beyond, students practice appropriate social and academic language to discuss texts.
DA.68.S.2.1:	Sustain focused attention, respect, and discipline during classes and performances.
ELD.K12.ELL.SI.1:	English language learners communicate for social and instructional purposes within the school setting.

General Course Information and Notes

VERSION DESCRIPTION

Students who have little or no experience on violin, viola, cello, bass, or harp explore high-quality music literature written or transcribed for string orchestra. Study includes the development of foundational instrumental ensemble techniques, performance skills, music literacy, and aesthetic awareness. Public performances may serve as a culmination of specific instructional goals. Students may be required to attend and/or participate in rehearsals and performances outside the school day to support, extend, and assess learning in the classroom. This course may also require students to obtain a musical instrument (e.g., borrow, rent, purchase) from an outside source.

GENERAL NOTES

Florida's Benchmarks for Excellent Student Thinking (B.E.S.T.) Standards
This course includes Florida's B.E.S.T. ELA Expectations (EE) and Mathematical Thinking and Reasoning Standards (MTRs) for students. Florida educators should intentionally embed these standards within the content and their instruction as applicable. For guidance on the implementation of the EEs and MTRs, please visit cpalms.org/Standards/BEST_Standards.aspx and select the appropriate B.E.S.T. Standards package.

English Language Development ELD Standards Special Notes Section:
Teachers are required to provide listening, speaking, reading and writing instruction that allows English language learners (ELL) to communicate for social and instructional purposes within the school setting. For the given level of English language proficiency and with visual, graphic, or interactive support, students will interact with grade level words, expressions, sentences and discourse to process or produce language necessary for academic success. The ELD standard should specify a relevant content area concept or topic of study chosen by curriculum developers and teachers which maximizes an ELL's need for communication and social skills. To access an ELL supporting document which delineates performance definitions and descriptors, please click on the following link: cpalms.org/uploads/docs/standards/eld/SI.pdf

GENERAL INFORMATION

Course Number: 1302040

Course Path: Section: Grades PreK to 12 Education Courses > **Grade Group:** Grades 6 to 8 Education Courses > **Subject:** Music Education > **SubSubject:** Instrumental Music >
Abbreviated Title: M/J ORCH 1
Course Length: Year (Y)
Course Level: 2

Course Status: Draft - Course Pending Approval
Grade Level(s): 6,7,8

Educator Certifications

Instrumental Music (Secondary Grades 7-12)
Instrumental Music (Elementary and Secondary Grades K-12)
Music (Elementary and Secondary Grades K-12)

M/J Orchestra 2 (#1302050) 2022 - And Beyond

Course Standards

Name	Description
MU.68.C.1.1:	Develop strategies for listening to unfamiliar musical works. **Clarifications:** e.g., listening maps, active listening, checklists
MU.68.C.1.2:	Compare, using correct music vocabulary, the aesthetic impact of a performance to one's own hypothesis of the composer's intent. **Clarifications:** e.g., quality recordings, peer group and individual performances, composer notes, instrumentation, expressive elements, title
MU.68.C.2.1:	Critique personal performance, experiment with a variety of solutions, and make appropriate adjustments with guidance from teachers and peers. **Clarifications:** e.g., intonation, balance, blend, phrasing, rhythm
MU.68.F.2.1:	Describe several routes a composition or performance could travel from creator to consumer. **Clarifications:** e.g., MIDI and other technology, production, sharing on the Internet, home studios, professional recording studios, sales
MU.68.F.3.2:	Investigate and discuss laws that protect intellectual property, and practice safe, legal, and responsible acquisition and use of musical media.
MU.68.H.1.1:	Describe the functions of music from various cultures and time periods.
MU.68.H.2.3:	Classify the literature being studied by genre, style, and/or time period.
MU.68.H.3.1:	Identify connections among music and other content areas and/or contexts through interdisciplinary collaboration. **Clarifications:** e.g., school: other music classes, social studies, dance, physical education, science, health, math, world languages; community: cultural connections and traditions, ceremonial music, sales and advertising, communication
MU.68.O.1.1:	Compare performances of a musical work to identify artistic choices made by performers. **Clarifications:** e.g., rhythm, melody, timbre, form, tonality, harmony, expressive elements; choral, orchestral, band, ensemble
MU.68.O.3.1:	Describe how the combination of instrumentation and expressive elements in a musical work can convey a specific thought, idea, mood, and/or image. **Clarifications:** e.g., tempo markings, expression markings, articulation markings, phrasing, scales, modes, harmonic structure, timbre, rhythm, orchestration
MU.68.O.3.2:	Perform the expressive elements of a musical work indicated by the musical score and/or conductor, and transfer new knowledge and experiences to other musical works.
MU.68.S.1.1:	Improvise rhythmic and melodic phrases to accompany familiar songs and/or standard harmonic progressions. **Clarifications:** e.g., blues, rock
MU.68.S.1.3:	Arrange a short musical piece by manipulating melody, form, rhythm, and/or voicing.
MU.68.S.1.4:	Sing or play melodies by ear with support from the teacher and/or peers. **Clarifications:** e.g., melodies using traditional classroom instruments and/or voice
MU.68.S.2.1:	Perform music from memory to demonstrate knowledge of the musical structure. **Clarifications:** e.g., basic themes, patterns, tonality, melody, harmony
MU.68.S.2.2:	Transfer performance techniques from familiar to unfamiliar pieces.
MU.68.S.3.1:	Sing and/or play age-appropriate repertoire expressively. **Clarifications:** e.g., technique, phrasing, dynamics, tone quality, blend, balance, intonation, kinesthetic support/response
MU.68.S.3.2:	Demonstrate proper vocal or instrumental technique. **Clarifications:** e.g., posture, breathing, fingering, embouchure, bow technique, tuning, strumming
MU.68.S.3.3:	Sight-read standard exercises and simple repertoire. **Clarifications:** e.g., note and rest values, key signatures, time signatures, expressive markings, special harmonic and/or notation symbols
MU.68.S.3.4:	Compare written notation to aural examples and analyze for accuracy of rhythm and pitch. **Clarifications:** e.g., error detection, interval reinforcement
MU.68.S.3.6:	Develop and demonstrate efficient rehearsal strategies to apply skills and techniques. **Clarifications:** e.g., independently, collaboratively
	Mathematicians who participate in effortful learning both individually and with others:

- Analyze the problem in a way that makes sense given the task.
- Ask questions that will help with solving the task.
- Build perseverance by modifying methods as needed while solving a challenging task.
- Stay engaged and maintain a positive mindset when working to solve tasks.
- Help and support each other when attempting a new method or approach.

MA.K12.MTR.1.1:

Clarifications:
Teachers who encourage students to participate actively in effortful learning both individually and with others:
- Cultivate a community of growth mindset learners.
- Foster perseverance in students by choosing tasks that are challenging.
- Develop students' ability to analyze and problem solve.
- Recognize students' effort when solving challenging problems.

Demonstrate understanding by representing problems in multiple ways.
Mathematicians who demonstrate understanding by representing problems in multiple ways:

- Build understanding through modeling and using manipulatives.
- Represent solutions to problems in multiple ways using objects, drawings, tables, graphs and equations.
- Progress from modeling problems with objects and drawings to using algorithms and equations.
- Express connections between concepts and representations.
- Choose a representation based on the given context or purpose.

MA.K12.MTR.2.1:

Clarifications:
Teachers who encourage students to demonstrate understanding by representing problems in multiple ways:
- Help students make connections between concepts and representations.
- Provide opportunities for students to use manipulatives when investigating concepts.
- Guide students from concrete to pictorial to abstract representations as understanding progresses.
- Show students that various representations can have different purposes and can be useful in different situations.

Complete tasks with mathematical fluency.
Mathematicians who complete tasks with mathematical fluency:

- Select efficient and appropriate methods for solving problems within the given context.
- Maintain flexibility and accuracy while performing procedures and mental calculations.
- Complete tasks accurately and with confidence.
- Adapt procedures to apply them to a new context.
- Use feedback to improve efficiency when performing calculations.

MA.K12.MTR.3.1:

Clarifications:
Teachers who encourage students to complete tasks with mathematical fluency:
- Provide students with the flexibility to solve problems by selecting a procedure that allows them to solve efficiently and accurately.
- Offer multiple opportunities for students to practice efficient and generalizable methods.
- Provide opportunities for students to reflect on the method they used and determine if a more efficient method could have been used.

Engage in discussions that reflect on the mathematical thinking of self and others.
Mathematicians who engage in discussions that reflect on the mathematical thinking of self and others:

- Communicate mathematical ideas, vocabulary and methods effectively.
- Analyze the mathematical thinking of others.
- Compare the efficiency of a method to those expressed by others.
- Recognize errors and suggest how to correctly solve the task.
- Justify results by explaining methods and processes.
- Construct possible arguments based on evidence.

MA.K12.MTR.4.1:

Clarifications:
Teachers who encourage students to engage in discussions that reflect on the mathematical thinking of self and others:
- Establish a culture in which students ask questions of the teacher and their peers, and error is an opportunity for learning.
- Create opportunities for students to discuss their thinking with peers.
- Select, sequence and present student work to advance and deepen understanding of correct and increasingly efficient methods.
- Develop students' ability to justify methods and compare their responses to the responses of their peers.

Use patterns and structure to help understand and connect mathematical concepts.
Mathematicians who use patterns and structure to help understand and connect mathematical concepts:

- Focus on relevant details within a problem.
- Create plans and procedures to logically order events, steps or ideas to solve problems.
- Decompose a complex problem into manageable parts.
- Relate previously learned concepts to new concepts.
- Look for similarities among problems.
- Connect solutions of problems to more complicated large-scale situations.

MA.K12.MTR.5.1:

Clarifications:
Teachers who encourage students to use patterns and structure to help understand and connect mathematical concepts:
- Help students recognize the patterns in the world around them and connect these patterns to mathematical concepts.
- Support students to develop generalizations based on the similarities found among problems.
- Provide opportunities for students to create plans and procedures to solve problems.
- Develop students' ability to construct relationships between their current understanding and more sophisticated ways of thinking.

Assess the reasonableness of solutions.
Mathematicians who assess the reasonableness of solutions:

MA.K12.MTR.6.1:	• Estimate to discover possible solutions. • Use benchmark quantities to determine if a solution makes sense. • Check calculations when solving problems. • Verify possible solutions by explaining the methods used. • Evaluate results based on the given context. **Clarifications:** Teachers who encourage students to assess the reasonableness of solutions: • Have students estimate or predict solutions prior to solving. • Prompt students to continually ask, "Does this solution make sense? How do you know?" • Reinforce that students check their work as they progress within and after a task. • Strengthen students' ability to verify solutions through justifications.
MA.K12.MTR.7.1:	Apply mathematics to real-world contexts. Mathematicians who apply mathematics to real-world contexts: • Connect mathematical concepts to everyday experiences. • Use models and methods to understand, represent and solve problems. • Perform investigations to gather data or determine if a method is appropriate. • Redesign models and methods to improve accuracy or efficiency. **Clarifications:** Teachers who encourage students to apply mathematics to real-world contexts: • Provide opportunities for students to create models, both concrete and abstract, and perform investigations. • Challenge students to question the accuracy of their models and methods. • Support students as they validate conclusions by comparing them to the given situation. • Indicate how various concepts can be applied to other disciplines.
ELA.K12.EE.1.1:	Cite evidence to explain and justify reasoning. **Clarifications:** K-1 Students include textual evidence in their oral communication with guidance and support from adults. The evidence can consist of details from the text without naming the text. During 1st grade, students learn how to incorporate the evidence in their writing. 2-3 Students include relevant textual evidence in their written and oral communication. Students should name the text when they refer to it. In 3rd grade, students should use a combination of direct and indirect citations. 4-5 Students continue with previous skills and reference comments made by speakers and peers. Students cite texts that they've directly quoted, paraphrased, or used for information. When writing, students will use the form of citation dictated by the instructor or the style guide referenced by the instructor. 6-8 Students continue with previous skills and use a style guide to create a proper citation. 9-12 Students continue with previous skills and should be aware of existing style guides and the ways in which they differ.
ELA.K12.EE.2.1:	Read and comprehend grade-level complex texts proficiently. **Clarifications:** See Text Complexity for grade-level complexity bands and a text complexity rubric.
ELA.K12.EE.3.1:	Make inferences to support comprehension. **Clarifications:** Students will make inferences before the words infer or inference are introduced. Kindergarten students will answer questions like "Why is the girl smiling?" or make predictions about what will happen based on the title page. Students will use the terms and apply them in 2nd grade and beyond.
ELA.K12.EE.4.1:	Use appropriate collaborative techniques and active listening skills when engaging in discussions in a variety of situations. **Clarifications:** In kindergarten, students learn to listen to one another respectfully. In grades 1-2, students build upon these skills by justifying what they are thinking. For example: "I think _____ because _____." The collaborative conversations are becoming academic conversations. In grades 3-12, students engage in academic conversations discussing claims and justifying their reasoning, refining and applying skills. Students build on ideas, propel the conversation, and support claims and counterclaims with evidence.
ELA.K12.EE.5.1:	Use the accepted rules governing a specific format to create quality work. **Clarifications:** Students will incorporate skills learned into work products to produce quality work. For students to incorporate these skills appropriately, they must receive instruction. A 3rd grade student creating a poster board display must have instruction in how to effectively present information to do quality work.
ELA.K12.EE.6.1:	Use appropriate voice and tone when speaking or writing. **Clarifications:** In kindergarten and 1st grade, students learn the difference between formal and informal language. For example, the way we talk to our friends differs from the way we speak to adults. In 2nd grade and beyond, students practice appropriate social and academic language to discuss texts.
DA.68.S.2.1:	Sustain focused attention, respect, and discipline during classes and performances.
ELD.K12.ELL.SI.1:	English language learners communicate for social and instructional purposes within the school setting.

General Course Information and Notes

VERSION DESCRIPTION

Students who have some previous orchestral experience focus on the development of instrumental technique, musical literacy, performance skills, and increasing aesthetic awareness through study, rehearsal, and performance of a variety of high-quality orchestra literature. Public performances may serve as a culmination of specific instructional goals. Students may be required to attend and/or participate in rehearsals and performances outside the school day to support, extend, and assess learning in the classroom. This course may also require students to obtain a musical instrument (e.g., borrow, rent, purchase) from an outside source.

GENERAL NOTES

Florida's Benchmarks for Excellent Student Thinking (B.E.S.T.) Standards
This course includes Florida's B.E.S.T. ELA Expectations (EE) and Mathematical Thinking and Reasoning Standards (MTRs) for students. Florida educators should intentionally embed these standards within the content and their instruction as applicable. For guidance on the implementation of the EEs and MTRs, please visit cpalms.org/Standards/BEST_Standards.aspx and select the appropriate B.E.S.T. Standards package.

English Language Development ELD Standards Special Notes Section:
Teachers are required to provide listening, speaking, reading and writing instruction that allows English language learners (ELL) to communicate for social and instructional purposes within the school setting. For the given level of English language proficiency and with visual, graphic, or interactive support, students will interact with grade level words, expressions, sentences and discourse to process or produce language necessary for academic success. The ELD standard should specify a relevant content area concept or topic of study chosen by curriculum developers and teachers which maximizes an ELL's need for communication and social skills. To access an ELL supporting document which delineates performance definitions and descriptors, please click on the following link: cpalms.org/uploads/docs/standards/eld/SI.pdf

GENERAL INFORMATION

Course Number: 1302050

Course Path: Section: Grades PreK to 12 Education Courses > **Grade Group:** Grades 6 to 8 Education Courses > **Subject:** Music Education > **SubSubject:** Instrumental Music >
Abbreviated Title: M/J ORCH 2
Course Length: Year (Y)
Course Level: 2

Course Status: Draft - Course Pending Approval

Grade Level(s): 6,7,8

Educator Certifications

Instrumental Music (Secondary Grades 7-12)
Instrumental Music (Elementary and Secondary Grades K-12)
Music (Elementary and Secondary Grades K-12)

M/J Orchestra 3 (#1302060) 2022 - And Beyond

Course Standards

Name	Description
MU.68.C.1.1:	Develop strategies for listening to unfamiliar musical works. **Clarifications:** e.g., listening maps, active listening, checklists
MU.68.C.1.2:	Compare, using correct music vocabulary, the aesthetic impact of a performance to one's own hypothesis of the composer's intent. **Clarifications:** e.g., quality recordings, peer group and individual performances, composer notes, instrumentation, expressive elements, title
MU.68.C.1.3:	Identify, aurally, instrumental styles and a variety of instrumental ensembles. **Clarifications:** e.g., Classical, Baroque, Romantic, contemporary, jazz, pop, solo, duet, trio, quartet, small ensembles
MU.68.C.2.1:	Critique personal performance, experiment with a variety of solutions, and make appropriate adjustments with guidance from teachers and peers. **Clarifications:** e.g., intonation, balance, blend, phrasing, rhythm
MU.68.C.2.2:	Critique, using correct music vocabulary, changes in one's own or others' musical performance resulting from practice or rehearsal. **Clarifications:** e.g., blend, balance, ensemble playing, sonority, technique, tone quality
MU.68.C.3.1:	Apply specific criteria to evaluate why a musical work is an exemplar in a specific style or genre.
MU.68.F.2.1:	Describe several routes a composition or performance could travel from creator to consumer. **Clarifications:** e.g., MIDI and other technology, production, sharing on the Internet, home studios, professional recording studios, sales
MU.68.F.3.2:	Investigate and discuss laws that protect intellectual property, and practice safe, legal, and responsible acquisition and use of musical media.
MU.68.H.1.1:	Describe the functions of music from various cultures and time periods.
MU.68.H.1.2:	Identify the works of representative composers within a specific style or time period.
MU.68.H.1.3:	Describe how American music has been influenced by other cultures.
MU.68.H.1.5:	Using representative musical works by selected composers, classify compositional characteristics common to a specific time period and/or genre.
MU.68.H.2.2:	Analyze how technology has changed the way music is created, performed, acquired, and experienced. **Clarifications:** e.g., from harpsichord to piano; from phonograph to CD
MU.68.H.2.3:	Classify the literature being studied by genre, style, and/or time period.
MU.68.H.3.1:	Identify connections among music and other content areas and/or contexts through interdisciplinary collaboration. **Clarifications:** e.g., school: other music classes, social studies, dance, physical education, science, health, math, world languages; community: cultural connections and traditions, ceremonial music, sales and advertising, communication
MU.68.O.1.1:	Compare performances of a musical work to identify artistic choices made by performers. **Clarifications:** e.g., rhythm, melody, timbre, form, tonality, harmony, expressive elements; choral, orchestral, band, ensemble
MU.68.O.2.2:	Demonstrate knowledge of major and minor tonalities through performance and composition. **Clarifications:** e.g., scales; key signatures; relative major/minor; parallel major/minor
MU.68.O.3.1:	Describe how the combination of instrumentation and expressive elements in a musical work can convey a specific thought, idea, mood, and/or image. **Clarifications:** e.g., tempo markings, expression markings, articulation markings, phrasing, scales, modes, harmonic structure, timbre, rhythm, orchestration
MU.68.O.3.2:	Perform the expressive elements of a musical work indicated by the musical score and/or conductor, and transfer new knowledge and experiences to other musical works.
MU.68.S.1.1:	Improvise rhythmic and melodic phrases to accompany familiar songs and/or standard harmonic progressions. **Clarifications:** e.g., blues, rock
MU.68.S.1.3:	Arrange a short musical piece by manipulating melody, form, rhythm, and/or voicing.
MU.68.S.1.4:	Sing or play melodies by ear with support from the teacher and/or peers. **Clarifications:** e.g., melodies using traditional classroom instruments and/or voice
MU.68.S.2.1:	Perform music from memory to demonstrate knowledge of the musical structure. **Clarifications:** e.g., basic themes, patterns, tonality, melody, harmony
MU.68.S.2.2:	Transfer performance techniques from familiar to unfamiliar pieces.

MU.68.S.3.1:	Sing and/or play age-appropriate repertoire expressively. **Clarifications:** e.g., technique, phrasing, dynamics, tone quality, blend, balance, intonation, kinesthetic support/response
MU.68.S.3.2:	Demonstrate proper vocal or instrumental technique. **Clarifications:** e.g., posture, breathing, fingering, embouchure, bow technique, tuning, strumming
MU.68.S.3.3:	Sight-read standard exercises and simple repertoire. **Clarifications:** e.g., note and rest values, key signatures, time signatures, expressive markings, special harmonic and/or notation symbols
MU.68.S.3.4:	Compare written notation to aural examples and analyze for accuracy of rhythm and pitch. **Clarifications:** e.g., error detection, interval reinforcement
MU.68.S.3.5:	Notate rhythmic phrases and/or melodies, in varying simple meters, performed by someone else.
MU.68.S.3.6:	Develop and demonstrate efficient rehearsal strategies to apply skills and techniques. **Clarifications:** e.g., independently, collaboratively
MA.K12.MTR.1.1:	Mathematicians who participate in effortful learning both individually and with others: • Analyze the problem in a way that makes sense given the task. • Ask questions that will help with solving the task. • Build perseverance by modifying methods as needed while solving a challenging task. • Stay engaged and maintain a positive mindset when working to solve tasks. • Help and support each other when attempting a new method or approach. **Clarifications:** Teachers who encourage students to participate actively in effortful learning both individually and with others: • Cultivate a community of growth mindset learners. • Foster perseverance in students by choosing tasks that are challenging. • Develop students' ability to analyze and problem solve. • Recognize students' effort when solving challenging problems.
MA.K12.MTR.2.1:	Demonstrate understanding by representing problems in multiple ways. Mathematicians who demonstrate understanding by representing problems in multiple ways: • Build understanding through modeling and using manipulatives. • Represent solutions to problems in multiple ways using objects, drawings, tables, graphs and equations. • Progress from modeling problems with objects and drawings to using algorithms and equations. • Express connections between concepts and representations. • Choose a representation based on the given context or purpose. **Clarifications:** Teachers who encourage students to demonstrate understanding by representing problems in multiple ways: • Help students make connections between concepts and representations. • Provide opportunities for students to use manipulatives when investigating concepts. • Guide students from concrete to pictorial to abstract representations as understanding progresses. • Show students that various representations can have different purposes and can be useful in different situations.
MA.K12.MTR.3.1:	Complete tasks with mathematical fluency. Mathematicians who complete tasks with mathematical fluency: • Select efficient and appropriate methods for solving problems within the given context. • Maintain flexibility and accuracy while performing procedures and mental calculations. • Complete tasks accurately and with confidence. • Adapt procedures to apply them to a new context. • Use feedback to improve efficiency when performing calculations. **Clarifications:** Teachers who encourage students to complete tasks with mathematical fluency: • Provide students with the flexibility to solve problems by selecting a procedure that allows them to solve efficiently and accurately. • Offer multiple opportunities for students to practice efficient and generalizable methods. • Provide opportunities for students to reflect on the method they used and determine if a more efficient method could have been used.
MA.K12.MTR.4.1:	Engage in discussions that reflect on the mathematical thinking of self and others. Mathematicians who engage in discussions that reflect on the mathematical thinking of self and others: • Communicate mathematical ideas, vocabulary and methods effectively. • Analyze the mathematical thinking of others. • Compare the efficiency of a method to those expressed by others. • Recognize errors and suggest how to correctly solve the task. • Justify results by explaining methods and processes. • Construct possible arguments based on evidence. **Clarifications:** Teachers who encourage students to engage in discussions that reflect on the mathematical thinking of self and others: • Establish a culture in which students ask questions of the teacher and their peers, and error is an opportunity for learning. • Create opportunities for students to discuss their thinking with peers.

	• Select, sequence and present student work to advance and deepen understanding of correct and increasingly efficient methods. • Develop students' ability to justify methods and compare their responses to the responses of their peers.
MA.K12.MTR.5.1:	Use patterns and structure to help understand and connect mathematical concepts. Mathematicians who use patterns and structure to help understand and connect mathematical concepts: • Focus on relevant details within a problem. • Create plans and procedures to logically order events, steps or ideas to solve problems. • Decompose a complex problem into manageable parts. • Relate previously learned concepts to new concepts. • Look for similarities among problems. • Connect solutions of problems to more complicated large-scale situations. **Clarifications:** Teachers who encourage students to use patterns and structure to help understand and connect mathematical concepts: • Help students recognize the patterns in the world around them and connect these patterns to mathematical concepts. • Support students to develop generalizations based on the similarities found among problems. • Provide opportunities for students to create plans and procedures to solve problems. • Develop students' ability to construct relationships between their current understanding and more sophisticated ways of thinking.
MA.K12.MTR.6.1:	Assess the reasonableness of solutions. Mathematicians who assess the reasonableness of solutions: • Estimate to discover possible solutions. • Use benchmark quantities to determine if a solution makes sense. • Check calculations when solving problems. • Verify possible solutions by explaining the methods used. • Evaluate results based on the given context. **Clarifications:** Teachers who encourage students to assess the reasonableness of solutions: • Have students estimate or predict solutions prior to solving. • Prompt students to continually ask, "Does this solution make sense? How do you know?" • Reinforce that students check their work as they progress within and after a task. • Strengthen students' ability to verify solutions through justifications.
MA.K12.MTR.7.1:	Apply mathematics to real-world contexts. Mathematicians who apply mathematics to real-world contexts: • Connect mathematical concepts to everyday experiences. • Use models and methods to understand, represent and solve problems. • Perform investigations to gather data or determine if a method is appropriate. • Redesign models and methods to improve accuracy or efficiency. **Clarifications:** Teachers who encourage students to apply mathematics to real-world contexts: • Provide opportunities for students to create models, both concrete and abstract, and perform investigations. • Challenge students to question the accuracy of their models and methods. • Support students as they validate conclusions by comparing them to the given situation. • Indicate how various concepts can be applied to other disciplines.
ELA.K12.EE.1.1:	Cite evidence to explain and justify reasoning. **Clarifications:** K-1 Students include textual evidence in their oral communication with guidance and support from adults. The evidence can consist of details from the text without naming the text. During 1st grade, students learn how to incorporate the evidence in their writing. 2-3 Students include relevant textual evidence in their written and oral communication. Students should name the text when they refer to it. In 3rd grade, students should use a combination of direct and indirect citations. 4-5 Students continue with previous skills and reference comments made by speakers and peers. Students cite texts that they've directly quoted, paraphrased, or used for information. When writing, students will use the form of citation dictated by the instructor or the style guide referenced by the instructor. 6-8 Students continue with previous skills and use a style guide to create a proper citation. 9-12 Students continue with previous skills and should be aware of existing style guides and the ways in which they differ.
ELA.K12.EE.2.1:	Read and comprehend grade-level complex texts proficiently. **Clarifications:** See Text Complexity for grade-level complexity bands and a text complexity rubric.
ELA.K12.EE.3.1:	Make inferences to support comprehension. **Clarifications:** Students will make inferences before the words infer or inference are introduced. Kindergarten students will answer questions like "Why is the girl smiling?" or make predictions about what will happen based on the title page. Students will use the terms and apply them in 2nd grade and beyond.
ELA.K12.EE.4.1:	Use appropriate collaborative techniques and active listening skills when engaging in discussions in a variety of situations. **Clarifications:** In kindergarten, students learn to listen to one another respectfully. In grades 1-2, students build upon these skills by justifying what they are thinking. For example: "I think _____ because _____." The collaborative conversations are becoming academic conversations.

	In grades 3-12, students engage in academic conversations discussing claims and justifying their reasoning, refining and applying skills. Students build on ideas, propel the conversation, and support claims and counterclaims with evidence.
ELA.K12.EE.5.1:	Use the accepted rules governing a specific format to create quality work. **Clarifications:** Students will incorporate skills learned into work products to produce quality work. For students to incorporate these skills appropriately, they must receive instruction. A 3rd grade student creating a poster board display must have instruction in how to effectively present information to do quality work.
ELA.K12.EE.6.1:	Use appropriate voice and tone when speaking or writing. **Clarifications:** In kindergarten and 1st grade, students learn the difference between formal and informal language. For example, the way we talk to our friends differs from the way we speak to adults. In 2nd grade and beyond, students practice appropriate social and academic language to discuss texts.
DA.68.S.2.1:	Sustain focused attention, respect, and discipline during classes and performances.
ELD.K12.ELL.SI.1:	English language learners communicate for social and instructional purposes within the school setting.

General Course Information and Notes

VERSION DESCRIPTION

Students with previous orchestral experience demonstrate intermediate-level knowledge of instrumental techniques, musical literacy, ensemble performance skills, and related musical knowledge through study, rehearsal, and performance of a variety of high-quality orchestral literature. Public performances may serve as a culmination of specific instructional goals. Students may be required to attend and/or participate in rehearsals and performances outside the school day to support, extend, and assess learning in the classroom. This course may also require students to obtain a musical instrument (e.g., borrow, rent, purchase) from an outside source.

GENERAL NOTES

Florida's Benchmarks for Excellent Student Thinking (B.E.S.T.) Standards
This course includes Florida's B.E.S.T. ELA Expectations (EE) and Mathematical Thinking and Reasoning Standards (MTRs) for students. Florida educators should intentionally embed these standards within the content and their instruction as applicable. For guidance on the implementation of the EEs and MTRs, please visit cpalms.org/Standards/BEST_Standards.aspx and select the appropriate B.E.S.T. Standards package.

English Language Development ELD Standards Special Notes Section:
Teachers are required to provide listening, speaking, reading and writing instruction that allows English language learners (ELL) to communicate for social and instructional purposes within the school setting. For the given level of English language proficiency and with visual, graphic, or interactive support, students will interact with grade level words, expressions, sentences and discourse to process or produce language necessary for academic success. The ELD standard should specify a relevant content area concept or topic of study chosen by curriculum developers and teachers which maximizes an ELL's need for communication and social skills. To access an ELL supporting document which delineates performance definitions and descriptors, please click on the following link: cpalms.org/uploads/docs/standards/eld/SI.pdf

GENERAL INFORMATION

Course Number: 1302060

Course Path: Section: Grades PreK to 12 Education Courses > **Grade Group:** Grades 6 to 8 Education Courses > **Subject:** Music Education > **SubSubject:** Instrumental Music >
Abbreviated Title: M/J ORCH 3
Course Length: Year (Y)
Course Level: 2

Course Status: Draft - Course Pending Approval

Grade Level(s): 6,7,8

Educator Certifications

Music (Elementary and Secondary Grades K-12)
Instrumental Music (Secondary Grades 7-12)
Instrumental Music (Elementary and Secondary Grades K-12)

M/J Orchestra 4 (#1302070) 2022 - And Beyond

Course Standards

Name	Description
MU.68.C.1.1:	Develop strategies for listening to unfamiliar musical works. **Clarifications:** e.g., listening maps, active listening, checklists
MU.68.C.1.2:	Compare, using correct music vocabulary, the aesthetic impact of a performance to one's own hypothesis of the composer's intent. **Clarifications:** e.g., quality recordings, peer group and individual performances, composer notes, instrumentation, expressive elements, title
MU.68.C.1.3:	Identify, aurally, instrumental styles and a variety of instrumental ensembles. **Clarifications:** e.g., Classical, Baroque, Romantic, contemporary, jazz, pop, solo, duet, trio, quartet, small ensembles
MU.68.C.2.1:	Critique personal performance, experiment with a variety of solutions, and make appropriate adjustments with guidance from teachers and peers. **Clarifications:** e.g., intonation, balance, blend, phrasing, rhythm
MU.68.C.2.2:	Critique, using correct music vocabulary, changes in one's own or others' musical performance resulting from practice or rehearsal. **Clarifications:** e.g., blend, balance, ensemble playing, sonority, technique, tone quality
MU.68.C.3.1:	Apply specific criteria to evaluate why a musical work is an exemplar in a specific style or genre.
MU.68.F.1.1:	Create a composition and/or performance, using visual, kinesthetic, digital, and/or acoustic means to manipulate musical elements.
MU.68.F.2.1:	Describe several routes a composition or performance could travel from creator to consumer. **Clarifications:** e.g., MIDI and other technology, production, sharing on the Internet, home studios, professional recording studios, sales
MU.68.F.2.2:	Describe how concert attendance can financially impact a community. **Clarifications:** e.g., increased revenues at restaurants, hotels, and travel agencies; venue maintenance, parking attendants
MU.68.F.3.1:	Describe how studying music can enhance citizenship, leadership, and global thinking. **Clarifications:** e.g., dedication to mastering a task, problem-solving, self-discipline, dependability, ability to organize, cultural awareness, mutual respect
MU.68.F.3.2:	Investigate and discuss laws that protect intellectual property, and practice safe, legal, and responsible acquisition and use of musical media.
MU.68.F.3.3:	Identify the tasks involved in the compositional process and discuss how the process might be applied in the work place. **Clarifications:** e.g., idea, development, editing, selling, revising, testing, presenting
MU.68.H.1.1:	Describe the functions of music from various cultures and time periods.
MU.68.H.1.2:	Identify the works of representative composers within a specific style or time period.
MU.68.H.1.3:	Describe how American music has been influenced by other cultures.
MU.68.H.1.4:	Classify authentic stylistic features in music originating from various cultures. **Clarifications:** e.g., rhythm, layered texture, key patterns, tonality, melodic line, quarter- or semi-tones, national folk melodies, improvisation, instrumentation, aural/oral traditions, drumming patterns
MU.68.H.1.5:	Using representative musical works by selected composers, classify compositional characteristics common to a specific time period and/or genre.
MU.68.H.2.1:	Describe the influence of historical events and periods on music composition and performance.
MU.68.H.2.2:	Analyze how technology has changed the way music is created, performed, acquired, and experienced. **Clarifications:** e.g., from harpsichord to piano; from phonograph to CD
MU.68.H.2.3:	Classify the literature being studied by genre, style, and/or time period.
MU.68.H.3.1:	Identify connections among music and other content areas and/or contexts through interdisciplinary collaboration. **Clarifications:** e.g., school: other music classes, social studies, dance, physical education, science, health, math, world languages; community: cultural connections and traditions, ceremonial music, sales and advertising, communication
MU.68.H.3.2:	Discuss how the absence of music would affect other content areas and contexts. **Clarifications:** e.g., theatre and dance, movies, sporting events, video games, commercial advertising, social gatherings, civic and religious ceremonies, plays
MU.68.O.1.1:	Compare performances of a musical work to identify artistic choices made by performers. **Clarifications:** e.g., rhythm, melody, timbre, form, tonality, harmony, expressive elements; choral, orchestral, band, ensemble
	Create a composition, manipulating musical elements and exploring the effects of those manipulations.

MU.68.O.2.1:	**Clarifications:** e.g., using electronic or paper-and-pencil means to experiment with timbre, melody, rhythm, harmony, form, tonality
MU.68.O.2.2:	Demonstrate knowledge of major and minor tonalities through performance and composition. **Clarifications:** e.g., scales; key signatures; relative major/minor; parallel major/minor
MU.68.O.3.1:	Describe how the combination of instrumentation and expressive elements in a musical work can convey a specific thought, idea, mood, and/or image. **Clarifications:** e.g., tempo markings, expression markings, articulation markings, phrasing, scales, modes, harmonic structure, timbre, rhythm, orchestration
MU.68.O.3.2:	Perform the expressive elements of a musical work indicated by the musical score and/or conductor, and transfer new knowledge and experiences to other musical works.
MU.68.S.1.1:	Improvise rhythmic and melodic phrases to accompany familiar songs and/or standard harmonic progressions. **Clarifications:** e.g., blues, rock
MU.68.S.1.3:	Arrange a short musical piece by manipulating melody, form, rhythm, and/or voicing.
MU.68.S.1.4:	Sing or play melodies by ear with support from the teacher and/or peers. **Clarifications:** e.g., melodies using traditional classroom instruments and/or voice
MU.68.S.2.1:	Perform music from memory to demonstrate knowledge of the musical structure. **Clarifications:** e.g., basic themes, patterns, tonality, melody, harmony
MU.68.S.2.2:	Transfer performance techniques from familiar to unfamiliar pieces.
MU.68.S.3.1:	Sing and/or play age-appropriate repertoire expressively. **Clarifications:** e.g., technique, phrasing, dynamics, tone quality, blend, balance, intonation, kinesthetic support/response
MU.68.S.3.2:	Demonstrate proper vocal or instrumental technique. **Clarifications:** e.g., posture, breathing, fingering, embouchure, bow technique, tuning, strumming
MU.68.S.3.3:	Sight-read standard exercises and simple repertoire. **Clarifications:** e.g., note and rest values, key signatures, time signatures, expressive markings, special harmonic and/or notation symbols
MU.68.S.3.4:	Compare written notation to aural examples and analyze for accuracy of rhythm and pitch. **Clarifications:** e.g., error detection, interval reinforcement
MU.68.S.3.5:	Notate rhythmic phrases and/or melodies, in varying simple meters, performed by someone else.
MU.68.S.3.6:	Develop and demonstrate efficient rehearsal strategies to apply skills and techniques. **Clarifications:** e.g., independently, collaboratively
MA.K12.MTR.1.1:	Mathematicians who participate in effortful learning both individually and with others: • Analyze the problem in a way that makes sense given the task. • Ask questions that will help with solving the task. • Build perseverance by modifying methods as needed while solving a challenging task. • Stay engaged and maintain a positive mindset when working to solve tasks. • Help and support each other when attempting a new method or approach. **Clarifications:** Teachers who encourage students to participate actively in effortful learning both individually and with others: • Cultivate a community of growth mindset learners. • Foster perseverance in students by choosing tasks that are challenging. • Develop students' ability to analyze and problem solve. • Recognize students' effort when solving challenging problems.
MA.K12.MTR.2.1:	Demonstrate understanding by representing problems in multiple ways. Mathematicians who demonstrate understanding by representing problems in multiple ways: • Build understanding through modeling and using manipulatives. • Represent solutions to problems in multiple ways using objects, drawings, tables, graphs and equations. • Progress from modeling problems with objects and drawings to using algorithms and equations. • Express connections between concepts and representations. • Choose a representation based on the given context or purpose. **Clarifications:** Teachers who encourage students to demonstrate understanding by representing problems in multiple ways: • Help students make connections between concepts and representations. • Provide opportunities for students to use manipulatives when investigating concepts. • Guide students from concrete to pictorial to abstract representations as understanding progresses. • Show students that various representations can have different purposes and can be useful in different situations.
	Complete tasks with mathematical fluency. Mathematicians who complete tasks with mathematical fluency:

MA.K12.MTR.3.1:	• Select efficient and appropriate methods for solving problems within the given context. • Maintain flexibility and accuracy while performing procedures and mental calculations. • Complete tasks accurately and with confidence. • Adapt procedures to apply them to a new context. • Use feedback to improve efficiency when performing calculations. **Clarifications:** Teachers who encourage students to complete tasks with mathematical fluency: • Provide students with the flexibility to solve problems by selecting a procedure that allows them to solve efficiently and accurately. • Offer multiple opportunities for students to practice efficient and generalizable methods. • Provide opportunities for students to reflect on the method they used and determine if a more efficient method could have been used.
MA.K12.MTR.4.1:	Engage in discussions that reflect on the mathematical thinking of self and others. Mathematicians who engage in discussions that reflect on the mathematical thinking of self and others: • Communicate mathematical ideas, vocabulary and methods effectively. • Analyze the mathematical thinking of others. • Compare the efficiency of a method to those expressed by others. • Recognize errors and suggest how to correctly solve the task. • Justify results by explaining methods and processes. • Construct possible arguments based on evidence. **Clarifications:** Teachers who encourage students to engage in discussions that reflect on the mathematical thinking of self and others: • Establish a culture in which students ask questions of the teacher and their peers, and error is an opportunity for learning. • Create opportunities for students to discuss their thinking with peers. • Select, sequence and present student work to advance and deepen understanding of correct and increasingly efficient methods. • Develop students' ability to justify methods and compare their responses to the responses of their peers.
MA.K12.MTR.5.1:	Use patterns and structure to help understand and connect mathematical concepts. Mathematicians who use patterns and structure to help understand and connect mathematical concepts: • Focus on relevant details within a problem. • Create plans and procedures to logically order events, steps or ideas to solve problems. • Decompose a complex problem into manageable parts. • Relate previously learned concepts to new concepts. • Look for similarities among problems. • Connect solutions of problems to more complicated large-scale situations. **Clarifications:** Teachers who encourage students to use patterns and structure to help understand and connect mathematical concepts: • Help students recognize the patterns in the world around them and connect these patterns to mathematical concepts. • Support students to develop generalizations based on the similarities found among problems. • Provide opportunities for students to create plans and procedures to solve problems. • Develop students' ability to construct relationships between their current understanding and more sophisticated ways of thinking.
MA.K12.MTR.6.1:	Assess the reasonableness of solutions. Mathematicians who assess the reasonableness of solutions: • Estimate to discover possible solutions. • Use benchmark quantities to determine if a solution makes sense. • Check calculations when solving problems. • Verify possible solutions by explaining the methods used. • Evaluate results based on the given context. **Clarifications:** Teachers who encourage students to assess the reasonableness of solutions: • Have students estimate or predict solutions prior to solving. • Prompt students to continually ask, "Does this solution make sense? How do you know?" • Reinforce that students check their work as they progress within and after a task. • Strengthen students' ability to verify solutions through justifications.
MA.K12.MTR.7.1:	Apply mathematics to real-world contexts. Mathematicians who apply mathematics to real-world contexts: • Connect mathematical concepts to everyday experiences. • Use models and methods to understand, represent and solve problems. • Perform investigations to gather data or determine if a method is appropriate. • Redesign models and methods to improve accuracy or efficiency. **Clarifications:** Teachers who encourage students to apply mathematics to real-world contexts: • Provide opportunities for students to create models, both concrete and abstract, and perform investigations. • Challenge students to question the accuracy of their models and methods. • Support students as they validate conclusions by comparing them to the given situation. • Indicate how various concepts can be applied to other disciplines.
	Cite evidence to explain and justify reasoning. **Clarifications:** K-1 Students include textual evidence in their oral communication with guidance and support from adults. The evidence can consist of details from the text without naming the text. During 1st grade, students learn how to incorporate the evidence in their writing.

ELA.K12.EE.1.1:	2-3 Students include relevant textual evidence in their written and oral communication. Students should name the text when they refer to it. In 3rd grade, students should use a combination of direct and indirect citations. 4-5 Students continue with previous skills and reference comments made by speakers and peers. Students cite texts that they've directly quoted, paraphrased, or used for information. When writing, students will use the form of citation dictated by the instructor or the style guide referenced by the instructor. 6-8 Students continue with previous skills and use a style guide to create a proper citation. 9-12 Students continue with previous skills and should be aware of existing style guides and the ways in which they differ.
ELA.K12.EE.2.1:	Read and comprehend grade-level complex texts proficiently. **Clarifications:** See Text Complexity for grade-level complexity bands and a text complexity rubric.
ELA.K12.EE.3.1:	Make inferences to support comprehension. **Clarifications:** Students will make inferences before the words infer or inference are introduced. Kindergarten students will answer questions like "Why is the girl smiling?" or make predictions about what will happen based on the title page. Students will use the terms and apply them in 2nd grade and beyond.
ELA.K12.EE.4.1:	Use appropriate collaborative techniques and active listening skills when engaging in discussions in a variety of situations. **Clarifications:** In kindergarten, students learn to listen to one another respectfully. In grades 1-2, students build upon these skills by justifying what they are thinking. For example: "I think _____ because _____." The collaborative conversations are becoming academic conversations. In grades 3-12, students engage in academic conversations discussing claims and justifying their reasoning, refining and applying skills. Students build on ideas, propel the conversation, and support claims and counterclaims with evidence.
ELA.K12.EE.5.1:	Use the accepted rules governing a specific format to create quality work. **Clarifications:** Students will incorporate skills learned into work products to produce quality work. For students to incorporate these skills appropriately, they must receive instruction. A 3rd grade student creating a poster board display must have instruction in how to effectively present information to do quality work.
ELA.K12.EE.6.1:	Use appropriate voice and tone when speaking or writing. **Clarifications:** In kindergarten and 1st grade, students learn the difference between formal and informal language. For example, the way we talk to our friends differs from the way we speak to adults. In 2nd grade and beyond, students practice appropriate social and academic language to discuss texts.
DA.68.S.2.1:	Sustain focused attention, respect, and discipline during classes and performances.
ELD.K12.ELL.SI.1:	English language learners communicate for social and instructional purposes within the school setting.

General Course Information and Notes

VERSION DESCRIPTION

Students with previous orchestral experience demonstrate advanced knowledge of instrumental techniques, musical literacy, ensemble skills, and related musical knowledge through study, rehearsal, and performance of a variety of high-quality orchestral literature. Additional opportunities for experiences in small ensembles, solo performance, and various leadership roles may be available. Public performances may serve as a culmination of specific instructional goals. Students may be required to attend and/or participate in rehearsals and performances outside the school day to support, extend, and assess learning in the classroom. This course may also require students to obtain a musical instrument (e.g., borrow, rent, purchase) from an outside source.

GENERAL NOTES

Florida's Benchmarks for Excellent Student Thinking (B.E.S.T.) Standards
This course includes Florida's B.E.S.T. ELA Expectations (EE) and Mathematical Thinking and Reasoning Standards (MTRs) for students. Florida educators should intentionally embed these standards within the content and their instruction as applicable. For guidance on the implementation of the EEs and MTRs, please visit cpalms.org/Standards/BEST_Standards.aspx and select the appropriate B.E.S.T. Standards package.

English Language Development ELD Standards Special Notes Section:
Teachers are required to provide listening, speaking, reading and writing instruction that allows English language learners (ELL) to communicate for social and instructional purposes within the school setting. For the given level of English language proficiency and with visual, graphic, or interactive support, students will interact with grade level words, expressions, sentences and discourse to process or produce language necessary for academic success. The ELD standard should specify a relevant content area concept or topic of study chosen by curriculum developers and teachers which maximizes an ELL's need for communication and social skills. To access an ELL supporting document which delineates performance definitions and descriptors, please click on the following link: cpalms.org/uploads/docs/standards/eld/SI.pdf

GENERAL INFORMATION

Course Number: 1302070

Course Path: Section: Grades PreK to 12 Education Courses > **Grade Group:** Grades 6 to 8 Education Courses > **Subject:** Music Education > **SubSubject:** Instrumental Music >

Abbreviated Title: M/J ORCH 4

Course Length: Year (Y)

Course Level: 2

Course Status: Draft - Course Pending Approval

Grade Level(s): 6,7,8

Educator Certifications

Instrumental Music (Secondary Grades 7-12)
Instrumental Music (Elementary and Secondary Grades K-12)
Music (Elementary and Secondary Grades K-12)

M/J Instrumental Techniques 1 (#1302080) 2022 - And Beyond

Course Standards

Name	Description
MU.68.C.1.1:	Develop strategies for listening to unfamiliar musical works. **Clarifications:** e.g., listening maps, active listening, checklists
MU.68.C.1.2:	Compare, using correct music vocabulary, the aesthetic impact of a performance to one's own hypothesis of the composer's intent. **Clarifications:** e.g., quality recordings, peer group and individual performances, composer notes, instrumentation, expressive elements, title
MU.68.C.2.1:	Critique personal performance, experiment with a variety of solutions, and make appropriate adjustments with guidance from teachers and peers. **Clarifications:** e.g., intonation, balance, blend, phrasing, rhythm
MU.68.C.2.2:	Critique, using correct music vocabulary, changes in one's own or others' musical performance resulting from practice or rehearsal. **Clarifications:** e.g., blend, balance, ensemble playing, sonority, technique, tone quality
MU.68.H.2.3:	Classify the literature being studied by genre, style, and/or time period.
MU.68.O.1.1:	Compare performances of a musical work to identify artistic choices made by performers. **Clarifications:** e.g., rhythm, melody, timbre, form, tonality, harmony, expressive elements; choral, orchestral, band, ensemble
MU.68.O.3.1:	Describe how the combination of instrumentation and expressive elements in a musical work can convey a specific thought, idea, mood, and/or image. **Clarifications:** e.g., tempo markings, expression markings, articulation markings, phrasing, scales, modes, harmonic structure, timbre, rhythm, orchestration
MU.68.S.1.1:	Improvise rhythmic and melodic phrases to accompany familiar songs and/or standard harmonic progressions. **Clarifications:** e.g., blues, rock
MU.68.S.1.4:	Sing or play melodies by ear with support from the teacher and/or peers. **Clarifications:** e.g., melodies using traditional classroom instruments and/or voice
MU.68.S.2.1:	Perform music from memory to demonstrate knowledge of the musical structure. **Clarifications:** e.g., basic themes, patterns, tonality, melody, harmony
MU.68.S.2.2:	Transfer performance techniques from familiar to unfamiliar pieces.
MU.68.S.3.1:	Sing and/or play age-appropriate repertoire expressively. **Clarifications:** e.g., technique, phrasing, dynamics, tone quality, blend, balance, intonation, kinesthetic support/response
MU.68.S.3.2:	Demonstrate proper vocal or instrumental technique. **Clarifications:** e.g., posture, breathing, fingering, embouchure, bow technique, tuning, strumming
MU.68.S.3.3:	Sight-read standard exercises and simple repertoire. **Clarifications:** e.g., note and rest values, key signatures, time signatures, expressive markings, special harmonic and/or notation symbols
MU.68.S.3.4:	Compare written notation to aural examples and analyze for accuracy of rhythm and pitch. **Clarifications:** e.g., error detection, interval reinforcement
MU.68.S.3.5:	Notate rhythmic phrases and/or melodies, in varying simple meters, performed by someone else.
MU.68.S.3.6:	Develop and demonstrate efficient rehearsal strategies to apply skills and techniques. **Clarifications:** e.g., independently, collaboratively
MA.K12.MTR.1.1:	Mathematicians who participate in effortful learning both individually and with others: • Analyze the problem in a way that makes sense given the task. • Ask questions that will help with solving the task. • Build perseverance by modifying methods as needed while solving a challenging task. • Stay engaged and maintain a positive mindset when working to solve tasks. • Help and support each other when attempting a new method or approach. **Clarifications:** Teachers who encourage students to participate actively in effortful learning both individually and with others: • Cultivate a community of growth mindset learners.

- Foster perseverance in students by choosing tasks that are challenging.
- Develop students' ability to analyze and problem solve.
- Recognize students' effort when solving challenging problems.

Demonstrate understanding by representing problems in multiple ways.
Mathematicians who demonstrate understanding by representing problems in multiple ways:

- Build understanding through modeling and using manipulatives.
- Represent solutions to problems in multiple ways using objects, drawings, tables, graphs and equations.
- Progress from modeling problems with objects and drawings to using algorithms and equations.
- Express connections between concepts and representations.

MA.K12.MTR.2.1:

- Choose a representation based on the given context or purpose.

Clarifications:
Teachers who encourage students to demonstrate understanding by representing problems in multiple ways:

- Help students make connections between concepts and representations.
- Provide opportunities for students to use manipulatives when investigating concepts.
- Guide students from concrete to pictorial to abstract representations as understanding progresses.
- Show students that various representations can have different purposes and can be useful in different situations.

Complete tasks with mathematical fluency.
Mathematicians who complete tasks with mathematical fluency:

- Select efficient and appropriate methods for solving problems within the given context.
- Maintain flexibility and accuracy while performing procedures and mental calculations.
- Complete tasks accurately and with confidence.
- Adapt procedures to apply them to a new context.

MA.K12.MTR.3.1:

- Use feedback to improve efficiency when performing calculations.

Clarifications:
Teachers who encourage students to complete tasks with mathematical fluency:

- Provide students with the flexibility to solve problems by selecting a procedure that allows them to solve efficiently and accurately.
- Offer multiple opportunities for students to practice efficient and generalizable methods.
- Provide opportunities for students to reflect on the method they used and determine if a more efficient method could have been used.

Engage in discussions that reflect on the mathematical thinking of self and others.
Mathematicians who engage in discussions that reflect on the mathematical thinking of self and others:

- Communicate mathematical ideas, vocabulary and methods effectively.
- Analyze the mathematical thinking of others.
- Compare the efficiency of a method to those expressed by others.
- Recognize errors and suggest how to correctly solve the task.
- Justify results by explaining methods and processes.

MA.K12.MTR.4.1:

- Construct possible arguments based on evidence.

Clarifications:
Teachers who encourage students to engage in discussions that reflect on the mathematical thinking of self and others:

- Establish a culture in which students ask questions of the teacher and their peers, and error is an opportunity for learning.
- Create opportunities for students to discuss their thinking with peers.
- Select, sequence and present student work to advance and deepen understanding of correct and increasingly efficient methods.
- Develop students' ability to justify methods and compare their responses to the responses of their peers.

Use patterns and structure to help understand and connect mathematical concepts.
Mathematicians who use patterns and structure to help understand and connect mathematical concepts:

- Focus on relevant details within a problem.
- Create plans and procedures to logically order events, steps or ideas to solve problems.
- Decompose a complex problem into manageable parts.
- Relate previously learned concepts to new concepts.
- Look for similarities among problems.

MA.K12.MTR.5.1:

- Connect solutions of problems to more complicated large-scale situations.

Clarifications:
Teachers who encourage students to use patterns and structure to help understand and connect mathematical concepts:

- Help students recognize the patterns in the world around them and connect these patterns to mathematical concepts.
- Support students to develop generalizations based on the similarities found among problems.
- Provide opportunities for students to create plans and procedures to solve problems.
- Develop students' ability to construct relationships between their current understanding and more sophisticated ways of thinking.

Assess the reasonableness of solutions.
Mathematicians who assess the reasonableness of solutions:

- Estimate to discover possible solutions.
- Use benchmark quantities to determine if a solution makes sense.
- Check calculations when solving problems.
- Verify possible solutions by explaining the methods used.

MA.K12.MTR.6.1:

- Evaluate results based on the given context.

Clarifications:
Teachers who encourage students to assess the reasonableness of solutions:

	• Have students estimate or predict solutions prior to solving. • Prompt students to continually ask, "Does this solution make sense? How do you know?" • Reinforce that students check their work as they progress within and after a task. • Strengthen students' ability to verify solutions through justifications.
MA.K12.MTR.7.1:	Apply mathematics to real-world contexts. Mathematicians who apply mathematics to real-world contexts: • Connect mathematical concepts to everyday experiences. • Use models and methods to understand, represent and solve problems. • Perform investigations to gather data or determine if a method is appropriate. • Redesign models and methods to improve accuracy or efficiency. **Clarifications:** Teachers who encourage students to apply mathematics to real-world contexts: • Provide opportunities for students to create models, both concrete and abstract, and perform investigations. • Challenge students to question the accuracy of their models and methods. • Support students as they validate conclusions by comparing them to the given situation. • Indicate how various concepts can be applied to other disciplines.
ELA.K12.EE.1.1:	Cite evidence to explain and justify reasoning. **Clarifications:** K-1 Students include textual evidence in their oral communication with guidance and support from adults. The evidence can consist of details from the text without naming the text. During 1st grade, students learn how to incorporate the evidence in their writing. 2-3 Students include relevant textual evidence in their written and oral communication. Students should name the text when they refer to it. In 3rd grade, students should use a combination of direct and indirect citations. 4-5 Students continue with previous skills and reference comments made by speakers and peers. Students cite texts that they've directly quoted, paraphrased, or used for information. When writing, students will use the form of citation dictated by the instructor or the style guide referenced by the instructor. 6-8 Students continue with previous skills and use a style guide to create a proper citation. 9-12 Students continue with previous skills and should be aware of existing style guides and the ways in which they differ.
ELA.K12.EE.2.1:	Read and comprehend grade-level complex texts proficiently. **Clarifications:** See Text Complexity for grade-level complexity bands and a text complexity rubric.
ELA.K12.EE.3.1:	Make inferences to support comprehension. **Clarifications:** Students will make inferences before the words infer or inference are introduced. Kindergarten students will answer questions like "Why is the girl smiling?" or make predictions about what will happen based on the title page. Students will use the terms and apply them in 2nd grade and beyond.
ELA.K12.EE.4.1:	Use appropriate collaborative techniques and active listening skills when engaging in discussions in a variety of situations. **Clarifications:** In kindergarten, students learn to listen to one another respectfully. In grades 1-2, students build upon these skills by justifying what they are thinking. For example: "I think _____ because _____." The collaborative conversations are becoming academic conversations. In grades 3-12, students engage in academic conversations discussing claims and justifying their reasoning, refining and applying skills. Students build on ideas, propel the conversation, and support claims and counterclaims with evidence.
ELA.K12.EE.5.1:	Use the accepted rules governing a specific format to create quality work. **Clarifications:** Students will incorporate skills learned into work products to produce quality work. For students to incorporate these skills appropriately, they must receive instruction. A 3rd grade student creating a poster board display must have instruction in how to effectively present information to do quality work.
ELA.K12.EE.6.1:	Use appropriate voice and tone when speaking or writing. **Clarifications:** In kindergarten and 1st grade, students learn the difference between formal and informal language. For example, the way we talk to our friends differs from the way we speak to adults. In 2nd grade and beyond, students practice appropriate social and academic language to discuss texts.
ELD.K12.ELL.SI.1:	English language learners communicate for social and instructional purposes within the school setting.

General Course Information and Notes

VERSION DESCRIPTION

Students with little or no instrumental experience develop musicianship, technical proficiency, and performance skills. Beginning musicians focus on development of skills and techniques through scales, etudes, and solo literature. Public performances may serve as a culmination of specific instructional goals. Students may be required to attend and/or participate in rehearsals and performances outside the school day to support, extend, and assess learning in the classroom. This course may also require students to obtain a musical instrument (e.g., borrow, rent, purchase) from an outside source.

GENERAL NOTES

Florida's Benchmarks for Excellent Student Thinking (B.E.S.T.) Standards
This course includes Florida's B.E.S.T. ELA Expectations (EE) and Mathematical Thinking and Reasoning Standards (MTRs) for students. Florida educators should intentionally embed these standards within the content and their instruction as applicable. For guidance on the implementation of the EEs and MTRs, please visit cpalms.org/Standards/BEST_Standards.aspx and select the appropriate B.E.S.T. Standards package.

English Language Development ELD Standards Special Notes Section:
Teachers are required to provide listening, speaking, reading and writing instruction that allows English language learners (ELL) to communicate for social and instructional purposes within the school setting. For the given level of English language proficiency and with visual, graphic, or interactive support, students will interact with grade level words, expressions, sentences and discourse to process or produce language necessary for academic success. The ELD standard should specify a relevant content area concept or topic of study chosen by curriculum developers and teachers which maximizes an ELL's need for communication and social skills. To access an ELL supporting document which delineates performance definitions and descriptors, please click on the following link: cpalms.org/uploads/docs/standards/eld/SI.pdf

GENERAL INFORMATION

Course Number: 1302080

Course Path: Section: Grades PreK to 12 Education Courses > **Grade Group:** Grades 6 to 8 Education Courses > **Subject:** Music Education > **SubSubject:** Instrumental Music >
Abbreviated Title: M/J INSTRU TECNQS 1
Course Length: Year (Y)
Course Level: 2

Course Status: Draft - Course Pending Approval

Grade Level(s): 6,7,8

Educator Certifications

Instrumental Music (Secondary Grades 7-12)
Instrumental Music (Elementary and Secondary Grades K-12)
Music (Elementary and Secondary Grades K-12)

M/J Instrumental Techniques 2 (#1302090) 2022 - And Beyond

Course Standards

Name	Description
MU.68.C.1.1:	Develop strategies for listening to unfamiliar musical works. **Clarifications:** e.g., listening maps, active listening, checklists
MU.68.C.1.2:	Compare, using correct music vocabulary, the aesthetic impact of a performance to one's own hypothesis of the composer's intent. **Clarifications:** e.g., quality recordings, peer group and individual performances, composer notes, instrumentation, expressive elements, title
MU.68.C.2.1:	Critique personal performance, experiment with a variety of solutions, and make appropriate adjustments with guidance from teachers and peers. **Clarifications:** e.g., intonation, balance, blend, phrasing, rhythm
MU.68.C.2.2:	Critique, using correct music vocabulary, changes in one's own or others' musical performance resulting from practice or rehearsal. **Clarifications:** e.g., blend, balance, ensemble playing, sonority, technique, tone quality
MU.68.F.3.1:	Describe how studying music can enhance citizenship, leadership, and global thinking. **Clarifications:** e.g., dedication to mastering a task, problem-solving, self-discipline, dependability, ability to organize, cultural awareness, mutual respect
MU.68.H.2.2:	Analyze how technology has changed the way music is created, performed, acquired, and experienced. **Clarifications:** e.g., from harpsichord to piano; from phonograph to CD
MU.68.H.2.3:	Classify the literature being studied by genre, style, and/or time period.
MU.68.O.1.1:	Compare performances of a musical work to identify artistic choices made by performers. **Clarifications:** e.g., rhythm, melody, timbre, form, tonality, harmony, expressive elements; choral, orchestral, band, ensemble
MU.68.O.2.2:	Demonstrate knowledge of major and minor tonalities through performance and composition. **Clarifications:** e.g., scales; key signatures; relative major/minor; parallel major/minor
MU.68.O.3.1:	Describe how the combination of instrumentation and expressive elements in a musical work can convey a specific thought, idea, mood, and/or image. **Clarifications:** e.g., tempo markings, expression markings, articulation markings, phrasing, scales, modes, harmonic structure, timbre, rhythm, orchestration
MU.68.O.3.2:	Perform the expressive elements of a musical work indicated by the musical score and/or conductor, and transfer new knowledge and experiences to other musical works.
MU.68.S.1.1:	Improvise rhythmic and melodic phrases to accompany familiar songs and/or standard harmonic progressions. **Clarifications:** e.g., blues, rock
MU.68.S.1.4:	Sing or play melodies by ear with support from the teacher and/or peers. **Clarifications:** e.g., melodies using traditional classroom instruments and/or voice
MU.68.S.2.1:	Perform music from memory to demonstrate knowledge of the musical structure. **Clarifications:** e.g., basic themes, patterns, tonality, melody, harmony
MU.68.S.2.2:	Transfer performance techniques from familiar to unfamiliar pieces.
MU.68.S.3.1:	Sing and/or play age-appropriate repertoire expressively. **Clarifications:** e.g., technique, phrasing, dynamics, tone quality, blend, balance, intonation, kinesthetic support/response
MU.68.S.3.2:	Demonstrate proper vocal or instrumental technique. **Clarifications:** e.g., posture, breathing, fingering, embouchure, bow technique, tuning, strumming
MU.68.S.3.3:	Sight-read standard exercises and simple repertoire. **Clarifications:** e.g., note and rest values, key signatures, time signatures, expressive markings, special harmonic and/or notation symbols
MU.68.S.3.4:	Compare written notation to aural examples and analyze for accuracy of rhythm and pitch. **Clarifications:** e.g., error detection, interval reinforcement
MU.68.S.3.5:	Notate rhythmic phrases and/or melodies, in varying simple meters, performed by someone else.

	Develop and demonstrate efficient rehearsal strategies to apply skills and techniques.
MU.68.S.3.6:	**Clarifications:** e.g., independently, collaboratively
MA.K12.MTR.1.1:	Mathematicians who participate in effortful learning both individually and with others: • Analyze the problem in a way that makes sense given the task. • Ask questions that will help with solving the task. • Build perseverance by modifying methods as needed while solving a challenging task. • Stay engaged and maintain a positive mindset when working to solve tasks. • Help and support each other when attempting a new method or approach. **Clarifications:** Teachers who encourage students to participate actively in effortful learning both individually and with others: • Cultivate a community of growth mindset learners. • Foster perseverance in students by choosing tasks that are challenging. • Develop students' ability to analyze and problem solve. • Recognize students' effort when solving challenging problems.
MA.K12.MTR.2.1:	Demonstrate understanding by representing problems in multiple ways. Mathematicians who demonstrate understanding by representing problems in multiple ways: • Build understanding through modeling and using manipulatives. • Represent solutions to problems in multiple ways using objects, drawings, tables, graphs and equations. • Progress from modeling problems with objects and drawings to using algorithms and equations. • Express connections between concepts and representations. • Choose a representation based on the given context or purpose. **Clarifications:** Teachers who encourage students to demonstrate understanding by representing problems in multiple ways: • Help students make connections between concepts and representations. • Provide opportunities for students to use manipulatives when investigating concepts. • Guide students from concrete to pictorial to abstract representations as understanding progresses. • Show students that various representations can have different purposes and can be useful in different situations.
MA.K12.MTR.3.1:	Complete tasks with mathematical fluency. Mathematicians who complete tasks with mathematical fluency: • Select efficient and appropriate methods for solving problems within the given context. • Maintain flexibility and accuracy while performing procedures and mental calculations. • Complete tasks accurately and with confidence. • Adapt procedures to apply them to a new context. • Use feedback to improve efficiency when performing calculations. **Clarifications:** Teachers who encourage students to complete tasks with mathematical fluency: • Provide students with the flexibility to solve problems by selecting a procedure that allows them to solve efficiently and accurately. • Offer multiple opportunities for students to practice efficient and generalizable methods. • Provide opportunities for students to reflect on the method they used and determine if a more efficient method could have been used.
MA.K12.MTR.4.1:	Engage in discussions that reflect on the mathematical thinking of self and others. Mathematicians who engage in discussions that reflect on the mathematical thinking of self and others: • Communicate mathematical ideas, vocabulary and methods effectively. • Analyze the mathematical thinking of others. • Compare the efficiency of a method to those expressed by others. • Recognize errors and suggest how to correctly solve the task. • Justify results by explaining methods and processes. • Construct possible arguments based on evidence. **Clarifications:** Teachers who encourage students to engage in discussions that reflect on the mathematical thinking of self and others: • Establish a culture in which students ask questions of the teacher and their peers, and error is an opportunity for learning. • Create opportunities for students to discuss their thinking with peers. • Select, sequence and present student work to advance and deepen understanding of correct and increasingly efficient methods. • Develop students' ability to justify methods and compare their responses to the responses of their peers.
MA.K12.MTR.5.1:	Use patterns and structure to help understand and connect mathematical concepts. Mathematicians who use patterns and structure to help understand and connect mathematical concepts: • Focus on relevant details within a problem. • Create plans and procedures to logically order events, steps or ideas to solve problems. • Decompose a complex problem into manageable parts. • Relate previously learned concepts to new concepts. • Look for similarities among problems. • Connect solutions of problems to more complicated large-scale situations. **Clarifications:** Teachers who encourage students to use patterns and structure to help understand and connect mathematical concepts: • Help students recognize the patterns in the world around them and connect these patterns to mathematical concepts. • Support students to develop generalizations based on the similarities found among problems.

	• Provide opportunities for students to create plans and procedures to solve problems. • Develop students' ability to construct relationships between their current understanding and more sophisticated ways of thinking.
MA.K12.MTR.6.1:	Assess the reasonableness of solutions. Mathematicians who assess the reasonableness of solutions: • Estimate to discover possible solutions. • Use benchmark quantities to determine if a solution makes sense. • Check calculations when solving problems. • Verify possible solutions by explaining the methods used. • Evaluate results based on the given context. **Clarifications:** Teachers who encourage students to assess the reasonableness of solutions: • Have students estimate or predict solutions prior to solving. • Prompt students to continually ask, "Does this solution make sense? How do you know?" • Reinforce that students check their work as they progress within and after a task. • Strengthen students' ability to verify solutions through justifications.
MA.K12.MTR.7.1:	Apply mathematics to real-world contexts. Mathematicians who apply mathematics to real-world contexts: • Connect mathematical concepts to everyday experiences. • Use models and methods to understand, represent and solve problems. • Perform investigations to gather data or determine if a method is appropriate. • Redesign models and methods to improve accuracy or efficiency. **Clarifications:** Teachers who encourage students to apply mathematics to real-world contexts: • Provide opportunities for students to create models, both concrete and abstract, and perform investigations. • Challenge students to question the accuracy of their models and methods. • Support students as they validate conclusions by comparing them to the given situation. • Indicate how various concepts can be applied to other disciplines.
ELA.K12.EE.1.1:	Cite evidence to explain and justify reasoning. **Clarifications:** K-1 Students include textual evidence in their oral communication with guidance and support from adults. The evidence can consist of details from the text without naming the text. During 1st grade, students learn how to incorporate the evidence in their writing. 2-3 Students include relevant textual evidence in their written and oral communication. Students should name the text when they refer to it. In 3rd grade, students should use a combination of direct and indirect citations. 4-5 Students continue with previous skills and reference comments made by speakers and peers. Students cite texts that they've directly quoted, paraphrased, or used for information. When writing, students will use the form of citation dictated by the instructor or the style guide referenced by the instructor. 6-8 Students continue with previous skills and use a style guide to create a proper citation. 9-12 Students continue with previous skills and should be aware of existing style guides and the ways in which they differ.
ELA.K12.EE.2.1:	Read and comprehend grade-level complex texts proficiently. **Clarifications:** See Text Complexity for grade-level complexity bands and a text complexity rubric.
ELA.K12.EE.3.1:	Make inferences to support comprehension. **Clarifications:** Students will make inferences before the words infer or inference are introduced. Kindergarten students will answer questions like "Why is the girl smiling?" or make predictions about what will happen based on the title page. Students will use the terms and apply them in 2nd grade and beyond.
ELA.K12.EE.4.1:	Use appropriate collaborative techniques and active listening skills when engaging in discussions in a variety of situations. **Clarifications:** In kindergarten, students learn to listen to one another respectfully. In grades 1-2, students build upon these skills by justifying what they are thinking. For example: "I think _____ because _____." The collaborative conversations are becoming academic conversations. In grades 3-12, students engage in academic conversations discussing claims and justifying their reasoning, refining and applying skills. Students build on ideas, propel the conversation, and support claims and counterclaims with evidence.
ELA.K12.EE.5.1:	Use the accepted rules governing a specific format to create quality work. **Clarifications:** Students will incorporate skills learned into work products to produce quality work. For students to incorporate these skills appropriately, they must receive instruction. A 3rd grade student creating a poster board display must have instruction in how to effectively present information to do quality work.
ELA.K12.EE.6.1:	Use appropriate voice and tone when speaking or writing. **Clarifications:** In kindergarten and 1st grade, students learn the difference between formal and informal language. For example, the way we talk to our friends differs from the way we speak to adults. In 2nd grade and beyond, students practice appropriate social and academic language to discuss texts.
ELD.K12.ELL.SI.1:	English language learners communicate for social and instructional purposes within the school setting.

General Course Information and Notes

VERSION DESCRIPTION

Students build on previous instruction to strengthen their musicianship, technique, and performance skills through preparation of scales, etudes, and solo literature. Through problem-solving, critical thinking, and reflection, students develop the physical and cognitive skills necessary to be more disciplined performers. Public performances may serve as a culmination of specific instructional goals. Students may be required to attend and/or participate in rehearsals and performances outside the school day to support, extend, and assess learning in the classroom. This course may also require students to obtain a musical instrument (e.g., borrow, rent, purchase) from an outside source.

GENERAL NOTES

Florida's Benchmarks for Excellent Student Thinking (B.E.S.T.) Standards
This course includes Florida's B.E.S.T. ELA Expectations (EE) and Mathematical Thinking and Reasoning Standards (MTRs) for students. Florida educators should intentionally embed these standards within the content and their instruction as applicable. For guidance on the implementation of the EEs and MTRs, please visit cpalms.org/Standards/BEST_Standards.aspx and select the appropriate B.E.S.T. Standards package.

English Language Development ELD Standards Special Notes Section:
Teachers are required to provide listening, speaking, reading and writing instruction that allows English language learners (ELL) to communicate for social and instructional purposes within the school setting. For the given level of English language proficiency and with visual, graphic, or interactive support, students will interact with grade level words, expressions, sentences and discourse to process or produce language necessary for academic success. The ELD standard should specify a relevant content area concept or topic of study chosen by curriculum developers and teachers which maximizes an ELL's need for communication and social skills. To access an ELL supporting document which delineates performance definitions and descriptors, please click on the following link: cpalms.org/uploads/docs/standards/eld/SI.pdf

GENERAL INFORMATION

Course Number: 1302090

Course Path: Section: Grades PreK to 12 Education Courses > **Grade Group:** Grades 6 to 8 Education Courses > **Subject:** Music Education > **SubSubject:** Instrumental Music >

Abbreviated Title: M/J INSTRU TECNQS 2

Course Length: Year (Y)

Course Level: 2

Course Status: Draft - Course Pending Approval

Grade Level(s): 6,7,8

Educator Certifications

Instrumental Music (Secondary Grades 7-12)
Instrumental Music (Elementary and Secondary Grades K-12)
Music (Elementary and Secondary Grades K-12)

M/J Instrumental Techniques 3 (#1302100) 2022 - And Beyond

Course Standards

Name	Description
MU.68.C.1.1:	Develop strategies for listening to unfamiliar musical works. **Clarifications:** e.g., listening maps, active listening, checklists
MU.68.C.1.2:	Compare, using correct music vocabulary, the aesthetic impact of a performance to one's own hypothesis of the composer's intent. **Clarifications:** e.g., quality recordings, peer group and individual performances, composer notes, instrumentation, expressive elements, title
MU.68.C.2.1:	Critique personal performance, experiment with a variety of solutions, and make appropriate adjustments with guidance from teachers and peers. **Clarifications:** e.g., intonation, balance, blend, phrasing, rhythm
MU.68.C.2.2:	Critique, using correct music vocabulary, changes in one's own or others' musical performance resulting from practice or rehearsal. **Clarifications:** e.g., blend, balance, ensemble playing, sonority, technique, tone quality
MU.68.F.3.1:	Describe how studying music can enhance citizenship, leadership, and global thinking. **Clarifications:** e.g., dedication to mastering a task, problem-solving, self-discipline, dependability, ability to organize, cultural awareness, mutual respect
MU.68.H.1.1:	Describe the functions of music from various cultures and time periods.
MU.68.H.1.2:	Identify the works of representative composers within a specific style or time period.
MU.68.H.1.4:	Classify authentic stylistic features in music originating from various cultures. **Clarifications:** e.g., rhythm, layered texture, key patterns, tonality, melodic line, quarter- or semi-tones, national folk melodies, improvisation, instrumentation, aural/oral traditions, drumming patterns
MU.68.H.2.2:	Analyze how technology has changed the way music is created, performed, acquired, and experienced. **Clarifications:** e.g., from harpsichord to piano; from phonograph to CD
MU.68.H.2.3:	Classify the literature being studied by genre, style, and/or time period.
MU.68.O.1.1:	Compare performances of a musical work to identify artistic choices made by performers. **Clarifications:** e.g., rhythm, melody, timbre, form, tonality, harmony, expressive elements; choral, orchestral, band, ensemble
MU.68.O.2.2:	Demonstrate knowledge of major and minor tonalities through performance and composition. **Clarifications:** e.g., scales; key signatures; relative major/minor; parallel major/minor
MU.68.O.3.1:	Describe how the combination of instrumentation and expressive elements in a musical work can convey a specific thought, idea, mood, and/or image. **Clarifications:** e.g., tempo markings, expression markings, articulation markings, phrasing, scales, modes, harmonic structure, timbre, rhythm, orchestration
MU.68.O.3.2:	Perform the expressive elements of a musical work indicated by the musical score and/or conductor, and transfer new knowledge and experiences to other musical works.
MU.68.S.1.1:	Improvise rhythmic and melodic phrases to accompany familiar songs and/or standard harmonic progressions. **Clarifications:** e.g., blues, rock
MU.68.S.1.4:	Sing or play melodies by ear with support from the teacher and/or peers. **Clarifications:** e.g., melodies using traditional classroom instruments and/or voice
MU.68.S.2.1:	Perform music from memory to demonstrate knowledge of the musical structure. **Clarifications:** e.g., basic themes, patterns, tonality, melody, harmony
MU.68.S.2.2:	Transfer performance techniques from familiar to unfamiliar pieces.
MU.68.S.3.1:	Sing and/or play age-appropriate repertoire expressively. **Clarifications:** e.g., technique, phrasing, dynamics, tone quality, blend, balance, intonation, kinesthetic support/response
MU.68.S.3.2:	Demonstrate proper vocal or instrumental technique. **Clarifications:** e.g., posture, breathing, fingering, embouchure, bow technique, tuning, strumming
MU.68.S.3.3:	Sight-read standard exercises and simple repertoire. **Clarifications:**

	e.g., note and rest values, key signatures, time signatures, expressive markings, special harmonic and/or notation symbols
MU.68.S.3.4:	Compare written notation to aural examples and analyze for accuracy of rhythm and pitch. **Clarifications:** e.g., error detection, interval reinforcement
MU.68.S.3.5:	Notate rhythmic phrases and/or melodies, in varying simple meters, performed by someone else.
MU.68.S.3.6:	Develop and demonstrate efficient rehearsal strategies to apply skills and techniques. **Clarifications:** e.g., independently, collaboratively
MA.K12.MTR.1.1:	Mathematicians who participate in effortful learning both individually and with others: • Analyze the problem in a way that makes sense given the task. • Ask questions that will help with solving the task. • Build perseverance by modifying methods as needed while solving a challenging task. • Stay engaged and maintain a positive mindset when working to solve tasks. • Help and support each other when attempting a new method or approach. **Clarifications:** Teachers who encourage students to participate actively in effortful learning both individually and with others: • Cultivate a community of growth mindset learners. • Foster perseverance in students by choosing tasks that are challenging. • Develop students' ability to analyze and problem solve. • Recognize students' effort when solving challenging problems.
MA.K12.MTR.2.1:	Demonstrate understanding by representing problems in multiple ways. Mathematicians who demonstrate understanding by representing problems in multiple ways: • Build understanding through modeling and using manipulatives. • Represent solutions to problems in multiple ways using objects, drawings, tables, graphs and equations. • Progress from modeling problems with objects and drawings to using algorithms and equations. • Express connections between concepts and representations. • Choose a representation based on the given context or purpose. **Clarifications:** Teachers who encourage students to demonstrate understanding by representing problems in multiple ways: • Help students make connections between concepts and representations. • Provide opportunities for students to use manipulatives when investigating concepts. • Guide students from concrete to pictorial to abstract representations as understanding progresses. • Show students that various representations can have different purposes and can be useful in different situations.
MA.K12.MTR.3.1:	Complete tasks with mathematical fluency. Mathematicians who complete tasks with mathematical fluency: • Select efficient and appropriate methods for solving problems within the given context. • Maintain flexibility and accuracy while performing procedures and mental calculations. • Complete tasks accurately and with confidence. • Adapt procedures to apply them to a new context. • Use feedback to improve efficiency when performing calculations. **Clarifications:** Teachers who encourage students to complete tasks with mathematical fluency: • Provide students with the flexibility to solve problems by selecting a procedure that allows them to solve efficiently and accurately. • Offer multiple opportunities for students to practice efficient and generalizable methods. • Provide opportunities for students to reflect on the method they used and determine if a more efficient method could have been used.
MA.K12.MTR.4.1:	Engage in discussions that reflect on the mathematical thinking of self and others. Mathematicians who engage in discussions that reflect on the mathematical thinking of self and others: • Communicate mathematical ideas, vocabulary and methods effectively. • Analyze the mathematical thinking of others. • Compare the efficiency of a method to those expressed by others. • Recognize errors and suggest how to correctly solve the task. • Justify results by explaining methods and processes. • Construct possible arguments based on evidence. **Clarifications:** Teachers who encourage students to engage in discussions that reflect on the mathematical thinking of self and others: • Establish a culture in which students ask questions of the teacher and their peers, and error is an opportunity for learning. • Create opportunities for students to discuss their thinking with peers. • Select, sequence and present student work to advance and deepen understanding of correct and increasingly efficient methods. • Develop students' ability to justify methods and compare their responses to the responses of their peers.
	Use patterns and structure to help understand and connect mathematical concepts. Mathematicians who use patterns and structure to help understand and connect mathematical concepts: • Focus on relevant details within a problem. • Create plans and procedures to logically order events, steps or ideas to solve problems. • Decompose a complex problem into manageable parts. • Relate previously learned concepts to new concepts.

MA.K12.MTR.5.1:	• Look for similarities among problems. • Connect solutions of problems to more complicated large-scale situations. **Clarifications:** Teachers who encourage students to use patterns and structure to help understand and connect mathematical concepts: • Help students recognize the patterns in the world around them and connect these patterns to mathematical concepts. • Support students to develop generalizations based on the similarities found among problems. • Provide opportunities for students to create plans and procedures to solve problems. • Develop students' ability to construct relationships between their current understanding and more sophisticated ways of thinking.
MA.K12.MTR.6.1:	Assess the reasonableness of solutions. Mathematicians who assess the reasonableness of solutions: • Estimate to discover possible solutions. • Use benchmark quantities to determine if a solution makes sense. • Check calculations when solving problems. • Verify possible solutions by explaining the methods used. • Evaluate results based on the given context. **Clarifications:** Teachers who encourage students to assess the reasonableness of solutions: • Have students estimate or predict solutions prior to solving. • Prompt students to continually ask, "Does this solution make sense? How do you know?" • Reinforce that students check their work as they progress within and after a task. • Strengthen students' ability to verify solutions through justifications.
MA.K12.MTR.7.1:	Apply mathematics to real-world contexts. Mathematicians who apply mathematics to real-world contexts: • Connect mathematical concepts to everyday experiences. • Use models and methods to understand, represent and solve problems. • Perform investigations to gather data or determine if a method is appropriate. • Redesign models and methods to improve accuracy or efficiency. **Clarifications:** Teachers who encourage students to apply mathematics to real-world contexts: • Provide opportunities for students to create models, both concrete and abstract, and perform investigations. • Challenge students to question the accuracy of their models and methods. • Support students as they validate conclusions by comparing them to the given situation. • Indicate how various concepts can be applied to other disciplines.
ELA.K12.EE.1.1:	Cite evidence to explain and justify reasoning. **Clarifications:** K-1 Students include textual evidence in their oral communication with guidance and support from adults. The evidence can consist of details from the text without naming the text. During 1st grade, students learn how to incorporate the evidence in their writing. 2-3 Students include relevant textual evidence in their written and oral communication. Students should name the text when they refer to it. In 3rd grade, students should use a combination of direct and indirect citations. 4-5 Students continue with previous skills and reference comments made by speakers and peers. Students cite texts that they've directly quoted, paraphrased, or used for information. When writing, students will use the form of citation dictated by the instructor or the style guide referenced by the instructor. 6-8 Students continue with previous skills and use a style guide to create a proper citation. 9-12 Students continue with previous skills and should be aware of existing style guides and the ways in which they differ.
ELA.K12.EE.2.1:	Read and comprehend grade-level complex texts proficiently. **Clarifications:** See Text Complexity for grade-level complexity bands and a text complexity rubric.
ELA.K12.EE.3.1:	Make inferences to support comprehension. **Clarifications:** Students will make inferences before the words infer or inference are introduced. Kindergarten students will answer questions like "Why is the girl smiling?" or make predictions about what will happen based on the title page. Students will use the terms and apply them in 2nd grade and beyond.
ELA.K12.EE.4.1:	Use appropriate collaborative techniques and active listening skills when engaging in discussions in a variety of situations. **Clarifications:** In kindergarten, students learn to listen to one another respectfully. In grades 1-2, students build upon these skills by justifying what they are thinking. For example: "I think _____ because _____." The collaborative conversations are becoming academic conversations. In grades 3-12, students engage in academic conversations discussing claims and justifying their reasoning, refining and applying skills. Students build on ideas, propel the conversation, and support claims and counterclaims with evidence.
ELA.K12.EE.5.1:	Use the accepted rules governing a specific format to create quality work. **Clarifications:** Students will incorporate skills learned into work products to produce quality work. For students to incorporate these skills appropriately, they must receive instruction. A 3rd grade student creating a poster board display must have instruction in how to effectively present information to do quality work.
	Use appropriate voice and tone when speaking or writing.

ELA.K12.EE.6.1:	**Clarifications:** In kindergarten and 1st grade, students learn the difference between formal and informal language. For example, the way we talk to our friends differs from the way we speak to adults. In 2nd grade and beyond, students practice appropriate social and academic language to discuss texts.
ELD.K12.ELL.SI.1:	English language learners communicate for social and instructional purposes within the school setting.

General Course Information and Notes

VERSION DESCRIPTION

Student musicians build on previous instruction to develop high levels of musicianship, technical proficiency, and performance skills through preparation of technically challenging scales, etudes, and solo literature. Students use problem-solving, critical thinking, and reflection to demonstrate the skills of disciplined performers. Public performances may serve as a culmination of specific instructional goals. Students may be required to attend and/or participate in rehearsals and performances outside the school day to support, extend, and assess learning in the classroom. This course may also require students to obtain a musical instrument (e.g., borrow, rent, purchase) from an outside source.

GENERAL NOTES

Florida's Benchmarks for Excellent Student Thinking (B.E.S.T.) Standards
This course includes Florida's B.E.S.T. ELA Expectations (EE) and Mathematical Thinking and Reasoning Standards (MTRs) for students. Florida educators should intentionally embed these standards within the content and their instruction as applicable. For guidance on the implementation of the EEs and MTRs, please visit cpalms.org/Standards/BEST_Standards.aspx and select the appropriate B.E.S.T. Standards package.

English Language Development ELD Standards Special Notes Section:
Teachers are required to provide listening, speaking, reading and writing instruction that allows English language learners (ELL) to communicate for social and instructional purposes within the school setting. For the given level of English language proficiency and with visual, graphic, or interactive support, students will interact with grade level words, expressions, sentences and discourse to process or produce language necessary for academic success. The ELD standard should specify a relevant content area concept or topic of study chosen by curriculum developers and teachers which maximizes an ELL's need for communication and social skills. To access an ELL supporting document which delineates performance definitions and descriptors, please click on the following link: cpalms.org/uploads/docs/standards/eld/SI.pdf

GENERAL INFORMATION

Course Number: 1302100

Course Path: Section: Grades PreK to 12 Education Courses > **Grade Group:** Grades 6 to 8 Education Courses > **Subject:** Music Education > **SubSubject:** Instrumental Music >
Abbreviated Title: M/J INSTRU TECNQS 3
Course Length: Year (Y)
Course Level: 2

Course Status: Draft - Course Pending Approval

Grade Level(s): 6,7,8

Educator Certifications

Instrumental Music (Secondary Grades 7-12)
Instrumental Music (Elementary and Secondary Grades K-12)
Music (Elementary and Secondary Grades K-12)

M/J Instrumental Ensemble 1 (#1302110) 2022 - And Beyond

Course Standards

Name	Description
MU.68.C.1.1:	Develop strategies for listening to unfamiliar musical works. **Clarifications:** e.g., listening maps, active listening, checklists
MU.68.C.1.2:	Compare, using correct music vocabulary, the aesthetic impact of a performance to one's own hypothesis of the composer's intent. **Clarifications:** e.g., quality recordings, peer group and individual performances, composer notes, instrumentation, expressive elements, title
MU.68.C.2.1:	Critique personal performance, experiment with a variety of solutions, and make appropriate adjustments with guidance from teachers and peers. **Clarifications:** e.g., intonation, balance, blend, phrasing, rhythm
MU.68.C.2.2:	Critique, using correct music vocabulary, changes in one's own or others' musical performance resulting from practice or rehearsal. **Clarifications:** e.g., blend, balance, ensemble playing, sonority, technique, tone quality
MU.68.F.3.2:	Investigate and discuss laws that protect intellectual property, and practice safe, legal, and responsible acquisition and use of musical media.
MU.68.H.1.4:	Classify authentic stylistic features in music originating from various cultures. **Clarifications:** e.g., rhythm, layered texture, key patterns, tonality, melodic line, quarter- or semi-tones, national folk melodies, improvisation, instrumentation, aural/oral traditions, drumming patterns
MU.68.H.2.3:	Classify the literature being studied by genre, style, and/or time period.
MU.68.H.3.1:	Identify connections among music and other content areas and/or contexts through interdisciplinary collaboration. **Clarifications:** e.g., school: other music classes, social studies, dance, physical education, science, health, math, world languages; community: cultural connections and traditions, ceremonial music, sales and advertising, communication
MU.68.O.3.1:	Describe how the combination of instrumentation and expressive elements in a musical work can convey a specific thought, idea, mood, and/or image. **Clarifications:** e.g., tempo markings, expression markings, articulation markings, phrasing, scales, modes, harmonic structure, timbre, rhythm, orchestration
MU.68.O.3.2:	Perform the expressive elements of a musical work indicated by the musical score and/or conductor, and transfer new knowledge and experiences to other musical works.
MU.68.S.1.3:	Arrange a short musical piece by manipulating melody, form, rhythm, and/or voicing.
MU.68.S.1.4:	Sing or play melodies by ear with support from the teacher and/or peers. **Clarifications:** e.g., melodies using traditional classroom instruments and/or voice
MU.68.S.2.2:	Transfer performance techniques from familiar to unfamiliar pieces.
MU.68.S.3.1:	Sing and/or play age-appropriate repertoire expressively. **Clarifications:** e.g., technique, phrasing, dynamics, tone quality, blend, balance, intonation, kinesthetic support/response
MU.68.S.3.2:	Demonstrate proper vocal or instrumental technique. **Clarifications:** e.g., posture, breathing, fingering, embouchure, bow technique, tuning, strumming
MU.68.S.3.3:	Sight-read standard exercises and simple repertoire. **Clarifications:** e.g., note and rest values, key signatures, time signatures, expressive markings, special harmonic and/or notation symbols
MU.68.S.3.4:	Compare written notation to aural examples and analyze for accuracy of rhythm and pitch. **Clarifications:** e.g., error detection, interval reinforcement
MU.68.S.3.6:	Develop and demonstrate efficient rehearsal strategies to apply skills and techniques. **Clarifications:** e.g., independently, collaboratively
MA.K12.MTR.1.1:	Mathematicians who participate in effortful learning both individually and with others: • Analyze the problem in a way that makes sense given the task. • Ask questions that will help with solving the task. • Build perseverance by modifying methods as needed while solving a challenging task. • Stay engaged and maintain a positive mindset when working to solve tasks. • Help and support each other when attempting a new method or approach. **Clarifications:** Teachers who encourage students to participate actively in effortful learning both individually and with others:

- Cultivate a community of growth mindset learners.
- Foster perseverance in students by choosing tasks that are challenging.
- Develop students' ability to analyze and problem solve.
- Recognize students' effort when solving challenging problems.

MA.K12.MTR.2.1:

Demonstrate understanding by representing problems in multiple ways.
Mathematicians who demonstrate understanding by representing problems in multiple ways:

- Build understanding through modeling and using manipulatives.
- Represent solutions to problems in multiple ways using objects, drawings, tables, graphs and equations.
- Progress from modeling problems with objects and drawings to using algorithms and equations.
- Express connections between concepts and representations.
- Choose a representation based on the given context or purpose.

Clarifications:
Teachers who encourage students to demonstrate understanding by representing problems in multiple ways:

- Help students make connections between concepts and representations.
- Provide opportunities for students to use manipulatives when investigating concepts.
- Guide students from concrete to pictorial to abstract representations as understanding progresses.
- Show students that various representations can have different purposes and can be useful in different situations.

MA.K12.MTR.3.1:

Complete tasks with mathematical fluency.
Mathematicians who complete tasks with mathematical fluency:

- Select efficient and appropriate methods for solving problems within the given context.
- Maintain flexibility and accuracy while performing procedures and mental calculations.
- Complete tasks accurately and with confidence.
- Adapt procedures to apply them to a new context.
- Use feedback to improve efficiency when performing calculations.

Clarifications:
Teachers who encourage students to complete tasks with mathematical fluency:

- Provide students with the flexibility to solve problems by selecting a procedure that allows them to solve efficiently and accurately.
- Offer multiple opportunities for students to practice efficient and generalizable methods.
- Provide opportunities for students to reflect on the method they used and determine if a more efficient method could have been used.

MA.K12.MTR.4.1:

Engage in discussions that reflect on the mathematical thinking of self and others.
Mathematicians who engage in discussions that reflect on the mathematical thinking of self and others:

- Communicate mathematical ideas, vocabulary and methods effectively.
- Analyze the mathematical thinking of others.
- Compare the efficiency of a method to those expressed by others.
- Recognize errors and suggest how to correctly solve the task.
- Justify results by explaining methods and processes.
- Construct possible arguments based on evidence.

Clarifications:
Teachers who encourage students to engage in discussions that reflect on the mathematical thinking of self and others:

- Establish a culture in which students ask questions of the teacher and their peers, and error is an opportunity for learning.
- Create opportunities for students to discuss their thinking with peers.
- Select, sequence and present student work to advance and deepen understanding of correct and increasingly efficient methods.
- Develop students' ability to justify methods and compare their responses to the responses of their peers.

MA.K12.MTR.5.1:

Use patterns and structure to help understand and connect mathematical concepts.
Mathematicians who use patterns and structure to help understand and connect mathematical concepts:

- Focus on relevant details within a problem.
- Create plans and procedures to logically order events, steps or ideas to solve problems.
- Decompose a complex problem into manageable parts.
- Relate previously learned concepts to new concepts.
- Look for similarities among problems.
- Connect solutions of problems to more complicated large-scale situations.

Clarifications:
Teachers who encourage students to use patterns and structure to help understand and connect mathematical concepts:

- Help students recognize the patterns in the world around them and connect these patterns to mathematical concepts.
- Support students to develop generalizations based on the similarities found among problems.
- Provide opportunities for students to create plans and procedures to solve problems.
- Develop students' ability to construct relationships between their current understanding and more sophisticated ways of thinking.

MA.K12.MTR.6.1:

Assess the reasonableness of solutions.
Mathematicians who assess the reasonableness of solutions:

- Estimate to discover possible solutions.
- Use benchmark quantities to determine if a solution makes sense.
- Check calculations when solving problems.
- Verify possible solutions by explaining the methods used.
- Evaluate results based on the given context.

Clarifications:

	Teachers who encourage students to assess the reasonableness of solutions: • Have students estimate or predict solutions prior to solving. • Prompt students to continually ask, "Does this solution make sense? How do you know?" • Reinforce that students check their work as they progress within and after a task. • Strengthen students' ability to verify solutions through justifications.
MA.K12.MTR.7.1:	Apply mathematics to real-world contexts. Mathematicians who apply mathematics to real-world contexts: • Connect mathematical concepts to everyday experiences. • Use models and methods to understand, represent and solve problems. • Perform investigations to gather data or determine if a method is appropriate. • Redesign models and methods to improve accuracy or efficiency. **Clarifications:** Teachers who encourage students to apply mathematics to real-world contexts: • Provide opportunities for students to create models, both concrete and abstract, and perform investigations. • Challenge students to question the accuracy of their models and methods. • Support students as they validate conclusions by comparing them to the given situation. • Indicate how various concepts can be applied to other disciplines.
ELA.K12.EE.1.1:	Cite evidence to explain and justify reasoning. **Clarifications:** K-1 Students include textual evidence in their oral communication with guidance and support from adults. The evidence can consist of details from the text without naming the text. During 1st grade, students learn how to incorporate the evidence in their writing. 2-3 Students include relevant textual evidence in their written and oral communication. Students should name the text when they refer to it. In 3rd grade, students should use a combination of direct and indirect citations. 4-5 Students continue with previous skills and reference comments made by speakers and peers. Students cite texts that they've directly quoted, paraphrased, or used for information. When writing, students will use the form of citation dictated by the instructor or the style guide referenced by the instructor. 6-8 Students continue with previous skills and use a style guide to create a proper citation. 9-12 Students continue with previous skills and should be aware of existing style guides and the ways in which they differ.
ELA.K12.EE.2.1:	Read and comprehend grade-level complex texts proficiently. **Clarifications:** See Text Complexity for grade-level complexity bands and a text complexity rubric.
ELA.K12.EE.3.1:	Make inferences to support comprehension. **Clarifications:** Students will make inferences before the words infer or inference are introduced. Kindergarten students will answer questions like "Why is the girl smiling?" or make predictions about what will happen based on the title page. Students will use the terms and apply them in 2nd grade and beyond.
ELA.K12.EE.4.1:	Use appropriate collaborative techniques and active listening skills when engaging in discussions in a variety of situations. **Clarifications:** In kindergarten, students learn to listen to one another respectfully. In grades 1-2, students build upon these skills by justifying what they are thinking. For example: "I think _____ because _____." The collaborative conversations are becoming academic conversations. In grades 3-12, students engage in academic conversations discussing claims and justifying their reasoning, refining and applying skills. Students build on ideas, propel the conversation, and support claims and counterclaims with evidence.
ELA.K12.EE.5.1:	Use the accepted rules governing a specific format to create quality work. **Clarifications:** Students will incorporate skills learned into work products to produce quality work. For students to incorporate these skills appropriately, they must receive instruction. A 3rd grade student creating a poster board display must have instruction in how to effectively present information to do quality work.
ELA.K12.EE.6.1:	Use appropriate voice and tone when speaking or writing. **Clarifications:** In kindergarten and 1st grade, students learn the difference between formal and informal language. For example, the way we talk to our friends differs from the way we speak to adults. In 2nd grade and beyond, students practice appropriate social and academic language to discuss texts.
ELD.K12.ELL.SI.1:	English language learners communicate for social and instructional purposes within the school setting.

General Course Information and Notes

VERSION DESCRIPTION

Students with little or no instrumental ensemble experience develop musicianship and performance skills as they study, rehearse, and perform high-quality ensemble literature in diverse styles. Public performances may serve as a culmination of specific instructional goals. Students may be required to attend and/or participate in rehearsals and performances outside the school day to support, extend, and assess learning in the classroom. This course may also require students to obtain a musical instrument (e.g., borrow, rent, purchase) from an outside source.

GENERAL NOTES

Florida's Benchmarks for Excellent Student Thinking (B.E.S.T.) Standards
This course includes Florida's B.E.S.T. ELA Expectations (EE) and Mathematical Thinking and Reasoning Standards (MTRs) for students. Florida educators should intentionally embed these standards within the content and their instruction as applicable. For guidance on the implementation of the EEs and MTRs, please visit cpalms.org/Standards/BEST_Standards.aspx and select the appropriate B.E.S.T. Standards package.

English Language Development ELD Standards Special Notes Section:
Teachers are required to provide listening, speaking, reading and writing instruction that allows English language learners (ELL) to communicate for social and instructional purposes within the school setting. For the given level of English language proficiency and with visual, graphic, or interactive support, students will interact with grade level words, expressions, sentences and discourse to process or produce language necessary for academic success. The ELD standard should specify a relevant content area concept or topic of study chosen by curriculum developers and teachers which maximizes an ELL's need for communication and social skills. To access an ELL supporting document which delineates performance definitions and descriptors, please click on the following link: cpalms.org/uploads/docs/standards/eld/SI.pdf

GENERAL INFORMATION

Course Number: 1302110

Course Path: Section: Grades PreK to 12 Education Courses > **Grade Group:** Grades 6 to 8 Education Courses > **Subject:** Music Education > **SubSubject:** Instrumental Music >
Abbreviated Title: M/J INSTRU ENS 1
Course Length: Year (Y)
Course Level: 2

Course Status: Draft - Course Pending Approval
Grade Level(s): 6,7,8

Educator Certifications

Instrumental Music (Secondary Grades 7-12)
Instrumental Music (Elementary and Secondary Grades K-12)
Music (Elementary and Secondary Grades K-12)

M/J Instrumental Ensemble 2 (#1302120) 2022 - And Beyond

Course Standards

Name	Description
MU.68.C.1.1:	Develop strategies for listening to unfamiliar musical works. **Clarifications:** e.g., listening maps, active listening, checklists
MU.68.C.1.2:	Compare, using correct music vocabulary, the aesthetic impact of a performance to one's own hypothesis of the composer's intent. **Clarifications:** e.g., quality recordings, peer group and individual performances, composer notes, instrumentation, expressive elements, title
MU.68.C.2.1:	Critique personal performance, experiment with a variety of solutions, and make appropriate adjustments with guidance from teachers and peers. **Clarifications:** e.g., intonation, balance, blend, phrasing, rhythm
MU.68.C.2.2:	Critique, using correct music vocabulary, changes in one's own or others' musical performance resulting from practice or rehearsal. **Clarifications:** e.g., blend, balance, ensemble playing, sonority, technique, tone quality
MU.68.F.2.1:	Describe several routes a composition or performance could travel from creator to consumer. **Clarifications:** e.g., MIDI and other technology, production, sharing on the Internet, home studios, professional recording studios, sales
MU.68.F.3.1:	Describe how studying music can enhance citizenship, leadership, and global thinking. **Clarifications:** e.g., dedication to mastering a task, problem-solving, self-discipline, dependability, ability to organize, cultural awareness, mutual respect
MU.68.F.3.2:	Investigate and discuss laws that protect intellectual property, and practice safe, legal, and responsible acquisition and use of musical media.
MU.68.H.1.4:	Classify authentic stylistic features in music originating from various cultures. **Clarifications:** e.g., rhythm, layered texture, key patterns, tonality, melodic line, quarter- or semi-tones, national folk melodies, improvisation, instrumentation, aural/oral traditions, drumming patterns
MU.68.H.2.3:	Classify the literature being studied by genre, style, and/or time period.
MU.68.H.3.1:	Identify connections among music and other content areas and/or contexts through interdisciplinary collaboration. **Clarifications:** e.g., school: other music classes, social studies, dance, physical education, science, health, math, world languages; community: cultural connections and traditions, ceremonial music, sales and advertising, communication
MU.68.H.3.2:	Discuss how the absence of music would affect other content areas and contexts. **Clarifications:** e.g., theatre and dance, movies, sporting events, video games, commercial advertising, social gatherings, civic and religious ceremonies, plays
MU.68.O.1.1:	Compare performances of a musical work to identify artistic choices made by performers. **Clarifications:** e.g., rhythm, melody, timbre, form, tonality, harmony, expressive elements; choral, orchestral, band, ensemble
MU.68.O.3.1:	Describe how the combination of instrumentation and expressive elements in a musical work can convey a specific thought, idea, mood, and/or image. **Clarifications:** e.g., tempo markings, expression markings, articulation markings, phrasing, scales, modes, harmonic structure, timbre, rhythm, orchestration
MU.68.O.3.2:	Perform the expressive elements of a musical work indicated by the musical score and/or conductor, and transfer new knowledge and experiences to other musical works.
MU.68.S.1.3:	Arrange a short musical piece by manipulating melody, form, rhythm, and/or voicing.
MU.68.S.1.4:	Sing or play melodies by ear with support from the teacher and/or peers. **Clarifications:** e.g., melodies using traditional classroom instruments and/or voice
MU.68.S.2.1:	Perform music from memory to demonstrate knowledge of the musical structure. **Clarifications:** e.g., basic themes, patterns, tonality, melody, harmony
MU.68.S.2.2:	Transfer performance techniques from familiar to unfamiliar pieces.
MU.68.S.3.1:	Sing and/or play age-appropriate repertoire expressively. **Clarifications:** e.g., technique, phrasing, dynamics, tone quality, blend, balance, intonation, kinesthetic support/response
MU.68.S.3.2:	Demonstrate proper vocal or instrumental technique. **Clarifications:** e.g., posture, breathing, fingering, embouchure, bow technique, tuning, strumming
	Sight-read standard exercises and simple repertoire.

MU.68.S.3.3:	**Clarifications:** e.g., note and rest values, key signatures, time signatures, expressive markings, special harmonic and/or notation symbols
MU.68.S.3.4:	Compare written notation to aural examples and analyze for accuracy of rhythm and pitch. **Clarifications:** e.g., error detection, interval reinforcement
MU.68.S.3.6:	Develop and demonstrate efficient rehearsal strategies to apply skills and techniques. **Clarifications:** e.g., independently, collaboratively
MA.K12.MTR.1.1:	Mathematicians who participate in effortful learning both individually and with others: • Analyze the problem in a way that makes sense given the task. • Ask questions that will help with solving the task. • Build perseverance by modifying methods as needed while solving a challenging task. • Stay engaged and maintain a positive mindset when working to solve tasks. • Help and support each other when attempting a new method or approach. **Clarifications:** Teachers who encourage students to participate actively in effortful learning both individually and with others: • Cultivate a community of growth mindset learners. • Foster perseverance in students by choosing tasks that are challenging. • Develop students' ability to analyze and problem solve. • Recognize students' effort when solving challenging problems.
MA.K12.MTR.2.1:	Demonstrate understanding by representing problems in multiple ways. Mathematicians who demonstrate understanding by representing problems in multiple ways: • Build understanding through modeling and using manipulatives. • Represent solutions to problems in multiple ways using objects, drawings, tables, graphs and equations. • Progress from modeling problems with objects and drawings to using algorithms and equations. • Express connections between concepts and representations. • Choose a representation based on the given context or purpose. **Clarifications:** Teachers who encourage students to demonstrate understanding by representing problems in multiple ways: • Help students make connections between concepts and representations. • Provide opportunities for students to use manipulatives when investigating concepts. • Guide students from concrete to pictorial to abstract representations as understanding progresses. • Show students that various representations can have different purposes and can be useful in different situations.
MA.K12.MTR.3.1:	Complete tasks with mathematical fluency. Mathematicians who complete tasks with mathematical fluency: • Select efficient and appropriate methods for solving problems within the given context. • Maintain flexibility and accuracy while performing procedures and mental calculations. • Complete tasks accurately and with confidence. • Adapt procedures to apply them to a new context. • Use feedback to improve efficiency when performing calculations. **Clarifications:** Teachers who encourage students to complete tasks with mathematical fluency: • Provide students with the flexibility to solve problems by selecting a procedure that allows them to solve efficiently and accurately. • Offer multiple opportunities for students to practice efficient and generalizable methods. • Provide opportunities for students to reflect on the method they used and determine if a more efficient method could have been used.
MA.K12.MTR.4.1:	Engage in discussions that reflect on the mathematical thinking of self and others. Mathematicians who engage in discussions that reflect on the mathematical thinking of self and others: • Communicate mathematical ideas, vocabulary and methods effectively. • Analyze the mathematical thinking of others. • Compare the efficiency of a method to those expressed by others. • Recognize errors and suggest how to correctly solve the task. • Justify results by explaining methods and processes. • Construct possible arguments based on evidence. **Clarifications:** Teachers who encourage students to engage in discussions that reflect on the mathematical thinking of self and others: • Establish a culture in which students ask questions of the teacher and their peers, and error is an opportunity for learning. • Create opportunities for students to discuss their thinking with peers. • Select, sequence and present student work to advance and deepen understanding of correct and increasingly efficient methods. • Develop students' ability to justify methods and compare their responses to the responses of their peers.
	Use patterns and structure to help understand and connect mathematical concepts. Mathematicians who use patterns and structure to help understand and connect mathematical concepts: • Focus on relevant details within a problem. • Create plans and procedures to logically order events, steps or ideas to solve problems. • Decompose a complex problem into manageable parts. • Relate previously learned concepts to new concepts.

MA.K12.MTR.5.1:	• Look for similarities among problems. • Connect solutions of problems to more complicated large-scale situations. **Clarifications:** Teachers who encourage students to use patterns and structure to help understand and connect mathematical concepts: • Help students recognize the patterns in the world around them and connect these patterns to mathematical concepts. • Support students to develop generalizations based on the similarities found among problems. • Provide opportunities for students to create plans and procedures to solve problems. • Develop students' ability to construct relationships between their current understanding and more sophisticated ways of thinking.
MA.K12.MTR.6.1:	Assess the reasonableness of solutions. Mathematicians who assess the reasonableness of solutions: • Estimate to discover possible solutions. • Use benchmark quantities to determine if a solution makes sense. • Check calculations when solving problems. • Verify possible solutions by explaining the methods used. • Evaluate results based on the given context. **Clarifications:** Teachers who encourage students to assess the reasonableness of solutions: • Have students estimate or predict solutions prior to solving. • Prompt students to continually ask, "Does this solution make sense? How do you know?" • Reinforce that students check their work as they progress within and after a task. • Strengthen students' ability to verify solutions through justifications.
MA.K12.MTR.7.1:	Apply mathematics to real-world contexts. Mathematicians who apply mathematics to real-world contexts: • Connect mathematical concepts to everyday experiences. • Use models and methods to understand, represent and solve problems. • Perform investigations to gather data or determine if a method is appropriate. • Redesign models and methods to improve accuracy or efficiency. **Clarifications:** Teachers who encourage students to apply mathematics to real-world contexts: • Provide opportunities for students to create models, both concrete and abstract, and perform investigations. • Challenge students to question the accuracy of their models and methods. • Support students as they validate conclusions by comparing them to the given situation. • Indicate how various concepts can be applied to other disciplines.
ELA.K12.EE.1.1:	Cite evidence to explain and justify reasoning. **Clarifications:** K-1 Students include textual evidence in their oral communication with guidance and support from adults. The evidence can consist of details from the text without naming the text. During 1st grade, students learn how to incorporate the evidence in their writing. 2-3 Students include relevant textual evidence in their written and oral communication. Students should name the text when they refer to it. In 3rd grade, students should use a combination of direct and indirect citations. 4-5 Students continue with previous skills and reference comments made by speakers and peers. Students cite texts that they've directly quoted, paraphrased, or used for information. When writing, students will use the form of citation dictated by the instructor or the style guide referenced by the instructor. 6-8 Students continue with previous skills and use a style guide to create a proper citation. 9-12 Students continue with previous skills and should be aware of existing style guides and the ways in which they differ.
ELA.K12.EE.2.1:	Read and comprehend grade-level complex texts proficiently. **Clarifications:** See Text Complexity for grade-level complexity bands and a text complexity rubric.
ELA.K12.EE.3.1:	Make inferences to support comprehension. **Clarifications:** Students will make inferences before the words infer or inference are introduced. Kindergarten students will answer questions like "Why is the girl smiling?" or make predictions about what will happen based on the title page. Students will use the terms and apply them in 2nd grade and beyond.
ELA.K12.EE.4.1:	Use appropriate collaborative techniques and active listening skills when engaging in discussions in a variety of situations. **Clarifications:** In kindergarten, students learn to listen to one another respectfully. In grades 1-2, students build upon these skills by justifying what they are thinking. For example: "I think _____ because _____." The collaborative conversations are becoming academic conversations. In grades 3-12, students engage in academic conversations discussing claims and justifying their reasoning, refining and applying skills. Students build on ideas, propel the conversation, and support claims and counterclaims with evidence.
ELA.K12.EE.5.1:	Use the accepted rules governing a specific format to create quality work. **Clarifications:** Students will incorporate skills learned into work products to produce quality work. For students to incorporate these skills appropriately, they must receive instruction. A 3rd grade student creating a poster board display must have instruction in how to effectively present information to do quality work.
	Use appropriate voice and tone when speaking or writing.

ELA.K12.EE.6.1:	**Clarifications:** In kindergarten and 1st grade, students learn the difference between formal and informal language. For example, the way we talk to our friends differs from the way we speak to adults. In 2nd grade and beyond, students practice appropriate social and academic language to discuss texts.
ELD.K12.ELL.SI.1:	English language learners communicate for social and instructional purposes within the school setting.

General Course Information and Notes

VERSION DESCRIPTION

Students with previous instrumental ensemble experience continue to build musicianship and performance skills through the study, rehearsal, and performance of high-quality ensemble literature in a variety of styles. Student musicians learn to self-assess and collaborate as they study relevant musical styles and time periods. Public performances may serve as a culmination of specific instructional goals. Students may be required to attend and/or participate in rehearsals and performances outside the school day to support, extend, and assess learning in the classroom. This course may also require students to obtain a musical instrument (e.g., borrow, rent, purchase) from an outside source.

GENERAL NOTES

Florida's Benchmarks for Excellent Student Thinking (B.E.S.T.) Standards
This course includes Florida's B.E.S.T. ELA Expectations (EE) and Mathematical Thinking and Reasoning Standards (MTRs) for students. Florida educators should intentionally embed these standards within the content and their instruction as applicable. For guidance on the implementation of the EEs and MTRs, please visit cpalms.org/Standards/BEST_Standards.aspx and select the appropriate B.E.S.T. Standards package.

English Language Development ELD Standards Special Notes Section:
Teachers are required to provide listening, speaking, reading and writing instruction that allows English language learners (ELL) to communicate for social and instructional purposes within the school setting. For the given level of English language proficiency and with visual, graphic, or interactive support, students will interact with grade level words, expressions, sentences and discourse to process or produce language necessary for academic success. The ELD standard should specify a relevant content area concept or topic of study chosen by curriculum developers and teachers which maximizes an ELL's need for communication and social skills. To access an ELL supporting document which delineates performance definitions and descriptors, please click on the following link: cpalms.org/uploads/docs/standards/eld/SI.pdf

GENERAL INFORMATION

Course Number: 1302120

Course Path: Section: Grades PreK to 12 Education Courses > **Grade Group:** Grades 6 to 8 Education Courses > **Subject:** Music Education > **SubSubject:** Instrumental Music >
Abbreviated Title: M/J INSTRU ENS 2
Course Length: Year (Y)
Course Level: 2

Course Status: Draft - Course Pending Approval
Grade Level(s): 6,7,8

Educator Certifications

Instrumental Music (Secondary Grades 7-12)
Instrumental Music (Elementary and Secondary Grades K-12)
Music (Elementary and Secondary Grades K-12)

M/J Instrumental Ensemble 3 (#1302130) 2022 - And Beyond

Course Standards

Name	Description
MU.68.C.1.1:	Develop strategies for listening to unfamiliar musical works. **Clarifications:** e.g., listening maps, active listening, checklists
MU.68.C.1.2:	Compare, using correct music vocabulary, the aesthetic impact of a performance to one's own hypothesis of the composer's intent. **Clarifications:** e.g., quality recordings, peer group and individual performances, composer notes, instrumentation, expressive elements, title
MU.68.C.2.1:	Critique personal performance, experiment with a variety of solutions, and make appropriate adjustments with guidance from teachers and peers. **Clarifications:** e.g., intonation, balance, blend, phrasing, rhythm
MU.68.C.2.2:	Critique, using correct music vocabulary, changes in one's own or others' musical performance resulting from practice or rehearsal. **Clarifications:** e.g., blend, balance, ensemble playing, sonority, technique, tone quality
MU.68.C.3.1:	Apply specific criteria to evaluate why a musical work is an exemplar in a specific style or genre.
MU.68.F.2.2:	Describe how concert attendance can financially impact a community. **Clarifications:** e.g., increased revenues at restaurants, hotels, and travel agencies; venue maintenance, parking attendants
MU.68.F.3.1:	Describe how studying music can enhance citizenship, leadership, and global thinking. **Clarifications:** e.g., dedication to mastering a task, problem-solving, self-discipline, dependability, ability to organize, cultural awareness, mutual respect
MU.68.F.3.2:	Investigate and discuss laws that protect intellectual property, and practice safe, legal, and responsible acquisition and use of musical media.
MU.68.H.1.1:	Describe the functions of music from various cultures and time periods.
MU.68.H.1.2:	Identify the works of representative composers within a specific style or time period.
MU.68.H.1.4:	Classify authentic stylistic features in music originating from various cultures. **Clarifications:** e.g., rhythm, layered texture, key patterns, tonality, melodic line, quarter- or semi-tones, national folk melodies, improvisation, instrumentation, aural/oral traditions, drumming patterns
MU.68.H.2.1:	Describe the influence of historical events and periods on music composition and performance.
MU.68.H.2.3:	Classify the literature being studied by genre, style, and/or time period.
MU.68.H.3.1:	Identify connections among music and other content areas and/or contexts through interdisciplinary collaboration. **Clarifications:** e.g., school: other music classes, social studies, dance, physical education, science, health, math, world languages; community: cultural connections and traditions, ceremonial music, sales and advertising, communication
MU.68.H.3.2:	Discuss how the absence of music would affect other content areas and contexts. **Clarifications:** e.g., theatre and dance, movies, sporting events, video games, commercial advertising, social gatherings, civic and religious ceremonies, plays
MU.68.O.1.1:	Compare performances of a musical work to identify artistic choices made by performers. **Clarifications:** e.g., rhythm, melody, timbre, form, tonality, harmony, expressive elements; choral, orchestral, band, ensemble
MU.68.O.2.2:	Demonstrate knowledge of major and minor tonalities through performance and composition. **Clarifications:** e.g., scales; key signatures; relative major/minor; parallel major/minor
MU.68.O.3.1:	Describe how the combination of instrumentation and expressive elements in a musical work can convey a specific thought, idea, mood, and/or image. **Clarifications:** e.g., tempo markings, expression markings, articulation markings, phrasing, scales, modes, harmonic structure, timbre, rhythm, orchestration
MU.68.O.3.2:	Perform the expressive elements of a musical work indicated by the musical score and/or conductor, and transfer new knowledge and experiences to other musical works.
MU.68.S.1.3:	Arrange a short musical piece by manipulating melody, form, rhythm, and/or voicing.
MU.68.S.1.4:	Sing or play melodies by ear with support from the teacher and/or peers. **Clarifications:** e.g., melodies using traditional classroom instruments and/or voice
MU.68.S.2.1:	Perform music from memory to demonstrate knowledge of the musical structure. **Clarifications:** e.g., basic themes, patterns, tonality, melody, harmony
MU.68.S.2.2:	Transfer performance techniques from familiar to unfamiliar pieces.

MU.68.S.3.1:	Sing and/or play age-appropriate repertoire expressively. **Clarifications:** e.g., technique, phrasing, dynamics, tone quality, blend, balance, intonation, kinesthetic support/response
MU.68.S.3.2:	Demonstrate proper vocal or instrumental technique. **Clarifications:** e.g., posture, breathing, fingering, embouchure, bow technique, tuning, strumming
MU.68.S.3.3:	Sight-read standard exercises and simple repertoire. **Clarifications:** e.g., note and rest values, key signatures, time signatures, expressive markings, special harmonic and/or notation symbols
MU.68.S.3.4:	Compare written notation to aural examples and analyze for accuracy of rhythm and pitch. **Clarifications:** e.g., error detection, interval reinforcement
MU.68.S.3.6:	Develop and demonstrate efficient rehearsal strategies to apply skills and techniques. **Clarifications:** e.g., independently, collaboratively
MA.K12.MTR.1.1:	Mathematicians who participate in effortful learning both individually and with others: • Analyze the problem in a way that makes sense given the task. • Ask questions that will help with solving the task. • Build perseverance by modifying methods as needed while solving a challenging task. • Stay engaged and maintain a positive mindset when working to solve tasks. • Help and support each other when attempting a new method or approach. **Clarifications:** Teachers who encourage students to participate actively in effortful learning both individually and with others: • Cultivate a community of growth mindset learners. • Foster perseverance in students by choosing tasks that are challenging. • Develop students' ability to analyze and problem solve. • Recognize students' effort when solving challenging problems.
MA.K12.MTR.2.1:	Demonstrate understanding by representing problems in multiple ways. Mathematicians who demonstrate understanding by representing problems in multiple ways: • Build understanding through modeling and using manipulatives. • Represent solutions to problems in multiple ways using objects, drawings, tables, graphs and equations. • Progress from modeling problems with objects and drawings to using algorithms and equations. • Express connections between concepts and representations. • Choose a representation based on the given context or purpose. **Clarifications:** Teachers who encourage students to demonstrate understanding by representing problems in multiple ways: • Help students make connections between concepts and representations. • Provide opportunities for students to use manipulatives when investigating concepts. • Guide students from concrete to pictorial to abstract representations as understanding progresses. • Show students that various representations can have different purposes and can be useful in different situations.
MA.K12.MTR.3.1:	Complete tasks with mathematical fluency. Mathematicians who complete tasks with mathematical fluency: • Select efficient and appropriate methods for solving problems within the given context. • Maintain flexibility and accuracy while performing procedures and mental calculations. • Complete tasks accurately and with confidence. • Adapt procedures to apply them to a new context. • Use feedback to improve efficiency when performing calculations. **Clarifications:** Teachers who encourage students to complete tasks with mathematical fluency: • Provide students with the flexibility to solve problems by selecting a procedure that allows them to solve efficiently and accurately. • Offer multiple opportunities for students to practice efficient and generalizable methods. • Provide opportunities for students to reflect on the method they used and determine if a more efficient method could have been used.
MA.K12.MTR.4.1:	Engage in discussions that reflect on the mathematical thinking of self and others. Mathematicians who engage in discussions that reflect on the mathematical thinking of self and others: • Communicate mathematical ideas, vocabulary and methods effectively. • Analyze the mathematical thinking of others. • Compare the efficiency of a method to those expressed by others. • Recognize errors and suggest how to correctly solve the task. • Justify results by explaining methods and processes. • Construct possible arguments based on evidence. **Clarifications:** Teachers who encourage students to engage in discussions that reflect on the mathematical thinking of self and others: • Establish a culture in which students ask questions of the teacher and their peers, and error is an opportunity for learning. • Create opportunities for students to discuss their thinking with peers. • Select, sequence and present student work to advance and deepen understanding of correct and increasingly efficient methods.

	• Develop students' ability to justify methods and compare their responses to the responses of their peers.
MA.K12.MTR.5.1:	Use patterns and structure to help understand and connect mathematical concepts. Mathematicians who use patterns and structure to help understand and connect mathematical concepts: • Focus on relevant details within a problem. • Create plans and procedures to logically order events, steps or ideas to solve problems. • Decompose a complex problem into manageable parts. • Relate previously learned concepts to new concepts. • Look for similarities among problems. • Connect solutions of problems to more complicated large-scale situations. **Clarifications:** Teachers who encourage students to use patterns and structure to help understand and connect mathematical concepts: • Help students recognize the patterns in the world around them and connect these patterns to mathematical concepts. • Support students to develop generalizations based on the similarities found among problems. • Provide opportunities for students to create plans and procedures to solve problems. • Develop students' ability to construct relationships between their current understanding and more sophisticated ways of thinking.
MA.K12.MTR.6.1:	Assess the reasonableness of solutions. Mathematicians who assess the reasonableness of solutions: • Estimate to discover possible solutions. • Use benchmark quantities to determine if a solution makes sense. • Check calculations when solving problems. • Verify possible solutions by explaining the methods used. • Evaluate results based on the given context. **Clarifications:** Teachers who encourage students to assess the reasonableness of solutions: • Have students estimate or predict solutions prior to solving. • Prompt students to continually ask, "Does this solution make sense? How do you know?" • Reinforce that students check their work as they progress within and after a task. • Strengthen students' ability to verify solutions through justifications.
MA.K12.MTR.7.1:	Apply mathematics to real-world contexts. Mathematicians who apply mathematics to real-world contexts: • Connect mathematical concepts to everyday experiences. • Use models and methods to understand, represent and solve problems. • Perform investigations to gather data or determine if a method is appropriate. • Redesign models and methods to improve accuracy or efficiency. **Clarifications:** Teachers who encourage students to apply mathematics to real-world contexts: • Provide opportunities for students to create models, both concrete and abstract, and perform investigations. • Challenge students to question the accuracy of their models and methods. • Support students as they validate conclusions by comparing them to the given situation. • Indicate how various concepts can be applied to other disciplines.
ELA.K12.EE.1.1:	Cite evidence to explain and justify reasoning. **Clarifications:** K-1 Students include textual evidence in their oral communication with guidance and support from adults. The evidence can consist of details from the text without naming the text. During 1st grade, students learn how to incorporate the evidence in their writing. 2-3 Students include relevant textual evidence in their written and oral communication. Students should name the text when they refer to it. In 3rd grade, students should use a combination of direct and indirect citations. 4-5 Students continue with previous skills and reference comments made by speakers and peers. Students cite texts that they've directly quoted, paraphrased, or used for information. When writing, students will use the form of citation dictated by the instructor or the style guide referenced by the instructor. 6-8 Students continue with previous skills and use a style guide to create a proper citation. 9-12 Students continue with previous skills and should be aware of existing style guides and the ways in which they differ.
ELA.K12.EE.2.1:	Read and comprehend grade-level complex texts proficiently. **Clarifications:** See Text Complexity for grade-level complexity bands and a text complexity rubric.
ELA.K12.EE.3.1:	Make inferences to support comprehension. **Clarifications:** Students will make inferences before the words infer or inference are introduced. Kindergarten students will answer questions like "Why is the girl smiling?" or make predictions about what will happen based on the title page. Students will use the terms and apply them in 2nd grade and beyond.
ELA.K12.EE.4.1:	Use appropriate collaborative techniques and active listening skills when engaging in discussions in a variety of situations. **Clarifications:** In kindergarten, students learn to listen to one another respectfully. In grades 1-2, students build upon these skills by justifying what they are thinking. For example: "I think _____ because _____." The collaborative conversations are becoming academic conversations. In grades 3-12, students engage in academic conversations discussing claims and justifying their reasoning, refining and applying skills. Students

	build on ideas, propel the conversation, and support claims and counterclaims with evidence.
ELA.K12.EE.5.1:	Use the accepted rules governing a specific format to create quality work. **Clarifications:** Students will incorporate skills learned into work products to produce quality work. For students to incorporate these skills appropriately, they must receive instruction. A 3rd grade student creating a poster board display must have instruction in how to effectively present information to do quality work.
ELA.K12.EE.6.1:	Use appropriate voice and tone when speaking or writing. **Clarifications:** In kindergarten and 1st grade, students learn the difference between formal and informal language. For example, the way we talk to our friends differs from the way we speak to adults. In 2nd grade and beyond, students practice appropriate social and academic language to discuss texts.
ELD.K12.ELL.SI.1:	English language learners communicate for social and instructional purposes within the school setting.

General Course Information and Notes

VERSION DESCRIPTION

Students continue to build musicianship and performance skills through the study, rehearsal, and performance of increasingly challenging, high-quality instrumental ensemble literature. Student musicians strengthen their techniques, ensemble skills, music literacy, and analytical skills as they study relevant history, cultures, and music genres. Public performances may serve as a culmination of specific instructional goals. Students may be required to attend and/or participate in rehearsals and performances outside the school day to support, extend, and assess learning in the classroom. This course may also require students to obtain a musical instrument (e.g., borrow, rent, purchase) from an outside source.

GENERAL NOTES

Florida's Benchmarks for Excellent Student Thinking (B.E.S.T.) Standards
This course includes Florida's B.E.S.T. ELA Expectations (EE) and Mathematical Thinking and Reasoning Standards (MTRs) for students. Florida educators should intentionally embed these standards within the content and their instruction as applicable. For guidance on the implementation of the EEs and MTRs, please visit cpalms.org/Standards/BEST_Standards.aspx and select the appropriate B.E.S.T. Standards package.

English Language Development ELD Standards Special Notes Section:
Teachers are required to provide listening, speaking, reading and writing instruction that allows English language learners (ELL) to communicate for social and instructional purposes within the school setting. For the given level of English language proficiency and with visual, graphic, or interactive support, students will interact with grade level words, expressions, sentences and discourse to process or produce language necessary for academic success. The ELD standard should specify a relevant content area concept or topic of study chosen by curriculum developers and teachers which maximizes an ELL's need for communication and social skills. To access an ELL supporting document which delineates performance definitions and descriptors, please click on the following link: cpalms.org/uploads/docs/standards/eld/SI.pdf

GENERAL INFORMATION

Course Number: 1302130

Course Path: Section: Grades PreK to 12 Education Courses > **Grade Group:** Grades 6 to 8 Education Courses > **Subject:** Music Education > **SubSubject:** Instrumental Music >
Abbreviated Title: M/J INSTRU ENS 3
Course Length: Year (Y)
Course Level: 2

Course Status: Draft - Course Pending Approval

Grade Level(s): 6,7,8

Educator Certifications

Instrumental Music (Secondary Grades 7-12)
Instrumental Music (Elementary and Secondary Grades K-12)
Music (Elementary and Secondary Grades K-12)

M/J Band 2 and Career Planning (#1302140) 2022 - And Beyond

Course Standards

Name	Description
MU.68.C.1.1:	Develop strategies for listening to unfamiliar musical works. **Clarifications:** e.g., listening maps, active listening, checklists
MU.68.C.2.1:	Critique personal performance, experiment with a variety of solutions, and make appropriate adjustments with guidance from teachers and peers. **Clarifications:** e.g., intonation, balance, blend, phrasing, rhythm
MU.68.C.2.2:	Critique, using correct music vocabulary, changes in one's own or others' musical performance resulting from practice or rehearsal. **Clarifications:** e.g., blend, balance, ensemble playing, sonority, technique, tone quality
MU.68.F.3.2:	Investigate and discuss laws that protect intellectual property, and practice safe, legal, and responsible acquisition and use of musical media.
MU.68.H.1.2:	Identify the works of representative composers within a specific style or time period.
MU.68.H.2.3:	Classify the literature being studied by genre, style, and/or time period.
MU.68.H.3.1:	Identify connections among music and other content areas and/or contexts through interdisciplinary collaboration. **Clarifications:** e.g., school: other music classes, social studies, dance, physical education, science, health, math, world languages; community: cultural connections and traditions, ceremonial music, sales and advertising, communication
MU.68.O.3.1:	Describe how the combination of instrumentation and expressive elements in a musical work can convey a specific thought, idea, mood, and/or image. **Clarifications:** e.g., tempo markings, expression markings, articulation markings, phrasing, scales, modes, harmonic structure, timbre, rhythm, orchestration
MU.68.O.3.2:	Perform the expressive elements of a musical work indicated by the musical score and/or conductor, and transfer new knowledge and experiences to other musical works.
MU.68.S.1.3:	Arrange a short musical piece by manipulating melody, form, rhythm, and/or voicing.
MU.68.S.1.4:	Sing or play melodies by ear with support from the teacher and/or peers. **Clarifications:** e.g., melodies using traditional classroom instruments and/or voice
MU.68.S.2.2:	Transfer performance techniques from familiar to unfamiliar pieces.
MU.68.S.3.1:	Sing and/or play age-appropriate repertoire expressively. **Clarifications:** e.g., technique, phrasing, dynamics, tone quality, blend, balance, intonation, kinesthetic support/response
MU.68.S.3.2:	Demonstrate proper vocal or instrumental technique. **Clarifications:** e.g., posture, breathing, fingering, embouchure, bow technique, tuning, strumming
MU.68.S.3.3:	Sight-read standard exercises and simple repertoire. **Clarifications:** e.g., note and rest values, key signatures, time signatures, expressive markings, special harmonic and/or notation symbols
MU.68.S.3.4:	Compare written notation to aural examples and analyze for accuracy of rhythm and pitch. **Clarifications:** e.g., error detection, interval reinforcement
MU.68.S.3.5:	Notate rhythmic phrases and/or melodies, in varying simple meters, performed by someone else.
MA.K12.MTR.1.1:	Mathematicians who participate in effortful learning both individually and with others: • Analyze the problem in a way that makes sense given the task. • Ask questions that will help with solving the task. • Build perseverance by modifying methods as needed while solving a challenging task. • Stay engaged and maintain a positive mindset when working to solve tasks. • Help and support each other when attempting a new method or approach. **Clarifications:** Teachers who encourage students to participate actively in effortful learning both individually and with others: • Cultivate a community of growth mindset learners. • Foster perseverance in students by choosing tasks that are challenging. • Develop students' ability to analyze and problem solve. • Recognize students' effort when solving challenging problems.
	Demonstrate understanding by representing problems in multiple ways. Mathematicians who demonstrate understanding by representing problems in multiple ways: • Build understanding through modeling and using manipulatives. • Represent solutions to problems in multiple ways using objects, drawings, tables, graphs and equations.

- Progress from modeling problems with objects and drawings to using algorithms and equations.
- Express connections between concepts and representations.

MA.K12.MTR.2.1:

- Choose a representation based on the given context or purpose.

Clarifications:
Teachers who encourage students to demonstrate understanding by representing problems in multiple ways:

- Help students make connections between concepts and representations.
- Provide opportunities for students to use manipulatives when investigating concepts.
- Guide students from concrete to pictorial to abstract representations as understanding progresses.
- Show students that various representations can have different purposes and can be useful in different situations.

Complete tasks with mathematical fluency.
Mathematicians who complete tasks with mathematical fluency:

- Select efficient and appropriate methods for solving problems within the given context.
- Maintain flexibility and accuracy while performing procedures and mental calculations.
- Complete tasks accurately and with confidence.
- Adapt procedures to apply them to a new context.

MA.K12.MTR.3.1:

- Use feedback to improve efficiency when performing calculations.

Clarifications:
Teachers who encourage students to complete tasks with mathematical fluency:

- Provide students with the flexibility to solve problems by selecting a procedure that allows them to solve efficiently and accurately.
- Offer multiple opportunities for students to practice efficient and generalizable methods.
- Provide opportunities for students to reflect on the method they used and determine if a more efficient method could have been used.

Engage in discussions that reflect on the mathematical thinking of self and others.
Mathematicians who engage in discussions that reflect on the mathematical thinking of self and others:

- Communicate mathematical ideas, vocabulary and methods effectively.
- Analyze the mathematical thinking of others.
- Compare the efficiency of a method to those expressed by others.
- Recognize errors and suggest how to correctly solve the task.
- Justify results by explaining methods and processes.

MA.K12.MTR.4.1:

- Construct possible arguments based on evidence.

Clarifications:
Teachers who encourage students to engage in discussions that reflect on the mathematical thinking of self and others:

- Establish a culture in which students ask questions of the teacher and their peers, and error is an opportunity for learning.
- Create opportunities for students to discuss their thinking with peers.
- Select, sequence and present student work to advance and deepen understanding of correct and increasingly efficient methods.
- Develop students' ability to justify methods and compare their responses to the responses of their peers.

Use patterns and structure to help understand and connect mathematical concepts.
Mathematicians who use patterns and structure to help understand and connect mathematical concepts:

- Focus on relevant details within a problem.
- Create plans and procedures to logically order events, steps or ideas to solve problems.
- Decompose a complex problem into manageable parts.
- Relate previously learned concepts to new concepts.
- Look for similarities among problems.

MA.K12.MTR.5.1:

- Connect solutions of problems to more complicated large-scale situations.

Clarifications:
Teachers who encourage students to use patterns and structure to help understand and connect mathematical concepts:

- Help students recognize the patterns in the world around them and connect these patterns to mathematical concepts.
- Support students to develop generalizations based on the similarities found among problems.
- Provide opportunities for students to create plans and procedures to solve problems.
- Develop students' ability to construct relationships between their current understanding and more sophisticated ways of thinking.

Assess the reasonableness of solutions.
Mathematicians who assess the reasonableness of solutions:

- Estimate to discover possible solutions.
- Use benchmark quantities to determine if a solution makes sense.
- Check calculations when solving problems.
- Verify possible solutions by explaining the methods used.

MA.K12.MTR.6.1:

- Evaluate results based on the given context.

Clarifications:
Teachers who encourage students to assess the reasonableness of solutions:

- Have students estimate or predict solutions prior to solving.
- Prompt students to continually ask, "Does this solution make sense? How do you know?"
- Reinforce that students check their work as they progress within and after a task.
- Strengthen students' ability to verify solutions through justifications.

Apply mathematics to real-world contexts.
Mathematicians who apply mathematics to real-world contexts:

- Connect mathematical concepts to everyday experiences.

MA.K12.MTR.7.1:	• Use models and methods to understand, represent and solve problems. • Perform investigations to gather data or determine if a method is appropriate. • Redesign models and methods to improve accuracy or efficiency. **Clarifications:** Teachers who encourage students to apply mathematics to real-world contexts: • Provide opportunities for students to create models, both concrete and abstract, and perform investigations. • Challenge students to question the accuracy of their models and methods. • Support students as they validate conclusions by comparing them to the given situation. • Indicate how various concepts can be applied to other disciplines.
ELA.K12.EE.1.1:	Cite evidence to explain and justify reasoning. **Clarifications:** K-1 Students include textual evidence in their oral communication with guidance and support from adults. The evidence can consist of details from the text without naming the text. During 1st grade, students learn how to incorporate the evidence in their writing. 2-3 Students include relevant textual evidence in their written and oral communication. Students should name the text when they refer to it. In 3rd grade, students should use a combination of direct and indirect citations. 4-5 Students continue with previous skills and reference comments made by speakers and peers. Students cite texts that they've directly quoted, paraphrased, or used for information. When writing, students will use the form of citation dictated by the instructor or the style guide referenced by the instructor. 6-8 Students continue with previous skills and use a style guide to create a proper citation. 9-12 Students continue with previous skills and should be aware of existing style guides and the ways in which they differ.
ELA.K12.EE.2.1:	Read and comprehend grade-level complex texts proficiently. **Clarifications:** See Text Complexity for grade-level complexity bands and a text complexity rubric.
ELA.K12.EE.3.1:	Make inferences to support comprehension. **Clarifications:** Students will make inferences before the words infer or inference are introduced. Kindergarten students will answer questions like "Why is the girl smiling?" or make predictions about what will happen based on the title page. Students will use the terms and apply them in 2nd grade and beyond.
ELA.K12.EE.4.1:	Use appropriate collaborative techniques and active listening skills when engaging in discussions in a variety of situations. **Clarifications:** In kindergarten, students learn to listen to one another respectfully. In grades 1-2, students build upon these skills by justifying what they are thinking. For example: "I think _____ because _____." The collaborative conversations are becoming academic conversations. In grades 3-12, students engage in academic conversations discussing claims and justifying their reasoning, refining and applying skills. Students build on ideas, propel the conversation, and support claims and counterclaims with evidence.
ELA.K12.EE.5.1:	Use the accepted rules governing a specific format to create quality work. **Clarifications:** Students will incorporate skills learned into work products to produce quality work. For students to incorporate these skills appropriately, they must receive instruction. A 3rd grade student creating a poster board display must have instruction in how to effectively present information to do quality work.
ELA.K12.EE.6.1:	Use appropriate voice and tone when speaking or writing. **Clarifications:** In kindergarten and 1st grade, students learn the difference between formal and informal language. For example, the way we talk to our friends differs from the way we speak to adults. In 2nd grade and beyond, students practice appropriate social and academic language to discuss texts.
DA.68.S.2.1:	Sustain focused attention, respect, and discipline during classes and performances.
ELD.K12.ELL.SI.1:	English language learners communicate for social and instructional purposes within the school setting.

General Course Information and Notes

VERSION DESCRIPTION

Students with previous band experience build on instrumental technique, music literacy, and aesthetic response through rehearsal, performance, and study of a variety of high-quality band literature. Instrumentalists expand their knowledge of music notation, music theory, sound production, and personal and group rehearsal strategies. In tandem with their learning opportunities in band, students investigate careers in a wide variety of fields guided by the competencies required by Florida Statute. Public performances may serve as a culmination of specific instructional goals. Students may be required to attend and/or participate in rehearsals and performances outside the school day to support, extend, and assess learning in the classroom. This course may also require students to obtain a musical instrument (e.g., borrow, rent, purchase) from an outside source.

GENERAL NOTES

Career and Education Planning – Per section 1003.4156, Florida Statutes, the Career and Education Planning course must result in a completed, personalized academic and career plan for the student, that may be revised as the student progresses through middle and high school; must emphasize the importance of entrepreneurship and employability skills; and must include information from the Department of Economic Opportunity's economic security report as described in Section 445.07, Florida

Statutes. The required, personalized academic and career plan must inform students of high school graduation requirements, including diploma designations (Section 1003.4285, Florida Statutes); requirements for a Florida Bright Futures Scholarship; state university and Florida College System institution admission requirements; and, available opportunities to earn college credit in high school utilizing acceleration mechanisms. For additional information on the Middle School Career and Education Planning courses, visit fldoe.org/academics/college-career-planning/educators-toolkit/index.stml.

Career and Education Planning Course Standards – Students will:

1.0 Describe the influences that societal, economic, and technological changes have on employment trends and future training.

2.0 Develop skills to locate, evaluate, and interpret career information.

3.0 Identify and demonstrate processes for making short and long term goals.

4.0 Demonstrate employability skills such as working in a group, problem-solving and organizational skills, and the importance of entrepreneurship.

5.0 Understand the relationship between educational achievement and career choices/postsecondary options.

6.0 Identify a career cluster and related pathways through an interest assessment that match career and education goals.

7.0 Develop a career and education plan that includes short and long-term goals, high school program of study, and postsecondary/career goals.

8.0 Demonstrate knowledge of technology and its application in career fields/clusters.

Florida's Benchmarks for Excellent Student Thinking (B.E.S.T.) Standards
This course includes Florida's B.E.S.T. ELA Expectations (EE) and Mathematical Thinking and Reasoning Standards (MTRs) for students. Florida educators should intentionally embed these standards within the content and their instruction as applicable. For guidance on the implementation of the EEs and MTRs, please visit cpalms.org/Standards/BEST_Standards.aspx and select the appropriate B.E.S.T. Standards package.

English Language Development ELD Standards Special Notes Section:

Teachers are required to provide listening, speaking, reading and writing instruction that allows English language learners (ELL) to communicate for social and instructional purposes within the school setting. For the given level of English language proficiency and with visual, graphic, or interactive support, students will interact with grade level words, expressions, sentences and discourse to process or produce language necessary for academic success. The ELD standard should specify a relevant content area concept or topic of study chosen by curriculum developers and teachers which maximizes an ELL's need for communication and social skills. To access an ELL supporting document which delineates performance definitions and descriptors, please click on the following link: cpalms.org/uploads/docs/standards/eld/SI.pdf

GENERAL INFORMATION

Course Number: 1302140

Course Path: Section: Grades PreK to 12 Education Courses > **Grade Group:** Grades 6 to 8 Education Courses > **Subject:** Music Education > **SubSubject:** Instrumental Music >
Abbreviated Title: M/J BAND 2&CAR PLAN
Course Length: Year (Y)
Course Level: 2

Course Status: Draft - Course Pending Approval

Grade Level(s): 6,7,8

Educator Certifications

Instrumental Music (Secondary Grades 7-12)
Instrumental Music (Elementary and Secondary Grades K-12)
Music (Elementary and Secondary Grades K-12)

M/J Band 3 and Career Planning (#1302142) 2022 - And Beyond

Course Standards

Name	Description
MU.68.C.1.1:	Develop strategies for listening to unfamiliar musical works. **Clarifications:** e.g., listening maps, active listening, checklists
MU.68.C.2.1:	Critique personal performance, experiment with a variety of solutions, and make appropriate adjustments with guidance from teachers and peers. **Clarifications:** e.g., intonation, balance, blend, phrasing, rhythm
MU.68.C.2.2:	Critique, using correct music vocabulary, changes in one's own or others' musical performance resulting from practice or rehearsal. **Clarifications:** e.g., blend, balance, ensemble playing, sonority, technique, tone quality
MU.68.C.3.1:	Apply specific criteria to evaluate why a musical work is an exemplar in a specific style or genre.
MU.68.F.3.1:	Describe how studying music can enhance citizenship, leadership, and global thinking. **Clarifications:** e.g., dedication to mastering a task, problem-solving, self-discipline, dependability, ability to organize, cultural awareness, mutual respect
MU.68.F.3.2:	Investigate and discuss laws that protect intellectual property, and practice safe, legal, and responsible acquisition and use of musical media.
MU.68.H.1.2:	Identify the works of representative composers within a specific style or time period.
MU.68.H.2.3:	Classify the literature being studied by genre, style, and/or time period.
MU.68.H.3.1:	Identify connections among music and other content areas and/or contexts through interdisciplinary collaboration. **Clarifications:** e.g., school: other music classes, social studies, dance, physical education, science, health, math, world languages; community: cultural connections and traditions, ceremonial music, sales and advertising, communication
MU.68.H.3.2:	Discuss how the absence of music would affect other content areas and contexts. **Clarifications:** e.g., theatre and dance, movies, sporting events, video games, commercial advertising, social gatherings, civic and religious ceremonies, plays
MU.68.O.1.1:	Compare performances of a musical work to identify artistic choices made by performers. **Clarifications:** e.g., rhythm, melody, timbre, form, tonality, harmony, expressive elements; choral, orchestral, band, ensemble
MU.68.O.2.2:	Demonstrate knowledge of major and minor tonalities through performance and composition. **Clarifications:** e.g., scales; key signatures; relative major/minor; parallel major/minor
MU.68.O.3.1:	Describe how the combination of instrumentation and expressive elements in a musical work can convey a specific thought, idea, mood, and/or image. **Clarifications:** e.g., tempo markings, expression markings, articulation markings, phrasing, scales, modes, harmonic structure, timbre, rhythm, orchestration
MU.68.O.3.2:	Perform the expressive elements of a musical work indicated by the musical score and/or conductor, and transfer new knowledge and experiences to other musical works.
MU.68.S.1.3:	Arrange a short musical piece by manipulating melody, form, rhythm, and/or voicing.
MU.68.S.1.4:	Sing or play melodies by ear with support from the teacher and/or peers. **Clarifications:** e.g., melodies using traditional classroom instruments and/or voice
MU.68.S.2.2:	Transfer performance techniques from familiar to unfamiliar pieces.
MU.68.S.3.1:	Sing and/or play age-appropriate repertoire expressively. **Clarifications:** e.g., technique, phrasing, dynamics, tone quality, blend, balance, intonation, kinesthetic support/response
MU.68.S.3.2:	Demonstrate proper vocal or instrumental technique. **Clarifications:** e.g., posture, breathing, fingering, embouchure, bow technique, tuning, strumming
MU.68.S.3.3:	Sight-read standard exercises and simple repertoire. **Clarifications:** e.g., note and rest values, key signatures, time signatures, expressive markings, special harmonic and/or notation symbols
MU.68.S.3.4:	Compare written notation to aural examples and analyze for accuracy of rhythm and pitch. **Clarifications:** e.g., error detection, interval reinforcement
MU.68.S.3.5:	Notate rhythmic phrases and/or melodies, in varying simple meters, performed by someone else.
	Mathematicians who participate in effortful learning both individually and with others: • Analyze the problem in a way that makes sense given the task.

- Ask questions that will help with solving the task.
- Build perseverance by modifying methods as needed while solving a challenging task.
- Stay engaged and maintain a positive mindset when working to solve tasks.
- Help and support each other when attempting a new method or approach.

MA.K12.MTR.1.1:

Clarifications:
Teachers who encourage students to participate actively in effortful learning both individually and with others:
- Cultivate a community of growth mindset learners.
- Foster perseverance in students by choosing tasks that are challenging.
- Develop students' ability to analyze and problem solve.
- Recognize students' effort when solving challenging problems.

Demonstrate understanding by representing problems in multiple ways.
Mathematicians who demonstrate understanding by representing problems in multiple ways:

- Build understanding through modeling and using manipulatives.
- Represent solutions to problems in multiple ways using objects, drawings, tables, graphs and equations.
- Progress from modeling problems with objects and drawings to using algorithms and equations.
- Express connections between concepts and representations.
- Choose a representation based on the given context or purpose.

MA.K12.MTR.2.1:

Clarifications:
Teachers who encourage students to demonstrate understanding by representing problems in multiple ways:
- Help students make connections between concepts and representations.
- Provide opportunities for students to use manipulatives when investigating concepts.
- Guide students from concrete to pictorial to abstract representations as understanding progresses.
- Show students that various representations can have different purposes and can be useful in different situations.

Complete tasks with mathematical fluency.
Mathematicians who complete tasks with mathematical fluency:

- Select efficient and appropriate methods for solving problems within the given context.
- Maintain flexibility and accuracy while performing procedures and mental calculations.
- Complete tasks accurately and with confidence.
- Adapt procedures to apply them to a new context.
- Use feedback to improve efficiency when performing calculations.

MA.K12.MTR.3.1:

Clarifications:
Teachers who encourage students to complete tasks with mathematical fluency:
- Provide students with the flexibility to solve problems by selecting a procedure that allows them to solve efficiently and accurately.
- Offer multiple opportunities for students to practice efficient and generalizable methods.
- Provide opportunities for students to reflect on the method they used and determine if a more efficient method could have been used.

Engage in discussions that reflect on the mathematical thinking of self and others.
Mathematicians who engage in discussions that reflect on the mathematical thinking of self and others:

- Communicate mathematical ideas, vocabulary and methods effectively.
- Analyze the mathematical thinking of others.
- Compare the efficiency of a method to those expressed by others.
- Recognize errors and suggest how to correctly solve the task.
- Justify results by explaining methods and processes.
- Construct possible arguments based on evidence.

MA.K12.MTR.4.1:

Clarifications:
Teachers who encourage students to engage in discussions that reflect on the mathematical thinking of self and others:
- Establish a culture in which students ask questions of the teacher and their peers, and error is an opportunity for learning.
- Create opportunities for students to discuss their thinking with peers.
- Select, sequence and present student work to advance and deepen understanding of correct and increasingly efficient methods.
- Develop students' ability to justify methods and compare their responses to the responses of their peers.

Use patterns and structure to help understand and connect mathematical concepts.
Mathematicians who use patterns and structure to help understand and connect mathematical concepts:

- Focus on relevant details within a problem.
- Create plans and procedures to logically order events, steps or ideas to solve problems.
- Decompose a complex problem into manageable parts.
- Relate previously learned concepts to new concepts.
- Look for similarities among problems.
- Connect solutions of problems to more complicated large-scale situations.

MA.K12.MTR.5.1:

Clarifications:
Teachers who encourage students to use patterns and structure to help understand and connect mathematical concepts:
- Help students recognize the patterns in the world around them and connect these patterns to mathematical concepts.
- Support students to develop generalizations based on the similarities found among problems.
- Provide opportunities for students to create plans and procedures to solve problems.
- Develop students' ability to construct relationships between their current understanding and more sophisticated ways of thinking.

Assess the reasonableness of solutions.
Mathematicians who assess the reasonableness of solutions:

MA.K12.MTR.6.1:	• Estimate to discover possible solutions. • Use benchmark quantities to determine if a solution makes sense. • Check calculations when solving problems. • Verify possible solutions by explaining the methods used. • Evaluate results based on the given context. **Clarifications:** Teachers who encourage students to assess the reasonableness of solutions: • Have students estimate or predict solutions prior to solving. • Prompt students to continually ask, "Does this solution make sense? How do you know?" • Reinforce that students check their work as they progress within and after a task. • Strengthen students' ability to verify solutions through justifications.
MA.K12.MTR.7.1:	Apply mathematics to real-world contexts. Mathematicians who apply mathematics to real-world contexts: • Connect mathematical concepts to everyday experiences. • Use models and methods to understand, represent and solve problems. • Perform investigations to gather data or determine if a method is appropriate. • Redesign models and methods to improve accuracy or efficiency. **Clarifications:** Teachers who encourage students to apply mathematics to real-world contexts: • Provide opportunities for students to create models, both concrete and abstract, and perform investigations. • Challenge students to question the accuracy of their models and methods. • Support students as they validate conclusions by comparing them to the given situation. • Indicate how various concepts can be applied to other disciplines.
ELA.K12.EE.1.1:	Cite evidence to explain and justify reasoning. **Clarifications:** K-1 Students include textual evidence in their oral communication with guidance and support from adults. The evidence can consist of details from the text without naming the text. During 1st grade, students learn how to incorporate the evidence in their writing. 2-3 Students include relevant textual evidence in their written and oral communication. Students should name the text when they refer to it. In 3rd grade, students should use a combination of direct and indirect citations. 4-5 Students continue with previous skills and reference comments made by speakers and peers. Students cite texts that they've directly quoted, paraphrased, or used for information. When writing, students will use the form of citation dictated by the instructor or the style guide referenced by the instructor. 6-8 Students continue with previous skills and use a style guide to create a proper citation. 9-12 Students continue with previous skills and should be aware of existing style guides and the ways in which they differ.
ELA.K12.EE.2.1:	Read and comprehend grade-level complex texts proficiently. **Clarifications:** See Text Complexity for grade-level complexity bands and a text complexity rubric.
ELA.K12.EE.3.1:	Make inferences to support comprehension. **Clarifications:** Students will make inferences before the words infer or inference are introduced. Kindergarten students will answer questions like "Why is the girl smiling?" or make predictions about what will happen based on the title page. Students will use the terms and apply them in 2nd grade and beyond.
ELA.K12.EE.4.1:	Use appropriate collaborative techniques and active listening skills when engaging in discussions in a variety of situations. **Clarifications:** In kindergarten, students learn to listen to one another respectfully. In grades 1-2, students build upon these skills by justifying what they are thinking. For example: "I think _____ because _____." The collaborative conversations are becoming academic conversations. In grades 3-12, students engage in academic conversations discussing claims and justifying their reasoning, refining and applying skills. Students build on ideas, propel the conversation, and support claims and counterclaims with evidence.
ELA.K12.EE.5.1:	Use the accepted rules governing a specific format to create quality work. **Clarifications:** Students will incorporate skills learned into work products to produce quality work. For students to incorporate these skills appropriately, they must receive instruction. A 3rd grade student creating a poster board display must have instruction in how to effectively present information to do quality work.
ELA.K12.EE.6.1:	Use appropriate voice and tone when speaking or writing. **Clarifications:** In kindergarten and 1st grade, students learn the difference between formal and informal language. For example, the way we talk to our friends differs from the way we speak to adults. In 2nd grade and beyond, students practice appropriate social and academic language to discuss texts.
DA.68.S.2.1:	Sustain focused attention, respect, and discipline during classes and performances.
ELD.K12.ELL.SI.1:	English language learners communicate for social and instructional purposes within the school setting.

General Course Information and Notes

VERSION DESCRIPTION

Students with previous band experience expand on their instrumental technique, music literacy, and aesthetic response through rehearsal, performance, and study of a variety of intermediate-level, high-quality band literature. Instrumentalists extend their knowledge of music notation and theory, sound production, and rehearsal strategies. In tandem with their learning opportunities in band, students investigate careers in a wide variety of fields guided by the competencies required by Florida Statute. Public performances may serve as a culmination of specific instructional goals. Students may be required to attend and/or participate in rehearsals and performances outside the school day to support, extend, and assess learning in the classroom. This course may also require students to obtain a musical instrument (e.g., borrow, rent, purchase) from an outside source.

GENERAL NOTES

Career and Education Planning – Per section 1003.4156, Florida Statutes, the Career and Education Planning course must result in a completed, personalized academic and career plan for the student, that may be revised as the student progresses through middle and high school; must emphasize the importance of entrepreneurship and employability skills; and must include information from the Department of Economic Opportunity's economic security report as described in Section 445.07, Florida Statutes. The required, personalized academic and career plan must inform students of high school graduation requirements, including diploma designations (Section 1003.4285, Florida Statutes); requirements for a Florida Bright Futures Scholarship; state university and Florida College System institution admission requirements; and, available opportunities to earn college credit in high school utilizing acceleration mechanisms. For additional information on the Middle School Career and Education Planning courses, visit fldoe.org/academics/college-career-planning/educators-toolkit/index.stml.

Career and Education Planning Course Standards – Students will:

1.0 Describe the influences that societal, economic, and technological changes have on employment trends and future training.

2.0 Develop skills to locate, evaluate, and interpret career information.

3.0 Identify and demonstrate processes for making short and long term goals.

4.0 Demonstrate employability skills such as working in a group, problem-solving and organizational skills, and the importance of entrepreneurship.

5.0 Understand the relationship between educational achievement and career choices/postsecondary options.

6.0 Identify a career cluster and related pathways through an interest assessment that match career and education goals.

7.0 Develop a career and education plan that includes short and long-term goals, high school program of study, and postsecondary/career goals.

8.0 Demonstrate knowledge of technology and its application in career fields/clusters.

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This course includes Florida's B.E.S.T. ELA Expectations (EE) and Mathematical Thinking and Reasoning Standards (MTRs) for students. Florida educators should intentionally embed these standards within the content and their instruction as applicable. For guidance on the implementation of the EEs and MTRs, please visit cpalms.org/Standards/BEST_Standards.aspx and select the appropriate B.E.S.T. Standards package.

English Language Development ELD Standards Special Notes Section:
Teachers are required to provide listening, speaking, reading and writing instruction that allows English language learners (ELL) to communicate for social and instructional purposes within the school setting. For the given level of English language proficiency and with visual, graphic, or interactive support, students will interact with grade level words, expressions, sentences and discourse to process or produce language necessary for academic success. The ELD standard should specify a relevant content area concept or topic of study chosen by curriculum developers and teachers which maximizes an ELL's need for communication and social skills. To access an ELL supporting document which delineates performance definitions and descriptors, please click on the following link: cpalms.org/uploads/docs/standards/eld/SI.pdf

GENERAL INFORMATION

Course Number: 1302142

Course Path: Section: Grades PreK to 12 Education Courses > **Grade Group:** Grades 6 to 8 Education Courses > **Subject:** Music Education > **SubSubject:** Instrumental Music >
Abbreviated Title: M/J BAND 3&CAR PLAN
Course Length: Year (Y)
Course Level: 2

Course Status: Draft - Course Pending Approval

Grade Level(s): 6,7,8

Educator Certifications

Instrumental Music (Secondary Grades 7-12)
Instrumental Music (Elementary and Secondary Grades K-12)
Music (Elementary and Secondary Grades K-12)

Band 1 (#1302300) 2022 - And Beyond

Course Standards

Name	Description
MU.912.C.1.1:	Apply listening strategies to promote appreciation and understanding of unfamiliar musical works. **Clarifications:** e.g., listening maps, active listening, checklists
MU.912.C.1.2:	Compare, using correct music vocabulary, the aesthetic impact of two or more performances of a musical work to one's own hypothesis of the composer's intent. **Clarifications:** e.g., quality recordings, individual and peer-group performances, composer notes, instrumentation, expressive elements, title
MU.912.C.1.3:	Analyze instruments of the world and classify them by common traits. **Clarifications:** e.g., classical and folk instruments from around the world
MU.912.C.2.1:	Evaluate and make appropriate adjustments to personal performance in solo and ensembles.
MU.912.C.2.2:	Evaluate performance quality in recorded and/or live performances.
MU.912.C.2.3:	Evaluate one's own or other's compositions and/or improvisations and generate improvements independently or cooperatively.
MU.912.C.3.1:	Make critical evaluations, based on exemplary models, of the quality and effectiveness of performances and apply the criteria to personal development in music.
MU.912.F.3.1:	Analyze and describe how meeting one's responsibilities in music offers opportunities to develop leadership skills, and identify personal examples of leadership in school and/or non-school settings.
MU.912.F.3.2:	Summarize copyright laws that govern printed, recorded, and on-line music to promote legal and responsible use of intellectual property and technology.
MU.912.F.3.3:	Define, prioritize, monitor, and successfully complete tasks related to individual musical performance or project presentation, without direct oversight, demonstrating skills for use in the workplace.
MU.912.H.1.1:	Investigate and discuss how a culture's traditions are reflected through its music. **Clarifications:** e.g., patriotic, folk, celebration, entertainment, spiritual
MU.912.H.1.2:	Compare the work of, and influences on, two or more exemplary composers in the performance medium studied in class. **Clarifications:** e.g., vocal, instrumental, guitar, keyboard, electronic, handbells
MU.912.H.1.3:	Compare two or more works of a composer across performance media. **Clarifications:** e.g., orchestral and choral; guitar and string quartet; piano solo and piano concerto
MU.912.H.1.4:	Analyze how Western music has been influenced by historical and current world cultures.
MU.912.H.1.5:	Analyze music within cultures to gain understanding of authentic performance practices.
MU.912.H.2.1:	Evaluate the social impact of music on specific historical periods.
MU.912.H.2.4:	Examine the effects of developing technology on composition, performance, and acquisition of music.
MU.912.O.1.1:	Evaluate the organizational principles and conventions in musical works and discuss their effect on structure. **Clarifications:** e.g., rhythm, melody, timbre, form, tonality, harmony, texture; solo, chamber ensemble, large ensemble
MU.912.O.2.1:	Transfer accepted composition conventions and performance practices of a specific style to a contrasting style of music.
MU.912.O.3.1:	Analyze expressive elements in a musical work and describe how the choices and manipulations of the elements support, for the listener, the implied meaning of the composer/performer. **Clarifications:** e.g., tempo markings, expression markings, articulation markings, phrasing, scales, modes, harmonic structure, timbre choice, rhythm, orchestration
MU.912.O.3.2:	Interpret and perform expressive elements indicated by the musical score and/or conductor.
MU.912.S.1.1:	Improvise rhythmic and melodic phrases over harmonic progressions. **Clarifications:** e.g., using text or scat syllables
MU.912.S.1.4:	Perform and notate, independently and accurately, melodies by ear. **Clarifications:** e.g., singing, playing, writing
MU.912.S.2.1:	Apply the ability to memorize and internalize musical structure, accurate and expressive details, and processing skills to the creation or performance of music literature. **Clarifications:** e.g., memorization, sequential process
MU.912.S.2.2:	Transfer expressive elements and performance techniques from one piece of music to another.

MU.912.S.3.1:	Synthesize a broad range of musical skills by performing a varied repertoire with expression, appropriate stylistic interpretation, technical accuracy, and kinesthetic energy.
MU.912.S.3.2:	Sight-read music accurately and expressively to show synthesis of skills. **Clarifications:** e.g., musical elements, expressive qualities, performance technique
MU.912.S.3.3:	Transcribe aurally presented songs into melodic and/or rhythmic notation to show synthesis of aural and notational skills.
MU.912.S.3.4:	Analyze and describe the effect of rehearsal sessions and/or strategies on refinement of skills and techniques.
MU.912.S.3.5:	Develop and demonstrate proper vocal or instrumental technique. **Clarifications:** e.g., posture, breathing, fingering, embouchure, bow technique, tuning, strumming
MA.K12.MTR.1.1:	Mathematicians who participate in effortful learning both individually and with others: • Analyze the problem in a way that makes sense given the task. • Ask questions that will help with solving the task. • Build perseverance by modifying methods as needed while solving a challenging task. • Stay engaged and maintain a positive mindset when working to solve tasks. • Help and support each other when attempting a new method or approach. **Clarifications:** Teachers who encourage students to participate actively in effortful learning both individually and with others: • Cultivate a community of growth mindset learners. • Foster perseverance in students by choosing tasks that are challenging. • Develop students' ability to analyze and problem solve. • Recognize students' effort when solving challenging problems.
MA.K12.MTR.2.1:	Demonstrate understanding by representing problems in multiple ways. Mathematicians who demonstrate understanding by representing problems in multiple ways: • Build understanding through modeling and using manipulatives. • Represent solutions to problems in multiple ways using objects, drawings, tables, graphs and equations. • Progress from modeling problems with objects and drawings to using algorithms and equations. • Express connections between concepts and representations. • Choose a representation based on the given context or purpose. **Clarifications:** Teachers who encourage students to demonstrate understanding by representing problems in multiple ways: • Help students make connections between concepts and representations. • Provide opportunities for students to use manipulatives when investigating concepts. • Guide students from concrete to pictorial to abstract representations as understanding progresses. • Show students that various representations can have different purposes and can be useful in different situations.
MA.K12.MTR.3.1:	Complete tasks with mathematical fluency. Mathematicians who complete tasks with mathematical fluency: • Select efficient and appropriate methods for solving problems within the given context. • Maintain flexibility and accuracy while performing procedures and mental calculations. • Complete tasks accurately and with confidence. • Adapt procedures to apply them to a new context. • Use feedback to improve efficiency when performing calculations. **Clarifications:** Teachers who encourage students to complete tasks with mathematical fluency: • Provide students with the flexibility to solve problems by selecting a procedure that allows them to solve efficiently and accurately. • Offer multiple opportunities for students to practice efficient and generalizable methods. • Provide opportunities for students to reflect on the method they used and determine if a more efficient method could have been used.
MA.K12.MTR.4.1:	Engage in discussions that reflect on the mathematical thinking of self and others. Mathematicians who engage in discussions that reflect on the mathematical thinking of self and others: • Communicate mathematical ideas, vocabulary and methods effectively. • Analyze the mathematical thinking of others. • Compare the efficiency of a method to those expressed by others. • Recognize errors and suggest how to correctly solve the task. • Justify results by explaining methods and processes. • Construct possible arguments based on evidence. **Clarifications:** Teachers who encourage students to engage in discussions that reflect on the mathematical thinking of self and others: • Establish a culture in which students ask questions of the teacher and their peers, and error is an opportunity for learning. • Create opportunities for students to discuss their thinking with peers. • Select, sequence and present student work to advance and deepen understanding of correct and increasingly efficient methods. • Develop students' ability to justify methods and compare their responses to the responses of their peers.
	Use patterns and structure to help understand and connect mathematical concepts. Mathematicians who use patterns and structure to help understand and connect mathematical concepts: • Focus on relevant details within a problem. • Create plans and procedures to logically order events, steps or ideas to solve problems. • Decompose a complex problem into manageable parts.

MA.K12.MTR.5.1:	• Relate previously learned concepts to new concepts. • Look for similarities among problems. • Connect solutions of problems to more complicated large-scale situations. **Clarifications:** Teachers who encourage students to use patterns and structure to help understand and connect mathematical concepts: • Help students recognize the patterns in the world around them and connect these patterns to mathematical concepts. • Support students to develop generalizations based on the similarities found among problems. • Provide opportunities for students to create plans and procedures to solve problems. • Develop students' ability to construct relationships between their current understanding and more sophisticated ways of thinking.
MA.K12.MTR.6.1:	Assess the reasonableness of solutions. Mathematicians who assess the reasonableness of solutions: • Estimate to discover possible solutions. • Use benchmark quantities to determine if a solution makes sense. • Check calculations when solving problems. • Verify possible solutions by explaining the methods used. • Evaluate results based on the given context. **Clarifications:** Teachers who encourage students to assess the reasonableness of solutions: • Have students estimate or predict solutions prior to solving. • Prompt students to continually ask, "Does this solution make sense? How do you know?" • Reinforce that students check their work as they progress within and after a task. • Strengthen students' ability to verify solutions through justifications.
MA.K12.MTR.7.1:	Apply mathematics to real-world contexts. Mathematicians who apply mathematics to real-world contexts: • Connect mathematical concepts to everyday experiences. • Use models and methods to understand, represent and solve problems. • Perform investigations to gather data or determine if a method is appropriate. • Redesign models and methods to improve accuracy or efficiency. **Clarifications:** Teachers who encourage students to apply mathematics to real-world contexts: • Provide opportunities for students to create models, both concrete and abstract, and perform investigations. • Challenge students to question the accuracy of their models and methods. • Support students as they validate conclusions by comparing them to the given situation. • Indicate how various concepts can be applied to other disciplines.
ELA.K12.EE.1.1:	Cite evidence to explain and justify reasoning. **Clarifications:** K-1 Students include textual evidence in their oral communication with guidance and support from adults. The evidence can consist of details from the text without naming the text. During 1st grade, students learn how to incorporate the evidence in their writing. 2-3 Students include relevant textual evidence in their written and oral communication. Students should name the text when they refer to it. In 3rd grade, students should use a combination of direct and indirect citations. 4-5 Students continue with previous skills and reference comments made by speakers and peers. Students cite texts that they've directly quoted, paraphrased, or used for information. When writing, students will use the form of citation dictated by the instructor or the style guide referenced by the instructor. 6-8 Students continue with previous skills and use a style guide to create a proper citation. 9-12 Students continue with previous skills and should be aware of existing style guides and the ways in which they differ.
ELA.K12.EE.2.1:	Read and comprehend grade-level complex texts proficiently. **Clarifications:** See Text Complexity for grade-level complexity bands and a text complexity rubric.
ELA.K12.EE.3.1:	Make inferences to support comprehension. **Clarifications:** Students will make inferences before the words infer or inference are introduced. Kindergarten students will answer questions like "Why is the girl smiling?" or make predictions about what will happen based on the title page. Students will use the terms and apply them in 2nd grade and beyond.
ELA.K12.EE.4.1:	Use appropriate collaborative techniques and active listening skills when engaging in discussions in a variety of situations. **Clarifications:** In kindergarten, students learn to listen to one another respectfully. In grades 1-2, students build upon these skills by justifying what they are thinking. For example: "I think _____ because _____." The collaborative conversations are becoming academic conversations. In grades 3-12, students engage in academic conversations discussing claims and justifying their reasoning, refining and applying skills. Students build on ideas, propel the conversation, and support claims and counterclaims with evidence.
ELA.K12.EE.5.1:	Use the accepted rules governing a specific format to create quality work. **Clarifications:** Students will incorporate skills learned into work products to produce quality work. For students to incorporate these skills appropriately, they must receive instruction. A 3rd grade student creating a poster board display must have instruction in how to effectively present information to do quality work.

ELA.K12.EE.6.1:	Use appropriate voice and tone when speaking or writing. **Clarifications:** In kindergarten and 1st grade, students learn the difference between formal and informal language. For example, the way we talk to our friends differs from the way we speak to adults. In 2nd grade and beyond, students practice appropriate social and academic language to discuss texts.
DA.912.S.2.1:	Sustain focused attention, respect, and discipline during class, rehearsal, and performance.
ELD.K12.ELL.SI.1:	English language learners communicate for social and instructional purposes within the school setting.

General Course Information and Notes

VERSION DESCRIPTION

This year-long, entry-level class, designed for students having little or no previous band experience with woodwind, brass, and/or percussion instruments, promotes the enjoyment and appreciation of music through performance of high-quality, beginning wind and percussion literature from different times and places. Rehearsals focus on the development of critical listening/aural skills; rudimentary instrumental technique and skills, music literacy, and ensemble skills; and aesthetic musical awareness culminating in periodic public performances.

GENERAL NOTES

All instruction related to Music benchmarks should be framed by the Big Ideas and Enduring Understandings. Non-Music benchmarks listed in this course are also required and should be fully integrated in support of arts instruction.

Special Notes: This course may require students to participate in extra rehearsals and performances beyond the school day. Students in this class may need to obtain (e.g., borrow, rent, purchase) an instrument from an outside source.

Florida's Benchmarks for Excellent Student Thinking (B.E.S.T.) Standards
This course includes Florida's B.E.S.T. ELA Expectations (EE) and Mathematical Thinking and Reasoning Standards (MTRs) for students. Florida educators should intentionally embed these standards within the content and their instruction as applicable. For guidance on the implementation of the EEs and MTRs, please visit cpalms.org/Standards/BEST_Standards.aspx and select the appropriate B.E.S.T. Standards package.

English Language Development ELD Standards Special Notes Section:
Teachers are required to provide listening, speaking, reading and writing instruction that allows English language learners (ELL) to communicate for social and instructional purposes within the school setting. For the given level of English language proficiency and with visual, graphic, or interactive support, students will interact with grade level words, expressions, sentences and discourse to process or produce language necessary for academic success. The ELD standard should specify a relevant content area concept or topic of study chosen by curriculum developers and teachers which maximizes an ELL's need for communication and social skills. To access an ELL supporting document which delineates performance definitions and descriptors, please click on the following link: cpalms.org/uploads/docs/standards/eld/SI.pdf

GENERAL INFORMATION

Course Number: 1302300

Course Path: Section: Grades PreK to 12 Education Courses > **Grade Group:** Grades 9 to 12 and Adult Education Courses > **Subject:** Music Education > **SubSubject:** Instrumental Music > **Abbreviated Title:** BAND 1

Number of Credits: One (1) credit

Course Length: Year (Y)

Course Type: Core Academic Course

Course Level: 2

Course Status: Draft - Course Pending Approval

Grade Level(s): 9,10,11,12

Graduation Requirement: Performing/Fine Arts

Educator Certifications

Music (Elementary and Secondary Grades K-12)
Instrumental Music (Secondary Grades 7-12)
Instrumental Music (Elementary and Secondary Grades K-12)

Band 2 (#1302310) 2022 - And Beyond

Course Standards

Name	Description
MU.912.C.1.1:	Apply listening strategies to promote appreciation and understanding of unfamiliar musical works. **Clarifications:** e.g., listening maps, active listening, checklists
MU.912.C.1.2:	Compare, using correct music vocabulary, the aesthetic impact of two or more performances of a musical work to one's own hypothesis of the composer's intent. **Clarifications:** e.g., quality recordings, individual and peer-group performances, composer notes, instrumentation, expressive elements, title
MU.912.C.1.3:	Analyze instruments of the world and classify them by common traits. **Clarifications:** e.g., classical and folk instruments from around the world
MU.912.C.2.1:	Evaluate and make appropriate adjustments to personal performance in solo and ensembles.
MU.912.C.2.2:	Evaluate performance quality in recorded and/or live performances.
MU.912.C.2.3:	Evaluate one's own or other's compositions and/or improvisations and generate improvements independently or cooperatively.
MU.912.C.3.1:	Make critical evaluations, based on exemplary models, of the quality and effectiveness of performances and apply the criteria to personal development in music.
MU.912.F.3.1:	Analyze and describe how meeting one's responsibilities in music offers opportunities to develop leadership skills, and identify personal examples of leadership in school and/or non-school settings.
MU.912.F.3.2:	Summarize copyright laws that govern printed, recorded, and on-line music to promote legal and responsible use of intellectual property and technology.
MU.912.F.3.3:	Define, prioritize, monitor, and successfully complete tasks related to individual musical performance or project presentation, without direct oversight, demonstrating skills for use in the workplace.
MU.912.H.1.1:	Investigate and discuss how a culture's traditions are reflected through its music. **Clarifications:** e.g., patriotic, folk, celebration, entertainment, spiritual
MU.912.H.1.2:	Compare the work of, and influences on, two or more exemplary composers in the performance medium studied in class. **Clarifications:** e.g., vocal, instrumental, guitar, keyboard, electronic, handbells
MU.912.H.1.3:	Compare two or more works of a composer across performance media. **Clarifications:** e.g., orchestral and choral; guitar and string quartet; piano solo and piano concerto
MU.912.H.1.4:	Analyze how Western music has been influenced by historical and current world cultures.
MU.912.H.1.5:	Analyze music within cultures to gain understanding of authentic performance practices.
MU.912.H.2.1:	Evaluate the social impact of music on specific historical periods.
MU.912.H.2.3:	Analyze the evolution of a music genre. **Clarifications:** e.g., jazz, blues
MU.912.H.2.4:	Examine the effects of developing technology on composition, performance, and acquisition of music.
MU.912.O.1.1:	Evaluate the organizational principles and conventions in musical works and discuss their effect on structure. **Clarifications:** e.g., rhythm, melody, timbre, form, tonality, harmony, texture; solo, chamber ensemble, large ensemble
MU.912.O.2.1:	Transfer accepted composition conventions and performance practices of a specific style to a contrasting style of music.
MU.912.O.3.1:	Analyze expressive elements in a musical work and describe how the choices and manipulations of the elements support, for the listener, the implied meaning of the composer/performer. **Clarifications:** e.g., tempo markings, expression markings, articulation markings, phrasing, scales, modes, harmonic structure, timbre choice, rhythm, orchestration
MU.912.O.3.2:	Interpret and perform expressive elements indicated by the musical score and/or conductor.
MU.912.S.1.1:	Improvise rhythmic and melodic phrases over harmonic progressions. **Clarifications:** e.g., using text or scat syllables
MU.912.S.1.4:	Perform and notate, independently and accurately, melodies by ear. **Clarifications:** e.g., singing, playing, writing
MU.912.S.2.1:	Apply the ability to memorize and internalize musical structure, accurate and expressive details, and processing skills to the creation or performance of music literature. **Clarifications:**

	e.g., memorization, sequential process
MU.912.S.2.2:	Transfer expressive elements and performance techniques from one piece of music to another.
MU.912.S.3.1:	Synthesize a broad range of musical skills by performing a varied repertoire with expression, appropriate stylistic interpretation, technical accuracy, and kinesthetic energy.
MU.912.S.3.2:	Sight-read music accurately and expressively to show synthesis of skills. **Clarifications:** e.g., musical elements, expressive qualities, performance technique
MU.912.S.3.3:	Transcribe aurally presented songs into melodic and/or rhythmic notation to show synthesis of aural and notational skills.
MU.912.S.3.4:	Analyze and describe the effect of rehearsal sessions and/or strategies on refinement of skills and techniques.
MU.912.S.3.5:	Develop and demonstrate proper vocal or instrumental technique. **Clarifications:** e.g., posture, breathing, fingering, embouchure, bow technique, tuning, strumming
MA.K12.MTR.1.1:	Mathematicians who participate in effortful learning both individually and with others: • Analyze the problem in a way that makes sense given the task. • Ask questions that will help with solving the task. • Build perseverance by modifying methods as needed while solving a challenging task. • Stay engaged and maintain a positive mindset when working to solve tasks. • Help and support each other when attempting a new method or approach. **Clarifications:** Teachers who encourage students to participate actively in effortful learning both individually and with others: • Cultivate a community of growth mindset learners. • Foster perseverance in students by choosing tasks that are challenging. • Develop students' ability to analyze and problem solve. • Recognize students' effort when solving challenging problems.
MA.K12.MTR.2.1:	Demonstrate understanding by representing problems in multiple ways. Mathematicians who demonstrate understanding by representing problems in multiple ways: • Build understanding through modeling and using manipulatives. • Represent solutions to problems in multiple ways using objects, drawings, tables, graphs and equations. • Progress from modeling problems with objects and drawings to using algorithms and equations. • Express connections between concepts and representations. • Choose a representation based on the given context or purpose. **Clarifications:** Teachers who encourage students to demonstrate understanding by representing problems in multiple ways: • Help students make connections between concepts and representations. • Provide opportunities for students to use manipulatives when investigating concepts. • Guide students from concrete to pictorial to abstract representations as understanding progresses. • Show students that various representations can have different purposes and can be useful in different situations.
MA.K12.MTR.3.1:	Complete tasks with mathematical fluency. Mathematicians who complete tasks with mathematical fluency: • Select efficient and appropriate methods for solving problems within the given context. • Maintain flexibility and accuracy while performing procedures and mental calculations. • Complete tasks accurately and with confidence. • Adapt procedures to apply them to a new context. • Use feedback to improve efficiency when performing calculations. **Clarifications:** Teachers who encourage students to complete tasks with mathematical fluency: • Provide students with the flexibility to solve problems by selecting a procedure that allows them to solve efficiently and accurately. • Offer multiple opportunities for students to practice efficient and generalizable methods. • Provide opportunities for students to reflect on the method they used and determine if a more efficient method could have been used.
MA.K12.MTR.4.1:	Engage in discussions that reflect on the mathematical thinking of self and others. Mathematicians who engage in discussions that reflect on the mathematical thinking of self and others: • Communicate mathematical ideas, vocabulary and methods effectively. • Analyze the mathematical thinking of others. • Compare the efficiency of a method to those expressed by others. • Recognize errors and suggest how to correctly solve the task. • Justify results by explaining methods and processes. • Construct possible arguments based on evidence. **Clarifications:** Teachers who encourage students to engage in discussions that reflect on the mathematical thinking of self and others: • Establish a culture in which students ask questions of the teacher and their peers, and error is an opportunity for learning. • Create opportunities for students to discuss their thinking with peers. • Select, sequence and present student work to advance and deepen understanding of correct and increasingly efficient methods. • Develop students' ability to justify methods and compare their responses to the responses of their peers.
	Use patterns and structure to help understand and connect mathematical concepts. Mathematicians who use patterns and structure to help understand and connect mathematical concepts:

MA.K12.MTR.5.1:	• Focus on relevant details within a problem. • Create plans and procedures to logically order events, steps or ideas to solve problems. • Decompose a complex problem into manageable parts. • Relate previously learned concepts to new concepts. • Look for similarities among problems. • Connect solutions of problems to more complicated large-scale situations. **Clarifications:** Teachers who encourage students to use patterns and structure to help understand and connect mathematical concepts: • Help students recognize the patterns in the world around them and connect these patterns to mathematical concepts. • Support students to develop generalizations based on the similarities found among problems. • Provide opportunities for students to create plans and procedures to solve problems. • Develop students' ability to construct relationships between their current understanding and more sophisticated ways of thinking.
MA.K12.MTR.6.1:	Assess the reasonableness of solutions. Mathematicians who assess the reasonableness of solutions: • Estimate to discover possible solutions. • Use benchmark quantities to determine if a solution makes sense. • Check calculations when solving problems. • Verify possible solutions by explaining the methods used. • Evaluate results based on the given context. **Clarifications:** Teachers who encourage students to assess the reasonableness of solutions: • Have students estimate or predict solutions prior to solving. • Prompt students to continually ask, "Does this solution make sense? How do you know?" • Reinforce that students check their work as they progress within and after a task. • Strengthen students' ability to verify solutions through justifications.
MA.K12.MTR.7.1:	Apply mathematics to real-world contexts. Mathematicians who apply mathematics to real-world contexts: • Connect mathematical concepts to everyday experiences. • Use models and methods to understand, represent and solve problems. • Perform investigations to gather data or determine if a method is appropriate. • Redesign models and methods to improve accuracy or efficiency. **Clarifications:** Teachers who encourage students to apply mathematics to real-world contexts: • Provide opportunities for students to create models, both concrete and abstract, and perform investigations. • Challenge students to question the accuracy of their models and methods. • Support students as they validate conclusions by comparing them to the given situation. • Indicate how various concepts can be applied to other disciplines.
ELA.K12.EE.1.1:	Cite evidence to explain and justify reasoning. **Clarifications:** K-1 Students include textual evidence in their oral communication with guidance and support from adults. The evidence can consist of details from the text without naming the text. During 1st grade, students learn how to incorporate the evidence in their writing. 2-3 Students include relevant textual evidence in their written and oral communication. Students should name the text when they refer to it. In 3rd grade, students should use a combination of direct and indirect citations. 4-5 Students continue with previous skills and reference comments made by speakers and peers. Students cite texts that they've directly quoted, paraphrased, or used for information. When writing, students will use the form of citation dictated by the instructor or the style guide referenced by the instructor. 6-8 Students continue with previous skills and use a style guide to create a proper citation. 9-12 Students continue with previous skills and should be aware of existing style guides and the ways in which they differ.
ELA.K12.EE.2.1:	Read and comprehend grade-level complex texts proficiently. **Clarifications:** See Text Complexity for grade-level complexity bands and a text complexity rubric.
ELA.K12.EE.3.1:	Make inferences to support comprehension. **Clarifications:** Students will make inferences before the words infer or inference are introduced. Kindergarten students will answer questions like "Why is the girl smiling?" or make predictions about what will happen based on the title page. Students will use the terms and apply them in 2nd grade and beyond.
ELA.K12.EE.4.1:	Use appropriate collaborative techniques and active listening skills when engaging in discussions in a variety of situations. **Clarifications:** In kindergarten, students learn to listen to one another respectfully. In grades 1-2, students build upon these skills by justifying what they are thinking. For example: "I think _____ because _____." The collaborative conversations are becoming academic conversations. In grades 3-12, students engage in academic conversations discussing claims and justifying their reasoning, refining and applying skills. Students build on ideas, propel the conversation, and support claims and counterclaims with evidence.
	Use the accepted rules governing a specific format to create quality work. **Clarifications:**

ELA.K12.EE.5.1:	Students will incorporate skills learned into work products to produce quality work. For students to incorporate these skills appropriately, they must receive instruction. A 3rd grade student creating a poster board display must have instruction in how to effectively present information to do quality work.
ELA.K12.EE.6.1:	Use appropriate voice and tone when speaking or writing. **Clarifications:** In kindergarten and 1st grade, students learn the difference between formal and informal language. For example, the way we talk to our friends differs from the way we speak to adults. In 2nd grade and beyond, students practice appropriate social and academic language to discuss texts.
DA.912.F.3.8:	Demonstrate effective teamwork and accountability, using compromise, collaboration, and conflict resolution, to set and achieve goals as required in the work environment.
ELD.K12.ELL.SI.1:	English language learners communicate for social and instructional purposes within the school setting.

General Course Information and Notes

VERSION DESCRIPTION

This year-long, beginning-level class, designed for students with at least one year of woodwind, brass, and/ or percussion ensemble experience, promotes the enjoyment and appreciation of music through performance of high-quality wind and percussion literature. Rehearsals focus on the development of critical listening skills, instrumental and ensemble technique and skills, expanded music literacy, and aesthetic awareness culminating in periodic public performances.

GENERAL NOTES

All instruction related to Music benchmarks should be framed by the Big Ideas and Enduring Understandings. Non-Music benchmarks listed in this course are also required and should be fully integrated in support of arts instruction.

Special Notes: This course may require students to participate in extra rehearsals and performances beyond the school day. Students in this class may need to obtain (e.g., borrow, rent, purchase) an instrument from an outside source.

Florida's Benchmarks for Excellent Student Thinking (B.E.S.T.) Standards
This course includes Florida's B.E.S.T. ELA Expectations (EE) and Mathematical Thinking and Reasoning Standards (MTRs) for students. Florida educators should intentionally embed these standards within the content and their instruction as applicable. For guidance on the implementation of the EEs and MTRs, please visit cpalms.org/Standards/BEST_Standards.aspx and select the appropriate B.E.S.T. Standards package.

English Language Development ELD Standards Special Notes Section:
Teachers are required to provide listening, speaking, reading and writing instruction that allows English language learners (ELL) to communicate for social and instructional purposes within the school setting. For the given level of English language proficiency and with visual, graphic, or interactive support, students will interact with grade level words, expressions, sentences and discourse to process or produce language necessary for academic success. The ELD standard should specify a relevant content area concept or topic of study chosen by curriculum developers and teachers which maximizes an ELL's need for communication and social skills. To access an ELL supporting document which delineates performance definitions and descriptors, please click on the following link: cpalms.org/uploads/docs/standards/eld/SI.pdf

GENERAL INFORMATION

Course Number: 1302310

Course Path: Section: Grades PreK to 12 Education Courses > **Grade Group:** Grades 9 to 12 and Adult Education Courses > **Subject:** Music Education > **SubSubject:** Instrumental Music > **Abbreviated Title:** BAND 2

Number of Credits: One (1) credit

Course Length: Year (Y)

Course Type: Core Academic Course

Course Level: 2

Course Status: Draft - Course Pending Approval

Grade Level(s): 9,10,11,12

Graduation Requirement: Performing/Fine Arts

Educator Certifications

Music (Elementary and Secondary Grades K-12)
Instrumental Music (Secondary Grades 7-12)
Instrumental Music (Elementary and Secondary Grades K-12)

Band 3 (#1302320) 2022 - And Beyond

Course Standards

Name	Description
MU.912.C.1.1:	Apply listening strategies to promote appreciation and understanding of unfamiliar musical works. **Clarifications:** e.g., listening maps, active listening, checklists
MU.912.C.1.2:	Compare, using correct music vocabulary, the aesthetic impact of two or more performances of a musical work to one's own hypothesis of the composer's intent. **Clarifications:** e.g., quality recordings, individual and peer-group performances, composer notes, instrumentation, expressive elements, title
MU.912.C.1.3:	Analyze instruments of the world and classify them by common traits. **Clarifications:** e.g., classical and folk instruments from around the world
MU.912.C.2.1:	Evaluate and make appropriate adjustments to personal performance in solo and ensembles.
MU.912.C.2.2:	Evaluate performance quality in recorded and/or live performances.
MU.912.C.2.3:	Evaluate one's own or other's compositions and/or improvisations and generate improvements independently or cooperatively.
MU.912.C.3.1:	Make critical evaluations, based on exemplary models, of the quality and effectiveness of performances and apply the criteria to personal development in music.
MU.912.F.3.1:	Analyze and describe how meeting one's responsibilities in music offers opportunities to develop leadership skills, and identify personal examples of leadership in school and/or non-school settings.
MU.912.F.3.2:	Summarize copyright laws that govern printed, recorded, and on-line music to promote legal and responsible use of intellectual property and technology.
MU.912.F.3.3:	Define, prioritize, monitor, and successfully complete tasks related to individual musical performance or project presentation, without direct oversight, demonstrating skills for use in the workplace.
MU.912.F.3.4:	Design and implement a personal learning plan, related to the study of music, which demonstrates self-assessment, brain-storming, decision-making, and initiative to advance skills and/or knowledge.
MU.912.H.1.1:	Investigate and discuss how a culture's traditions are reflected through its music. **Clarifications:** e.g., patriotic, folk, celebration, entertainment, spiritual
MU.912.H.1.2:	Compare the work of, and influences on, two or more exemplary composers in the performance medium studied in class. **Clarifications:** e.g., vocal, instrumental, guitar, keyboard, electronic, handbells
MU.912.H.1.3:	Compare two or more works of a composer across performance media. **Clarifications:** e.g., orchestral and choral; guitar and string quartet; piano solo and piano concerto
MU.912.H.1.4:	Analyze how Western music has been influenced by historical and current world cultures.
MU.912.H.1.5:	Analyze music within cultures to gain understanding of authentic performance practices.
MU.912.H.2.1:	Evaluate the social impact of music on specific historical periods.
MU.912.H.2.3:	Analyze the evolution of a music genre. **Clarifications:** e.g., jazz, blues
MU.912.H.2.4:	Examine the effects of developing technology on composition, performance, and acquisition of music.
MU.912.H.3.1:	Apply knowledge of science, math, and music to demonstrate, through an acoustic or digital performance medium, how sound production affects musical performance. **Clarifications:** e.g., acoustics, sound amplification, materials, mechanics
MU.912.O.1.1:	Evaluate the organizational principles and conventions in musical works and discuss their effect on structure. **Clarifications:** e.g., rhythm, melody, timbre, form, tonality, harmony, texture; solo, chamber ensemble, large ensemble
MU.912.O.2.1:	Transfer accepted composition conventions and performance practices of a specific style to a contrasting style of music.
MU.912.O.2.2:	Transpose melodies into different modalities through performance and composition.
MU.912.O.3.1:	Analyze expressive elements in a musical work and describe how the choices and manipulations of the elements support, for the listener, the implied meaning of the composer/performer. **Clarifications:** e.g., tempo markings, expression markings, articulation markings, phrasing, scales, modes, harmonic structure, timbre choice, rhythm, orchestration
MU.912.O.3.2:	Interpret and perform expressive elements indicated by the musical score and/or conductor.
MU.912.S.1.1:	Improvise rhythmic and melodic phrases over harmonic progressions. **Clarifications:** e.g., using text or scat syllables

	Perform and notate, independently and accurately, melodies by ear.
MU.912.S.1.4:	**Clarifications:** e.g., singing, playing, writing
MU.912.S.2.1:	Apply the ability to memorize and internalize musical structure, accurate and expressive details, and processing skills to the creation or performance of music literature. **Clarifications:** e.g., memorization, sequential process
MU.912.S.2.2:	Transfer expressive elements and performance techniques from one piece of music to another.
MU.912.S.3.1:	Synthesize a broad range of musical skills by performing a varied repertoire with expression, appropriate stylistic interpretation, technical accuracy, and kinesthetic energy.
MU.912.S.3.2:	Sight-read music accurately and expressively to show synthesis of skills. **Clarifications:** e.g., musical elements, expressive qualities, performance technique
MU.912.S.3.3:	Transcribe aurally presented songs into melodic and/or rhythmic notation to show synthesis of aural and notational skills.
MU.912.S.3.4:	Analyze and describe the effect of rehearsal sessions and/or strategies on refinement of skills and techniques.
MU.912.S.3.5:	Develop and demonstrate proper vocal or instrumental technique. **Clarifications:** e.g., posture, breathing, fingering, embouchure, bow technique, tuning, strumming
MA.K12.MTR.1.1:	Mathematicians who participate in effortful learning both individually and with others: • Analyze the problem in a way that makes sense given the task. • Ask questions that will help with solving the task. • Build perseverance by modifying methods as needed while solving a challenging task. • Stay engaged and maintain a positive mindset when working to solve tasks. • Help and support each other when attempting a new method or approach. **Clarifications:** Teachers who encourage students to participate actively in effortful learning both individually and with others: • Cultivate a community of growth mindset learners. • Foster perseverance in students by choosing tasks that are challenging. • Develop students' ability to analyze and problem solve. • Recognize students' effort when solving challenging problems.
MA.K12.MTR.2.1:	Demonstrate understanding by representing problems in multiple ways. Mathematicians who demonstrate understanding by representing problems in multiple ways: • Build understanding through modeling and using manipulatives. • Represent solutions to problems in multiple ways using objects, drawings, tables, graphs and equations. • Progress from modeling problems with objects and drawings to using algorithms and equations. • Express connections between concepts and representations. • Choose a representation based on the given context or purpose. **Clarifications:** Teachers who encourage students to demonstrate understanding by representing problems in multiple ways: • Help students make connections between concepts and representations. • Provide opportunities for students to use manipulatives when investigating concepts. • Guide students from concrete to pictorial to abstract representations as understanding progresses. • Show students that various representations can have different purposes and can be useful in different situations.
MA.K12.MTR.3.1:	Complete tasks with mathematical fluency. Mathematicians who complete tasks with mathematical fluency: • Select efficient and appropriate methods for solving problems within the given context. • Maintain flexibility and accuracy while performing procedures and mental calculations. • Complete tasks accurately and with confidence. • Adapt procedures to apply them to a new context. • Use feedback to improve efficiency when performing calculations. **Clarifications:** Teachers who encourage students to complete tasks with mathematical fluency: • Provide students with the flexibility to solve problems by selecting a procedure that allows them to solve efficiently and accurately. • Offer multiple opportunities for students to practice efficient and generalizable methods. • Provide opportunities for students to reflect on the method they used and determine if a more efficient method could have been used.
MA.K12.MTR.4.1:	Engage in discussions that reflect on the mathematical thinking of self and others. Mathematicians who engage in discussions that reflect on the mathematical thinking of self and others: • Communicate mathematical ideas, vocabulary and methods effectively. • Analyze the mathematical thinking of others. • Compare the efficiency of a method to those expressed by others. • Recognize errors and suggest how to correctly solve the task. • Justify results by explaining methods and processes. • Construct possible arguments based on evidence. **Clarifications:** Teachers who encourage students to engage in discussions that reflect on the mathematical thinking of self and others:

	• Establish a culture in which students ask questions of the teacher and their peers, and error is an opportunity for learning. • Create opportunities for students to discuss their thinking with peers. • Select, sequence and present student work to advance and deepen understanding of correct and increasingly efficient methods. • Develop students' ability to justify methods and compare their responses to the responses of their peers.
MA.K12.MTR.5.1:	Use patterns and structure to help understand and connect mathematical concepts. Mathematicians who use patterns and structure to help understand and connect mathematical concepts: • Focus on relevant details within a problem. • Create plans and procedures to logically order events, steps or ideas to solve problems. • Decompose a complex problem into manageable parts. • Relate previously learned concepts to new concepts. • Look for similarities among problems. • Connect solutions of problems to more complicated large-scale situations. **Clarifications:** Teachers who encourage students to use patterns and structure to help understand and connect mathematical concepts: • Help students recognize the patterns in the world around them and connect these patterns to mathematical concepts. • Support students to develop generalizations based on the similarities found among problems. • Provide opportunities for students to create plans and procedures to solve problems. • Develop students' ability to construct relationships between their current understanding and more sophisticated ways of thinking.
MA.K12.MTR.6.1:	Assess the reasonableness of solutions. Mathematicians who assess the reasonableness of solutions: • Estimate to discover possible solutions. • Use benchmark quantities to determine if a solution makes sense. • Check calculations when solving problems. • Verify possible solutions by explaining the methods used. • Evaluate results based on the given context. **Clarifications:** Teachers who encourage students to assess the reasonableness of solutions: • Have students estimate or predict solutions prior to solving. • Prompt students to continually ask, "Does this solution make sense? How do you know?" • Reinforce that students check their work as they progress within and after a task. • Strengthen students' ability to verify solutions through justifications.
MA.K12.MTR.7.1:	Apply mathematics to real-world contexts. Mathematicians who apply mathematics to real-world contexts: • Connect mathematical concepts to everyday experiences. • Use models and methods to understand, represent and solve problems. • Perform investigations to gather data or determine if a method is appropriate. • Redesign models and methods to improve accuracy or efficiency. **Clarifications:** Teachers who encourage students to apply mathematics to real-world contexts: • Provide opportunities for students to create models, both concrete and abstract, and perform investigations. • Challenge students to question the accuracy of their models and methods. • Support students as they validate conclusions by comparing them to the given situation. • Indicate how various concepts can be applied to other disciplines.
ELA.K12.EE.1.1:	Cite evidence to explain and justify reasoning. **Clarifications:** K-1 Students include textual evidence in their oral communication with guidance and support from adults. The evidence can consist of details from the text without naming the text. During 1st grade, students learn how to incorporate the evidence in their writing. 2-3 Students include relevant textual evidence in their written and oral communication. Students should name the text when they refer to it. In 3rd grade, students should use a combination of direct and indirect citations. 4-5 Students continue with previous skills and reference comments made by speakers and peers. Students cite texts that they've directly quoted, paraphrased, or used for information. When writing, students will use the form of citation dictated by the instructor or the style guide referenced by the instructor. 6-8 Students continue with previous skills and use a style guide to create a proper citation. 9-12 Students continue with previous skills and should be aware of existing style guides and the ways in which they differ.
ELA.K12.EE.2.1:	Read and comprehend grade-level complex texts proficiently. **Clarifications:** See Text Complexity for grade-level complexity bands and a text complexity rubric.
ELA.K12.EE.3.1:	Make inferences to support comprehension. **Clarifications:** Students will make inferences before the words infer or inference are introduced. Kindergarten students will answer questions like "Why is the girl smiling?" or make predictions about what will happen based on the title page. Students will use the terms and apply them in 2nd grade and beyond.
	Use appropriate collaborative techniques and active listening skills when engaging in discussions in a variety of situations. **Clarifications:** In kindergarten, students learn to listen to one another respectfully.

ELA.K12.EE.4.1:	In grades 1-2, students build upon these skills by justifying what they are thinking. For example: "I think _____ because _____." The collaborative conversations are becoming academic conversations. In grades 3-12, students engage in academic conversations discussing claims and justifying their reasoning, refining and applying skills. Students build on ideas, propel the conversation, and support claims and counterclaims with evidence.
ELA.K12.EE.5.1:	Use the accepted rules governing a specific format to create quality work. **Clarifications:** Students will incorporate skills learned into work products to produce quality work. For students to incorporate these skills appropriately, they must receive instruction. A 3rd grade student creating a poster board display must have instruction in how to effectively present information to do quality work.
ELA.K12.EE.6.1:	Use appropriate voice and tone when speaking or writing. **Clarifications:** In kindergarten and 1st grade, students learn the difference between formal and informal language. For example, the way we talk to our friends differs from the way we speak to adults. In 2nd grade and beyond, students practice appropriate social and academic language to discuss texts.
DA.912.S.2.1:	Sustain focused attention, respect, and discipline during class, rehearsal, and performance.
ELD.K12.ELL.SI.1:	English language learners communicate for social and instructional purposes within the school setting.

General Course Information and Notes

VERSION DESCRIPTION

This year-long, formative class, designed for students ready to build on skills and knowledge previously acquired in a middle or high school instrumental ensemble, promotes the enjoyment and appreciation of music through performance of high-quality, intermediate-level wind and percussion literature. Rehearsals focus on development of critical listening/aural skills, individual musicianship, instrumental technique, refinement of ensemble skills, and aesthetic engagement culminating in periodic public performances.

GENERAL NOTES

All instruction related to Music benchmarks should be framed by the Big Ideas and Enduring Understandings. Non-Music benchmarks listed in this course are also required and should be fully integrated in support of arts instruction.

Special Notes: This course requires students to participate in extra rehearsals and performances beyond the school day. Students in this class may need to obtain (e.g., borrow, rent, purchase) an instrument from an outside source.

Florida's Benchmarks for Excellent Student Thinking (B.E.S.T.) Standards
This course includes Florida's B.E.S.T. ELA Expectations (EE) and Mathematical Thinking and Reasoning Standards (MTRs) for students. Florida educators should intentionally embed these standards within the content and their instruction as applicable. For guidance on the implementation of the EEs and MTRs, please visit cpalms.org/Standards/BEST_Standards.aspx and select the appropriate B.E.S.T. Standards package.

English Language Development ELD Standards Special Notes Section:
Teachers are required to provide listening, speaking, reading and writing instruction that allows English language learners (ELL) to communicate for social and instructional purposes within the school setting. For the given level of English language proficiency and with visual, graphic, or interactive support, students will interact with grade level words, expressions, sentences and discourse to process or produce language necessary for academic success. The ELD standard should specify a relevant content area concept or topic of study chosen by curriculum developers and teachers which maximizes an ELL's need for communication and social skills. To access an ELL supporting document which delineates performance definitions and descriptors, please click on the following link: cpalms.org/uploads/docs/standards/eld/SI.pdf

GENERAL INFORMATION

Course Number: 1302320

Course Path: Section: Grades PreK to 12 Education Courses > **Grade Group:** Grades 9 to 12 and Adult Education Courses > **Subject:** Music Education > **SubSubject:** Instrumental Music > **Abbreviated Title:** BAND 3 **Course Length:** Year (Y) **Course Level:** 2

Course Status: Draft - Course Pending Approval

Grade Level(s): 9,10,11,12

Graduation Requirement: Performing/Fine Arts

Educator Certifications

Music (Elementary and Secondary Grades K-12)
Instrumental Music (Secondary Grades 7-12)

Band 4 (#1302330) 2022 - And Beyond

Course Standards

Name	Description
MU.912.C.1.1:	Apply listening strategies to promote appreciation and understanding of unfamiliar musical works. **Clarifications:** e.g., listening maps, active listening, checklists
MU.912.C.1.2:	Compare, using correct music vocabulary, the aesthetic impact of two or more performances of a musical work to one's own hypothesis of the composer's intent. **Clarifications:** e.g., quality recordings, individual and peer-group performances, composer notes, instrumentation, expressive elements, title
MU.912.C.1.3:	Analyze instruments of the world and classify them by common traits. **Clarifications:** e.g., classical and folk instruments from around the world
MU.912.C.2.1:	Evaluate and make appropriate adjustments to personal performance in solo and ensembles.
MU.912.C.2.2:	Evaluate performance quality in recorded and/or live performances.
MU.912.C.2.3:	Evaluate one's own or other's compositions and/or improvisations and generate improvements independently or cooperatively.
MU.912.C.3.1:	Make critical evaluations, based on exemplary models, of the quality and effectiveness of performances and apply the criteria to personal development in music.
MU.912.F.1.1:	Analyze and evaluate the effect of "traditional" and contemporary technologies on the development of music.
MU.912.F.2.2:	Analyze the effect of the arts and entertainment industry on the economic and social health of communities and regions. **Clarifications:** e.g., community revitalization, industry choosing new locations, cultural and social enrichment
MU.912.F.3.1:	Analyze and describe how meeting one's responsibilities in music offers opportunities to develop leadership skills, and identify personal examples of leadership in school and/or non-school settings.
MU.912.F.3.2:	Summarize copyright laws that govern printed, recorded, and on-line music to promote legal and responsible use of intellectual property and technology.
MU.912.F.3.3:	Define, prioritize, monitor, and successfully complete tasks related to individual musical performance or project presentation, without direct oversight, demonstrating skills for use in the workplace.
MU.912.F.3.4:	Design and implement a personal learning plan, related to the study of music, which demonstrates self-assessment, brain-storming, decision-making, and initiative to advance skills and/or knowledge.
MU.912.H.1.1:	Investigate and discuss how a culture's traditions are reflected through its music. **Clarifications:** e.g., patriotic, folk, celebration, entertainment, spiritual
MU.912.H.1.2:	Compare the work of, and influences on, two or more exemplary composers in the performance medium studied in class. **Clarifications:** e.g., vocal, instrumental, guitar, keyboard, electronic, handbells
MU.912.H.1.3:	Compare two or more works of a composer across performance media. **Clarifications:** e.g., orchestral and choral; guitar and string quartet; piano solo and piano concerto
MU.912.H.1.4:	Analyze how Western music has been influenced by historical and current world cultures.
MU.912.H.1.5:	Analyze music within cultures to gain understanding of authentic performance practices.
MU.912.H.2.1:	Evaluate the social impact of music on specific historical periods.
MU.912.H.2.2:	Analyze current musical trends, including audience environments and music acquisition, to predict possible directions of music.
MU.912.H.2.3:	Analyze the evolution of a music genre. **Clarifications:** e.g., jazz, blues
MU.912.H.2.4:	Examine the effects of developing technology on composition, performance, and acquisition of music.
MU.912.H.3.1:	Apply knowledge of science, math, and music to demonstrate, through an acoustic or digital performance medium, how sound production affects musical performance. **Clarifications:** e.g., acoustics, sound amplification, materials, mechanics
MU.912.O.1.1:	Evaluate the organizational principles and conventions in musical works and discuss their effect on structure. **Clarifications:** e.g., rhythm, melody, timbre, form, tonality, harmony, texture; solo, chamber ensemble, large ensemble
MU.912.O.2.1:	Transfer accepted composition conventions and performance practices of a specific style to a contrasting style of music.
MU.912.O.2.2:	Transpose melodies into different modalities through performance and composition.
MU.912.O.3.1:	Analyze expressive elements in a musical work and describe how the choices and manipulations of the elements support, for the listener, the implied meaning of the composer/performer. **Clarifications:**

	e.g., tempo markings, expression markings, articulation markings, phrasing, scales, modes, harmonic structure, timbre choice, rhythm, orchestration
MU.912.O.3.2:	Interpret and perform expressive elements indicated by the musical score and/or conductor.
MU.912.S.1.1:	Improvise rhythmic and melodic phrases over harmonic progressions. **Clarifications:** e.g., using text or scat syllables
MU.912.S.1.3:	Arrange a musical work by manipulating two or more aspects of the composition. **Clarifications:** e.g., texture, mode, form, tempo, voicing
MU.912.S.1.4:	Perform and notate, independently and accurately, melodies by ear. **Clarifications:** e.g., singing, playing, writing
MU.912.S.2.1:	Apply the ability to memorize and internalize musical structure, accurate and expressive details, and processing skills to the creation or performance of music literature. **Clarifications:** e.g., memorization, sequential process
MU.912.S.2.2:	Transfer expressive elements and performance techniques from one piece of music to another.
MU.912.S.3.1:	Synthesize a broad range of musical skills by performing a varied repertoire with expression, appropriate stylistic interpretation, technical accuracy, and kinesthetic energy.
MU.912.S.3.2:	Sight-read music accurately and expressively to show synthesis of skills. **Clarifications:** e.g., musical elements, expressive qualities, performance technique
MU.912.S.3.3:	Transcribe aurally presented songs into melodic and/or rhythmic notation to show synthesis of aural and notational skills.
MU.912.S.3.4:	Analyze and describe the effect of rehearsal sessions and/or strategies on refinement of skills and techniques.
MU.912.S.3.5:	Develop and demonstrate proper vocal or instrumental technique. **Clarifications:** e.g., posture, breathing, fingering, embouchure, bow technique, tuning, strumming
MA.K12.MTR.1.1:	Mathematicians who participate in effortful learning both individually and with others: • Analyze the problem in a way that makes sense given the task. • Ask questions that will help with solving the task. • Build perseverance by modifying methods as needed while solving a challenging task. • Stay engaged and maintain a positive mindset when working to solve tasks. • Help and support each other when attempting a new method or approach. **Clarifications:** Teachers who encourage students to participate actively in effortful learning both individually and with others: • Cultivate a community of growth mindset learners. • Foster perseverance in students by choosing tasks that are challenging. • Develop students' ability to analyze and problem solve. • Recognize students' effort when solving challenging problems.
MA.K12.MTR.2.1:	Demonstrate understanding by representing problems in multiple ways. Mathematicians who demonstrate understanding by representing problems in multiple ways: • Build understanding through modeling and using manipulatives. • Represent solutions to problems in multiple ways using objects, drawings, tables, graphs and equations. • Progress from modeling problems with objects and drawings to using algorithms and equations. • Express connections between concepts and representations. • Choose a representation based on the given context or purpose. **Clarifications:** Teachers who encourage students to demonstrate understanding by representing problems in multiple ways: • Help students make connections between concepts and representations. • Provide opportunities for students to use manipulatives when investigating concepts. • Guide students from concrete to pictorial to abstract representations as understanding progresses. • Show students that various representations can have different purposes and can be useful in different situations.
MA.K12.MTR.3.1:	Complete tasks with mathematical fluency. Mathematicians who complete tasks with mathematical fluency: • Select efficient and appropriate methods for solving problems within the given context. • Maintain flexibility and accuracy while performing procedures and mental calculations. • Complete tasks accurately and with confidence. • Adapt procedures to apply them to a new context. • Use feedback to improve efficiency when performing calculations. **Clarifications:** Teachers who encourage students to complete tasks with mathematical fluency: • Provide students with the flexibility to solve problems by selecting a procedure that allows them to solve efficiently and accurately. • Offer multiple opportunities for students to practice efficient and generalizable methods. • Provide opportunities for students to reflect on the method they used and determine if a more efficient method could have been used.
	Engage in discussions that reflect on the mathematical thinking of self and others.

MA.K12.MTR.4.1:	Mathematicians who engage in discussions that reflect on the mathematical thinking of self and others: • Communicate mathematical ideas, vocabulary and methods effectively. • Analyze the mathematical thinking of others. • Compare the efficiency of a method to those expressed by others. • Recognize errors and suggest how to correctly solve the task. • Justify results by explaining methods and processes. • Construct possible arguments based on evidence. **Clarifications:** Teachers who encourage students to engage in discussions that reflect on the mathematical thinking of self and others: • Establish a culture in which students ask questions of the teacher and their peers, and error is an opportunity for learning. • Create opportunities for students to discuss their thinking with peers. • Select, sequence and present student work to advance and deepen understanding of correct and increasingly efficient methods. • Develop students' ability to justify methods and compare their responses to the responses of their peers.
MA.K12.MTR.5.1:	Use patterns and structure to help understand and connect mathematical concepts. Mathematicians who use patterns and structure to help understand and connect mathematical concepts: • Focus on relevant details within a problem. • Create plans and procedures to logically order events, steps or ideas to solve problems. • Decompose a complex problem into manageable parts. • Relate previously learned concepts to new concepts. • Look for similarities among problems. • Connect solutions of problems to more complicated large-scale situations. **Clarifications:** Teachers who encourage students to use patterns and structure to help understand and connect mathematical concepts: • Help students recognize the patterns in the world around them and connect these patterns to mathematical concepts. • Support students to develop generalizations based on the similarities found among problems. • Provide opportunities for students to create plans and procedures to solve problems. • Develop students' ability to construct relationships between their current understanding and more sophisticated ways of thinking.
MA.K12.MTR.6.1:	Assess the reasonableness of solutions. Mathematicians who assess the reasonableness of solutions: • Estimate to discover possible solutions. • Use benchmark quantities to determine if a solution makes sense. • Check calculations when solving problems. • Verify possible solutions by explaining the methods used. • Evaluate results based on the given context. **Clarifications:** Teachers who encourage students to assess the reasonableness of solutions: • Have students estimate or predict solutions prior to solving. • Prompt students to continually ask, "Does this solution make sense? How do you know?" • Reinforce that students check their work as they progress within and after a task. • Strengthen students' ability to verify solutions through justifications.
MA.K12.MTR.7.1:	Apply mathematics to real-world contexts. Mathematicians who apply mathematics to real-world contexts: • Connect mathematical concepts to everyday experiences. • Use models and methods to understand, represent and solve problems. • Perform investigations to gather data or determine if a method is appropriate. • Redesign models and methods to improve accuracy or efficiency. **Clarifications:** Teachers who encourage students to apply mathematics to real-world contexts: • Provide opportunities for students to create models, both concrete and abstract, and perform investigations. • Challenge students to question the accuracy of their models and methods. • Support students as they validate conclusions by comparing them to the given situation. • Indicate how various concepts can be applied to other disciplines.
ELA.K12.EE.1.1:	Cite evidence to explain and justify reasoning. **Clarifications:** K-1 Students include textual evidence in their oral communication with guidance and support from adults. The evidence can consist of details from the text without naming the text. During 1st grade, students learn how to incorporate the evidence in their writing. 2-3 Students include relevant textual evidence in their written and oral communication. Students should name the text when they refer to it. In 3rd grade, students should use a combination of direct and indirect citations. 4-5 Students continue with previous skills and reference comments made by speakers and peers. Students cite texts that they've directly quoted, paraphrased, or used for information. When writing, students will use the form of citation dictated by the instructor or the style guide referenced by the instructor. 6-8 Students continue with previous skills and use a style guide to create a proper citation. 9-12 Students continue with previous skills and should be aware of existing style guides and the ways in which they differ.
ELA.K12.EE.2.1:	Read and comprehend grade-level complex texts proficiently. **Clarifications:**

	See Text Complexity for grade-level complexity bands and a text complexity rubric.
ELA.K12.EE.3.1:	Make inferences to support comprehension. **Clarifications:** Students will make inferences before the words infer or inference are introduced. Kindergarten students will answer questions like "Why is the girl smiling?" or make predictions about what will happen based on the title page. Students will use the terms and apply them in 2nd grade and beyond.
ELA.K12.EE.4.1:	Use appropriate collaborative techniques and active listening skills when engaging in discussions in a variety of situations. **Clarifications:** In kindergarten, students learn to listen to one another respectfully. In grades 1-2, students build upon these skills by justifying what they are thinking. For example: "I think _____ because _____." The collaborative conversations are becoming academic conversations. In grades 3-12, students engage in academic conversations discussing claims and justifying their reasoning, refining and applying skills. Students build on ideas, propel the conversation, and support claims and counterclaims with evidence.
ELA.K12.EE.5.1:	Use the accepted rules governing a specific format to create quality work. **Clarifications:** Students will incorporate skills learned into work products to produce quality work. For students to incorporate these skills appropriately, they must receive instruction. A 3rd grade student creating a poster board display must have instruction in how to effectively present information to do quality work.
ELA.K12.EE.6.1:	Use appropriate voice and tone when speaking or writing. **Clarifications:** In kindergarten and 1st grade, students learn the difference between formal and informal language. For example, the way we talk to our friends differs from the way we speak to adults. In 2nd grade and beyond, students practice appropriate social and academic language to discuss texts.
DA.912.F.3.8:	Demonstrate effective teamwork and accountability, using compromise, collaboration, and conflict resolution, to set and achieve goals as required in the work environment.
DA.912.S.2.1:	Sustain focused attention, respect, and discipline during class, rehearsal, and performance.
ELD.K12.ELL.SI.1:	English language learners communicate for social and instructional purposes within the school setting.

General Course Information and Notes

VERSION DESCRIPTION

This year-long, intermediate-level course, designed for students who demonstrate proficiency in woodwind, brass and/or percussion techniques, music literacy, critical listening/aural skills, and ensemble performance skills, promotes greater engagement with and appreciation for music through performance and other experiences with a broad spectrum of music, as well as creativity through composition and/or arranging.. Study includes cultivation of well-developed instrumental ensemble techniques and skills, music literacy and theory, and deeper aesthetic engagement with a wide variety of high-quality repertoire.

GENERAL NOTES

All instruction related to Music benchmarks should be framed by the Big Ideas and Enduring Understandings. Non-Music benchmarks listed in this course are also required and should be fully integrated in support of arts instruction.

Special Notes: This course requires students to participate in extra rehearsals and performances beyond the school day. Additional experiences with small ensembles and solo performance may be available. Students who enjoy the challenges and successes of this course may wish to take an accelerated music class in the future. Students in this class may need to obtain (e.g., borrow, rent, purchase) an instrument from an outside source.

Florida's Benchmarks for Excellent Student Thinking (B.E.S.T.) Standards
This course includes Florida's B.E.S.T. ELA Expectations (EE) and Mathematical Thinking and Reasoning Standards (MTRs) for students. Florida educators should intentionally embed these standards within the content and their instruction as applicable. For guidance on the implementation of the EEs and MTRs, please visit cpalms.org/Standards/BEST_Standards.aspx and select the appropriate B.E.S.T. Standards package.

English Language Development ELD Standards Special Notes Section:
Teachers are required to provide listening, speaking, reading and writing instruction that allows English language learners (ELL) to communicate for social and instructional purposes within the school setting. For the given level of English language proficiency and with visual, graphic, or interactive support, students will interact with grade level words, expressions, sentences and discourse to process or produce language necessary for academic success. The ELD standard should specify a relevant content area concept or topic of study chosen by curriculum developers and teachers which maximizes an ELL's need for communication and social skills. To access an ELL supporting document which delineates performance definitions and descriptors, please click on the following link: cpalms.org/uploads/docs/standards/eld/SI.pdf

GENERAL INFORMATION

Course Number: 1302330

Course Path: Section: Grades PreK to 12 Education Courses > **Grade Group:** Grades 9 to 12 and Adult Education Courses > **Subject:** Music Education > **SubSubject:** Instrumental Music >

Abbreviated Title: BAND 4
Number of Credits: One (1) credit
Course Length: Year (Y)
Course Type: Core Academic Course
Course Level: 2
Course Status: Draft - Course Pending Approval
Grade Level(s): 9,10,11,12
Graduation Requirement: Performing/Fine Arts

Educator Certifications

Music (Elementary and Secondary Grades K-12)
Instrumental Music (Secondary Grades 7-12)
Instrumental Music (Elementary and Secondary Grades K-12)

Band 5 Honors (#1302340) 2022 - And Beyond

Course Standards

Name	Description
MU.912.C.1.1:	Apply listening strategies to promote appreciation and understanding of unfamiliar musical works. **Clarifications:** e.g., listening maps, active listening, checklists
MU.912.C.1.2:	Compare, using correct music vocabulary, the aesthetic impact of two or more performances of a musical work to one's own hypothesis of the composer's intent. **Clarifications:** e.g., quality recordings, individual and peer-group performances, composer notes, instrumentation, expressive elements, title
MU.912.C.1.3:	Analyze instruments of the world and classify them by common traits. **Clarifications:** e.g., classical and folk instruments from around the world
MU.912.C.2.1:	Evaluate and make appropriate adjustments to personal performance in solo and ensembles.
MU.912.C.2.2:	Evaluate performance quality in recorded and/or live performances.
MU.912.C.2.3:	Evaluate one's own or other's compositions and/or improvisations and generate improvements independently or cooperatively.
MU.912.C.3.1:	Make critical evaluations, based on exemplary models, of the quality and effectiveness of performances and apply the criteria to personal development in music.
MU.912.F.1.1:	Analyze and evaluate the effect of "traditional" and contemporary technologies on the development of music.
MU.912.F.2.1:	Design or refine a résumé for application to higher education or the workforce that highlights marketable skills and knowledge gained through music training. **Clarifications:** e.g., repertoire lists, technology-based work, ability to research and analyze, and examples of leadership and collaborative skills
MU.912.F.2.2:	Analyze the effect of the arts and entertainment industry on the economic and social health of communities and regions. **Clarifications:** e.g., community revitalization, industry choosing new locations, cultural and social enrichment
MU.912.F.3.1:	Analyze and describe how meeting one's responsibilities in music offers opportunities to develop leadership skills, and identify personal examples of leadership in school and/or non-school settings.
MU.912.F.3.2:	Summarize copyright laws that govern printed, recorded, and on-line music to promote legal and responsible use of intellectual property and technology.
MU.912.F.3.3:	Define, prioritize, monitor, and successfully complete tasks related to individual musical performance or project presentation, without direct oversight, demonstrating skills for use in the workplace.
MU.912.F.3.4:	Design and implement a personal learning plan, related to the study of music, which demonstrates self-assessment, brain-storming, decision-making, and initiative to advance skills and/or knowledge.
MU.912.H.1.1:	Investigate and discuss how a culture's traditions are reflected through its music. **Clarifications:** e.g., patriotic, folk, celebration, entertainment, spiritual
MU.912.H.1.2:	Compare the work of, and influences on, two or more exemplary composers in the performance medium studied in class. **Clarifications:** e.g., vocal, instrumental, guitar, keyboard, electronic, handbells
MU.912.H.1.3:	Compare two or more works of a composer across performance media. **Clarifications:** e.g., orchestral and choral; guitar and string quartet; piano solo and piano concerto
MU.912.H.1.4:	Analyze how Western music has been influenced by historical and current world cultures.
MU.912.H.1.5:	Analyze music within cultures to gain understanding of authentic performance practices.
MU.912.H.2.1:	Evaluate the social impact of music on specific historical periods.
MU.912.H.2.2:	Analyze current musical trends, including audience environments and music acquisition, to predict possible directions of music.
MU.912.H.2.3:	Analyze the evolution of a music genre. **Clarifications:** e.g., jazz, blues
MU.912.H.2.4:	Examine the effects of developing technology on composition, performance, and acquisition of music.
MU.912.H.3.1:	Apply knowledge of science, math, and music to demonstrate, through an acoustic or digital performance medium, how sound production affects musical performance. **Clarifications:** e.g., acoustics, sound amplification, materials, mechanics
MU.912.O.1.1:	Evaluate the organizational principles and conventions in musical works and discuss their effect on structure. **Clarifications:** e.g., rhythm, melody, timbre, form, tonality, harmony, texture; solo, chamber ensemble, large ensemble
MU.912.O.2.1:	Transfer accepted composition conventions and performance practices of a specific style to a contrasting style of music.

MU.912.O.2.2:	Transpose melodies into different modalities through performance and composition.
MU.912.O.3.1:	Analyze expressive elements in a musical work and describe how the choices and manipulations of the elements support, for the listener, the implied meaning of the composer/performer. **Clarifications:** e.g., tempo markings, expression markings, articulation markings, phrasing, scales, modes, harmonic structure, timbre choice, rhythm, orchestration
MU.912.O.3.2:	Interpret and perform expressive elements indicated by the musical score and/or conductor.
MU.912.S.1.1:	Improvise rhythmic and melodic phrases over harmonic progressions. **Clarifications:** e.g., using text or scat syllables
MU.912.S.1.3:	Arrange a musical work by manipulating two or more aspects of the composition. **Clarifications:** e.g., texture, mode, form, tempo, voicing
MU.912.S.1.4:	Perform and notate, independently and accurately, melodies by ear. **Clarifications:** e.g., singing, playing, writing
MU.912.S.2.1:	Apply the ability to memorize and internalize musical structure, accurate and expressive details, and processing skills to the creation or performance of music literature. **Clarifications:** e.g., memorization, sequential process
MU.912.S.2.2:	Transfer expressive elements and performance techniques from one piece of music to another.
MU.912.S.3.1:	Synthesize a broad range of musical skills by performing a varied repertoire with expression, appropriate stylistic interpretation, technical accuracy, and kinesthetic energy.
MU.912.S.3.2:	Sight-read music accurately and expressively to show synthesis of skills. **Clarifications:** e.g., musical elements, expressive qualities, performance technique
MU.912.S.3.3:	Transcribe aurally presented songs into melodic and/or rhythmic notation to show synthesis of aural and notational skills.
MU.912.S.3.4:	Analyze and describe the effect of rehearsal sessions and/or strategies on refinement of skills and techniques.
MU.912.S.3.5:	Develop and demonstrate proper vocal or instrumental technique. **Clarifications:** e.g., posture, breathing, fingering, embouchure, bow technique, tuning, strumming
MA.K12.MTR.1.1:	Mathematicians who participate in effortful learning both individually and with others: • Analyze the problem in a way that makes sense given the task. • Ask questions that will help with solving the task. • Build perseverance by modifying methods as needed while solving a challenging task. • Stay engaged and maintain a positive mindset when working to solve tasks. • Help and support each other when attempting a new method or approach. **Clarifications:** Teachers who encourage students to participate actively in effortful learning both individually and with others: • Cultivate a community of growth mindset learners. • Foster perseverance in students by choosing tasks that are challenging. • Develop students' ability to analyze and problem solve. • Recognize students' effort when solving challenging problems.
MA.K12.MTR.2.1:	Demonstrate understanding by representing problems in multiple ways. Mathematicians who demonstrate understanding by representing problems in multiple ways: • Build understanding through modeling and using manipulatives. • Represent solutions to problems in multiple ways using objects, drawings, tables, graphs and equations. • Progress from modeling problems with objects and drawings to using algorithms and equations. • Express connections between concepts and representations. • Choose a representation based on the given context or purpose. **Clarifications:** Teachers who encourage students to demonstrate understanding by representing problems in multiple ways: • Help students make connections between concepts and representations. • Provide opportunities for students to use manipulatives when investigating concepts. • Guide students from concrete to pictorial to abstract representations as understanding progresses. • Show students that various representations can have different purposes and can be useful in different situations.
MA.K12.MTR.3.1:	Complete tasks with mathematical fluency. Mathematicians who complete tasks with mathematical fluency: • Select efficient and appropriate methods for solving problems within the given context. • Maintain flexibility and accuracy while performing procedures and mental calculations. • Complete tasks accurately and with confidence. • Adapt procedures to apply them to a new context. • Use feedback to improve efficiency when performing calculations. **Clarifications:** Teachers who encourage students to complete tasks with mathematical fluency:

	• Provide students with the flexibility to solve problems by selecting a procedure that allows them to solve efficiently and accurately. • Offer multiple opportunities for students to practice efficient and generalizable methods. • Provide opportunities for students to reflect on the method they used and determine if a more efficient method could have been used.
MA.K12.MTR.4.1:	Engage in discussions that reflect on the mathematical thinking of self and others. Mathematicians who engage in discussions that reflect on the mathematical thinking of self and others: • Communicate mathematical ideas, vocabulary and methods effectively. • Analyze the mathematical thinking of others. • Compare the efficiency of a method to those expressed by others. • Recognize errors and suggest how to correctly solve the task. • Justify results by explaining methods and processes. • Construct possible arguments based on evidence. **Clarifications:** Teachers who encourage students to engage in discussions that reflect on the mathematical thinking of self and others: • Establish a culture in which students ask questions of the teacher and their peers, and error is an opportunity for learning. • Create opportunities for students to discuss their thinking with peers. • Select, sequence and present student work to advance and deepen understanding of correct and increasingly efficient methods. • Develop students' ability to justify methods and compare their responses to the responses of their peers.
MA.K12.MTR.5.1:	Use patterns and structure to help understand and connect mathematical concepts. Mathematicians who use patterns and structure to help understand and connect mathematical concepts: • Focus on relevant details within a problem. • Create plans and procedures to logically order events, steps or ideas to solve problems. • Decompose a complex problem into manageable parts. • Relate previously learned concepts to new concepts. • Look for similarities among problems. • Connect solutions of problems to more complicated large-scale situations. **Clarifications:** Teachers who encourage students to use patterns and structure to help understand and connect mathematical concepts: • Help students recognize the patterns in the world around them and connect these patterns to mathematical concepts. • Support students to develop generalizations based on the similarities found among problems. • Provide opportunities for students to create plans and procedures to solve problems. • Develop students' ability to construct relationships between their current understanding and more sophisticated ways of thinking.
MA.K12.MTR.6.1:	Assess the reasonableness of solutions. Mathematicians who assess the reasonableness of solutions: • Estimate to discover possible solutions. • Use benchmark quantities to determine if a solution makes sense. • Check calculations when solving problems. • Verify possible solutions by explaining the methods used. • Evaluate results based on the given context. **Clarifications:** Teachers who encourage students to assess the reasonableness of solutions: • Have students estimate or predict solutions prior to solving. • Prompt students to continually ask, "Does this solution make sense? How do you know?" • Reinforce that students check their work as they progress within and after a task. • Strengthen students' ability to verify solutions through justifications.
MA.K12.MTR.7.1:	Apply mathematics to real-world contexts. Mathematicians who apply mathematics to real-world contexts: • Connect mathematical concepts to everyday experiences. • Use models and methods to understand, represent and solve problems. • Perform investigations to gather data or determine if a method is appropriate. • Redesign models and methods to improve accuracy or efficiency. **Clarifications:** Teachers who encourage students to apply mathematics to real-world contexts: • Provide opportunities for students to create models, both concrete and abstract, and perform investigations. • Challenge students to question the accuracy of their models and methods. • Support students as they validate conclusions by comparing them to the given situation. • Indicate how various concepts can be applied to other disciplines.
ELA.K12.EE.1.1:	Cite evidence to explain and justify reasoning. **Clarifications:** K-1 Students include textual evidence in their oral communication with guidance and support from adults. The evidence can consist of details from the text without naming the text. During 1st grade, students learn how to incorporate the evidence in their writing. 2-3 Students include relevant textual evidence in their written and oral communication. Students should name the text when they refer to it. In 3rd grade, students should use a combination of direct and indirect citations. 4-5 Students continue with previous skills and reference comments made by speakers and peers. Students cite texts that they've directly quoted, paraphrased, or used for information. When writing, students will use the form of citation dictated by the instructor or the style guide referenced by the instructor. 6-8 Students continue with previous skills and use a style guide to create a proper citation.

	9-12 Students continue with previous skills and should be aware of existing style guides and the ways in which they differ.
ELA.K12.EE.2.1:	Read and comprehend grade-level complex texts proficiently. **Clarifications:** See Text Complexity for grade-level complexity bands and a text complexity rubric.
ELA.K12.EE.3.1:	Make inferences to support comprehension. **Clarifications:** Students will make inferences before the words infer or inference are introduced. Kindergarten students will answer questions like "Why is the girl smiling?" or make predictions about what will happen based on the title page. Students will use the terms and apply them in 2nd grade and beyond.
ELA.K12.EE.4.1:	Use appropriate collaborative techniques and active listening skills when engaging in discussions in a variety of situations. **Clarifications:** In kindergarten, students learn to listen to one another respectfully. In grades 1-2, students build upon these skills by justifying what they are thinking. For example: "I think _____ because _____." The collaborative conversations are becoming academic conversations. In grades 3-12, students engage in academic conversations discussing claims and justifying their reasoning, refining and applying skills. Students build on ideas, propel the conversation, and support claims and counterclaims with evidence.
ELA.K12.EE.5.1:	Use the accepted rules governing a specific format to create quality work. **Clarifications:** Students will incorporate skills learned into work products to produce quality work. For students to incorporate these skills appropriately, they must receive instruction. A 3rd grade student creating a poster board display must have instruction in how to effectively present information to do quality work.
ELA.K12.EE.6.1:	Use appropriate voice and tone when speaking or writing. **Clarifications:** In kindergarten and 1st grade, students learn the difference between formal and informal language. For example, the way we talk to our friends differs from the way we speak to adults. In 2nd grade and beyond, students practice appropriate social and academic language to discuss texts.
DA.912.F.3.8:	Demonstrate effective teamwork and accountability, using compromise, collaboration, and conflict resolution, to set and achieve goals as required in the work environment.
DA.912.S.2.1:	Sustain focused attention, respect, and discipline during class, rehearsal, and performance.
SS.912.H.1.5:	Examine artistic response to social issues and new ideas in various cultures. **Clarifications:** Examples are Victor Hugo's Les Miserables, Langston Hughes' poetry, Pete Seeger's Bring 'Em Home.
SS.912.H.2.3:	Apply various types of critical analysis (contextual, formal, and intuitive criticism) to works in the arts, including the types and use of symbolism within art forms and their philosophical implications.
ELD.K12.ELL.SI.1:	English language learners communicate for social and instructional purposes within the school setting.

General Course Information and Notes

VERSION DESCRIPTION

This year-long, advanced course, designed for wind and percussion students with extensive experience in solo performance and larger performing ensembles, promotes significant depth of engagement and lifelong appreciation of music through performance and other experiences with sophisticated instrumental music, as well as creativity through composition and/or arranging. The course includes the development of advanced instrumental ensemble techniques and skills, extended music literacy and theory, and deep aesthetic engagement with a broad spectrum of high-quality repertoire, ranging from early music to the contemporary. Musical independence and leadership are particularly encouraged in this setting.

GENERAL NOTES

All instruction related to Music benchmarks should be framed by the Big Ideas and Enduring Understandings. Non-Music benchmarks listed in this course are also required and should be fully integrated in support of arts instruction.

Special Notes: Students may be required to attend and/or participate in rehearsals and performances outside the school day to support, extend, and assess learning in the classroom. Additional experiences with small ensembles, solo performance, and leadership opportunities may be available. Students who enjoy the challenges and successes of this course may wish to take an accelerated music class in the future. Students in this class may need to obtain (e.g., borrow, rent, purchase) an instrument from an outside source.

Honors and Advanced Level Course Note: Advanced courses require a greater demand on students through increased academic rigor. Academic rigor is obtained through the application, analysis, evaluation, and creation of complex ideas that are often abstract and multi-faceted. Students are challenged to think and collaborate critically on the content they are learning. Honors level rigor will be achieved by increasing text complexity through text selection, focus on high-level qualitative measures, and complexity of task. Instruction will be structured to give students a deeper understanding of conceptual themes and organization within and across disciplines. Academic rigor is more than simply assigning to students a greater quantity of work.

Florida's Benchmarks for Excellent Student Thinking (B.E.S.T.) Standards
This course includes Florida's B.E.S.T. ELA Expectations (EE) and Mathematical Thinking and Reasoning Standards (MTRs) for students. Florida educators should intentionally embed these standards within the content and their instruction as applicable. For guidance on the implementation of the EEs and MTRs, please visit

cpalms.org/Standards/BEST_Standards.aspx and select the appropriate B.E.S.T. Standards package.

English Language Development ELD Standards Special Notes Section:
Teachers are required to provide listening, speaking, reading and writing instruction that allows English language learners (ELL) to communicate for social and instructional purposes within the school setting. For the given level of English language proficiency and with visual, graphic, or interactive support, students will interact with grade level words, expressions, sentences and discourse to process or produce language necessary for academic success. The ELD standard should specify a relevant content area concept or topic of study chosen by curriculum developers and teachers which maximizes an ELL's need for communication and social skills. To access an ELL supporting document which delineates performance definitions and descriptors, please click on the following link: cpalms.org/uploads/docs/standards/eld/SI.pdf

GENERAL INFORMATION

Course Number: 1302340

Course Path: Section: Grades PreK to 12 Education Courses > **Grade Group:** Grades 9 to 12 and Adult Education Courses > **Subject:** Music Education > **SubSubject:** Instrumental Music >

Abbreviated Title: BAND 5 HON

Number of Credits: One (1) credit

Course Length: Year (Y)

Course Attributes:

- Honors

Course Type: Core Academic Course

Course Level: 3

Course Status: Draft - Course Pending Approval

Grade Level(s): 9,10,11,12

Graduation Requirement: Performing/Fine Arts

Educator Certifications

Music (Elementary and Secondary Grades K-12)
Instrumental Music (Secondary Grades 7-12)
Instrumental Music (Elementary and Secondary Grades K-12)

Band 6 Honors (#1302350) 2022 - And Beyond

Course Standards

Name	Description
MU.912.C.1.1:	Apply listening strategies to promote appreciation and understanding of unfamiliar musical works. **Clarifications:** e.g., listening maps, active listening, checklists
MU.912.C.1.2:	Compare, using correct music vocabulary, the aesthetic impact of two or more performances of a musical work to one's own hypothesis of the composer's intent. **Clarifications:** e.g., quality recordings, individual and peer-group performances, composer notes, instrumentation, expressive elements, title
MU.912.C.1.3:	Analyze instruments of the world and classify them by common traits. **Clarifications:** e.g., classical and folk instruments from around the world
MU.912.C.2.1:	Evaluate and make appropriate adjustments to personal performance in solo and ensembles.
MU.912.C.2.2:	Evaluate performance quality in recorded and/or live performances.
MU.912.C.2.3:	Evaluate one's own or other's compositions and/or improvisations and generate improvements independently or cooperatively.
MU.912.C.3.1:	Make critical evaluations, based on exemplary models, of the quality and effectiveness of performances and apply the criteria to personal development in music.
MU.912.F.1.1:	Analyze and evaluate the effect of "traditional" and contemporary technologies on the development of music.
MU.912.F.2.1:	Design or refine a résumé for application to higher education or the workforce that highlights marketable skills and knowledge gained through music training. **Clarifications:** e.g., repertoire lists, technology-based work, ability to research and analyze, and examples of leadership and collaborative skills
MU.912.F.2.2:	Analyze the effect of the arts and entertainment industry on the economic and social health of communities and regions. **Clarifications:** e.g., community revitalization, industry choosing new locations, cultural and social enrichment
MU.912.F.2.3:	Compare the organizational structure of a professional orchestra, chorus, quintet, or other ensemble to that of a business. **Clarifications:** e.g., leadership, financial needs and structure, marketing, personnel matters, manager, travel
MU.912.F.3.1:	Analyze and describe how meeting one's responsibilities in music offers opportunities to develop leadership skills, and identify personal examples of leadership in school and/or non-school settings.
MU.912.F.3.2:	Summarize copyright laws that govern printed, recorded, and on-line music to promote legal and responsible use of intellectual property and technology.
MU.912.F.3.3:	Define, prioritize, monitor, and successfully complete tasks related to individual musical performance or project presentation, without direct oversight, demonstrating skills for use in the workplace.
MU.912.F.3.4:	Design and implement a personal learning plan, related to the study of music, which demonstrates self-assessment, brain-storming, decision-making, and initiative to advance skills and/or knowledge.
MU.912.H.1.1:	Investigate and discuss how a culture's traditions are reflected through its music. **Clarifications:** e.g., patriotic, folk, celebration, entertainment, spiritual
MU.912.H.1.2:	Compare the work of, and influences on, two or more exemplary composers in the performance medium studied in class. **Clarifications:** e.g., vocal, instrumental, guitar, keyboard, electronic, handbells
MU.912.H.1.3:	Compare two or more works of a composer across performance media. **Clarifications:** e.g., orchestral and choral; guitar and string quartet; piano solo and piano concerto
MU.912.H.1.4:	Analyze how Western music has been influenced by historical and current world cultures.
MU.912.H.1.5:	Analyze music within cultures to gain understanding of authentic performance practices.
MU.912.H.2.1:	Evaluate the social impact of music on specific historical periods.
MU.912.H.2.2:	Analyze current musical trends, including audience environments and music acquisition, to predict possible directions of music.
MU.912.H.2.3:	Analyze the evolution of a music genre. **Clarifications:** e.g., jazz, blues
MU.912.H.2.4:	Examine the effects of developing technology on composition, performance, and acquisition of music.
MU.912.H.3.1:	Apply knowledge of science, math, and music to demonstrate, through an acoustic or digital performance medium, how sound production affects musical performance. **Clarifications:** e.g., acoustics, sound amplification, materials, mechanics
	Evaluate the organizational principles and conventions in musical works and discuss their effect on structure.

MU.912.O.1.1:	**Clarifications:** e.g., rhythm, melody, timbre, form, tonality, harmony, texture; solo, chamber ensemble, large ensemble
MU.912.O.2.1:	Transfer accepted composition conventions and performance practices of a specific style to a contrasting style of music.
MU.912.O.2.2:	Transpose melodies into different modalities through performance and composition.
MU.912.O.3.1:	Analyze expressive elements in a musical work and describe how the choices and manipulations of the elements support, for the listener, the implied meaning of the composer/performer. **Clarifications:** e.g., tempo markings, expression markings, articulation markings, phrasing, scales, modes, harmonic structure, timbre choice, rhythm, orchestration
MU.912.O.3.2:	Interpret and perform expressive elements indicated by the musical score and/or conductor.
MU.912.S.1.1:	Improvise rhythmic and melodic phrases over harmonic progressions. **Clarifications:** e.g., using text or scat syllables
MU.912.S.1.3:	Arrange a musical work by manipulating two or more aspects of the composition. **Clarifications:** e.g., texture, mode, form, tempo, voicing
MU.912.S.1.4:	Perform and notate, independently and accurately, melodies by ear. **Clarifications:** e.g., singing, playing, writing
MU.912.S.2.1:	Apply the ability to memorize and internalize musical structure, accurate and expressive details, and processing skills to the creation or performance of music literature. **Clarifications:** e.g., memorization, sequential process
MU.912.S.2.2:	Transfer expressive elements and performance techniques from one piece of music to another.
MU.912.S.3.1:	Synthesize a broad range of musical skills by performing a varied repertoire with expression, appropriate stylistic interpretation, technical accuracy, and kinesthetic energy.
MU.912.S.3.2:	Sight-read music accurately and expressively to show synthesis of skills. **Clarifications:** e.g., musical elements, expressive qualities, performance technique
MU.912.S.3.3:	Transcribe aurally presented songs into melodic and/or rhythmic notation to show synthesis of aural and notational skills.
MU.912.S.3.4:	Analyze and describe the effect of rehearsal sessions and/or strategies on refinement of skills and techniques.
MU.912.S.3.5:	Develop and demonstrate proper vocal or instrumental technique. **Clarifications:** e.g., posture, breathing, fingering, embouchure, bow technique, tuning, strumming
MA.K12.MTR.1.1:	Mathematicians who participate in effortful learning both individually and with others: • Analyze the problem in a way that makes sense given the task. • Ask questions that will help with solving the task. • Build perseverance by modifying methods as needed while solving a challenging task. • Stay engaged and maintain a positive mindset when working to solve tasks. • Help and support each other when attempting a new method or approach. **Clarifications:** Teachers who encourage students to participate actively in effortful learning both individually and with others: • Cultivate a community of growth mindset learners. • Foster perseverance in students by choosing tasks that are challenging. • Develop students' ability to analyze and problem solve. • Recognize students' effort when solving challenging problems.
MA.K12.MTR.2.1:	Demonstrate understanding by representing problems in multiple ways. Mathematicians who demonstrate understanding by representing problems in multiple ways: • Build understanding through modeling and using manipulatives. • Represent solutions to problems in multiple ways using objects, drawings, tables, graphs and equations. • Progress from modeling problems with objects and drawings to using algorithms and equations. • Express connections between concepts and representations. • Choose a representation based on the given context or purpose. **Clarifications:** Teachers who encourage students to demonstrate understanding by representing problems in multiple ways: • Help students make connections between concepts and representations. • Provide opportunities for students to use manipulatives when investigating concepts. • Guide students from concrete to pictorial to abstract representations as understanding progresses. • Show students that various representations can have different purposes and can be useful in different situations.
	Complete tasks with mathematical fluency. Mathematicians who complete tasks with mathematical fluency: • Select efficient and appropriate methods for solving problems within the given context. • Maintain flexibility and accuracy while performing procedures and mental calculations. • Complete tasks accurately and with confidence.

MA.K12.MTR.3.1:	• Adapt procedures to apply them to a new context. • Use feedback to improve efficiency when performing calculations. **Clarifications:** Teachers who encourage students to complete tasks with mathematical fluency: • Provide students with the flexibility to solve problems by selecting a procedure that allows them to solve efficiently and accurately. • Offer multiple opportunities for students to practice efficient and generalizable methods. • Provide opportunities for students to reflect on the method they used and determine if a more efficient method could have been used.
MA.K12.MTR.4.1:	Engage in discussions that reflect on the mathematical thinking of self and others. Mathematicians who engage in discussions that reflect on the mathematical thinking of self and others: • Communicate mathematical ideas, vocabulary and methods effectively. • Analyze the mathematical thinking of others. • Compare the efficiency of a method to those expressed by others. • Recognize errors and suggest how to correctly solve the task. • Justify results by explaining methods and processes. • Construct possible arguments based on evidence. **Clarifications:** Teachers who encourage students to engage in discussions that reflect on the mathematical thinking of self and others: • Establish a culture in which students ask questions of the teacher and their peers, and error is an opportunity for learning. • Create opportunities for students to discuss their thinking with peers. • Select, sequence and present student work to advance and deepen understanding of correct and increasingly efficient methods. • Develop students' ability to justify methods and compare their responses to the responses of their peers.
MA.K12.MTR.5.1:	Use patterns and structure to help understand and connect mathematical concepts. Mathematicians who use patterns and structure to help understand and connect mathematical concepts: • Focus on relevant details within a problem. • Create plans and procedures to logically order events, steps or ideas to solve problems. • Decompose a complex problem into manageable parts. • Relate previously learned concepts to new concepts. • Look for similarities among problems. • Connect solutions of problems to more complicated large-scale situations. **Clarifications:** Teachers who encourage students to use patterns and structure to help understand and connect mathematical concepts: • Help students recognize the patterns in the world around them and connect these patterns to mathematical concepts. • Support students to develop generalizations based on the similarities found among problems. • Provide opportunities for students to create plans and procedures to solve problems. • Develop students' ability to construct relationships between their current understanding and more sophisticated ways of thinking.
MA.K12.MTR.6.1:	Assess the reasonableness of solutions. Mathematicians who assess the reasonableness of solutions: • Estimate to discover possible solutions. • Use benchmark quantities to determine if a solution makes sense. • Check calculations when solving problems. • Verify possible solutions by explaining the methods used. • Evaluate results based on the given context. **Clarifications:** Teachers who encourage students to assess the reasonableness of solutions: • Have students estimate or predict solutions prior to solving. • Prompt students to continually ask, "Does this solution make sense? How do you know?" • Reinforce that students check their work as they progress within and after a task. • Strengthen students' ability to verify solutions through justifications.
MA.K12.MTR.7.1:	Apply mathematics to real-world contexts. Mathematicians who apply mathematics to real-world contexts: • Connect mathematical concepts to everyday experiences. • Use models and methods to understand, represent and solve problems. • Perform investigations to gather data or determine if a method is appropriate. • Redesign models and methods to improve accuracy or efficiency. **Clarifications:** Teachers who encourage students to apply mathematics to real-world contexts: • Provide opportunities for students to create models, both concrete and abstract, and perform investigations. • Challenge students to question the accuracy of their models and methods. • Support students as they validate conclusions by comparing them to the given situation. • Indicate how various concepts can be applied to other disciplines.
ELA.K12.EE.1.1:	Cite evidence to explain and justify reasoning. **Clarifications:** K-1 Students include textual evidence in their oral communication with guidance and support from adults. The evidence can consist of details from the text without naming the text. During 1st grade, students learn how to incorporate the evidence in their writing. 2-3 Students include relevant textual evidence in their written and oral communication. Students should name the text when they refer to it. In 3rd grade, students should use a combination of direct and indirect citations. 4-5 Students continue with previous skills and reference comments made by speakers and peers. Students cite texts that they've directly

	quoted, paraphrased, or used for information. When writing, students will use the form of citation dictated by the instructor or the style guide referenced by the instructor. 6-8 Students continue with previous skills and use a style guide to create a proper citation. 9-12 Students continue with previous skills and should be aware of existing style guides and the ways in which they differ.
ELA.K12.EE.2.1:	Read and comprehend grade-level complex texts proficiently. **Clarifications:** See Text Complexity for grade-level complexity bands and a text complexity rubric.
ELA.K12.EE.3.1:	Make inferences to support comprehension. **Clarifications:** Students will make inferences before the words infer or inference are introduced. Kindergarten students will answer questions like "Why is the girl smiling?" or make predictions about what will happen based on the title page. Students will use the terms and apply them in 2nd grade and beyond.
ELA.K12.EE.4.1:	Use appropriate collaborative techniques and active listening skills when engaging in discussions in a variety of situations. **Clarifications:** In kindergarten, students learn to listen to one another respectfully. In grades 1-2, students build upon these skills by justifying what they are thinking. For example: "I think _____ because _____." The collaborative conversations are becoming academic conversations. In grades 3-12, students engage in academic conversations discussing claims and justifying their reasoning, refining and applying skills. Students build on ideas, propel the conversation, and support claims and counterclaims with evidence.
ELA.K12.EE.5.1:	Use the accepted rules governing a specific format to create quality work. **Clarifications:** Students will incorporate skills learned into work products to produce quality work. For students to incorporate these skills appropriately, they must receive instruction. A 3rd grade student creating a poster board display must have instruction in how to effectively present information to do quality work.
ELA.K12.EE.6.1:	Use appropriate voice and tone when speaking or writing. **Clarifications:** In kindergarten and 1st grade, students learn the difference between formal and informal language. For example, the way we talk to our friends differs from the way we speak to adults. In 2nd grade and beyond, students practice appropriate social and academic language to discuss texts.
DA.912.F.3.8:	Demonstrate effective teamwork and accountability, using compromise, collaboration, and conflict resolution, to set and achieve goals as required in the work environment.
DA.912.S.2.1:	Sustain focused attention, respect, and discipline during class, rehearsal, and performance.
ELD.K12.ELL.SI.1:	English language learners communicate for social and instructional purposes within the school setting.
SS.912.H.1.5:	Examine artistic response to social issues and new ideas in various cultures. **Clarifications:** Examples are Victor Hugo's Les Miserables, Langston Hughes' poetry, Pete Seeger's Bring 'Em Home.

General Course Information and Notes

VERSION DESCRIPTION

This year-long, highly advanced course, designed for students with substantial experience in solo performance and larger performing ensembles, promotes significant engagement with and appreciation for music through performance of sophisticated wind and percussion literature. Study focuses on mastery of highly advanced music skills, techniques, and processes, as well as creativity through composition and/or arranging and use of current technology to enhance creativity and performance effectiveness. This course also provides significant opportunities for student leadership through peer mentoring, solo work, and participation as a performer or coach in a small or large ensemble.

GENERAL NOTES

All instruction related to Music benchmarks should be framed by the Big Ideas and Enduring Understandings. Non-Music benchmarks listed in this course are also required and should be fully integrated in support of arts instruction.

Special Notes: Students may be required to attend and/or participate in rehearsals and performances outside the school day to support, extend, and assess learning in the classroom. Additional experiences with small ensembles, solo performance, and leadership opportunities may be available. Students who enjoy the challenges and successes of this course may wish to take an accelerated music class in the future. Students in this class may need to obtain (e.g., borrow, rent, purchase) an instrument from an outside source.

Honors and Advanced Level Course Note: Advanced courses require a greater demand on students through increased academic rigor. Academic rigor is obtained through the application, analysis, evaluation, and creation of complex ideas that are often abstract and multi-faceted. Students are challenged to think and collaborate critically on the content they are learning. Honors level rigor will be achieved by increasing text complexity through text selection, focus on high-level qualitative measures, and complexity of task. Instruction will be structured to give students a deeper understanding of conceptual themes and organization within and across disciplines. Academic rigor is more than simply assigning to students a greater quantity of work.

Florida's Benchmarks for Excellent Student Thinking (B.E.S.T.) Standards
This course includes Florida's B.E.S.T. ELA Expectations (EE) and Mathematical Thinking and Reasoning Standards (MTRs) for students. Florida educators should intentionally embed these standards within the content and their instruction as applicable. For guidance on the implementation of the EEs and MTRs, please visit

cpalms.org/Standards/BEST_Standards.aspx and select the appropriate B.E.S.T. Standards package.

English Language Development ELD Standards Special Notes Section:
Teachers are required to provide listening, speaking, reading and writing instruction that allows English language learners (ELL) to communicate for social and instructional purposes within the school setting. For the given level of English language proficiency and with visual, graphic, or interactive support, students will interact with grade level words, expressions, sentences and discourse to process or produce language necessary for academic success. The ELD standard should specify a relevant content area concept or topic of study chosen by curriculum developers and teachers which maximizes an ELL's need for communication and social skills. To access an ELL supporting document which delineates performance definitions and descriptors, please click on the following link: cpalms.org/uploads/docs/standards/eld/SI.pdf

GENERAL INFORMATION

Course Number: 1302350

Course Path: Section: Grades PreK to 12 Education Courses > **Grade Group:** Grades 9 to 12 and Adult Education Courses > **Subject:** Music Education > **SubSubject:** Instrumental Music >

Abbreviated Title: BAND 6 HON

Number of Credits: One (1) credit

Course Length: Year (Y)

Course Attributes:

- Honors

Course Type: Core Academic Course

Course Level: 3

Course Status: Draft - Course Pending Approval

Grade Level(s): 9,10,11,12

Graduation Requirement: Performing/Fine Arts

Educator Certifications

Music (Elementary and Secondary Grades K-12)
Instrumental Music (Secondary Grades 7-12)
Instrumental Music (Elementary and Secondary Grades K-12)

Marching Band (#1302355) 2022 - And Beyond

Course Standards

Name	Description
MU.912.C.1.1:	Apply listening strategies to promote appreciation and understanding of unfamiliar musical works. **Clarifications:** e.g., listening maps, active listening, checklists
MU.912.C.2.1:	Evaluate and make appropriate adjustments to personal performance in solo and ensembles.
MU.912.C.2.2:	Evaluate performance quality in recorded and/or live performances.
MU.912.C.2.3:	Evaluate one's own or other's compositions and/or improvisations and generate improvements independently or cooperatively.
MU.912.C.3.1:	Make critical evaluations, based on exemplary models, of the quality and effectiveness of performances and apply the criteria to personal development in music.
MU.912.F.3.3:	Define, prioritize, monitor, and successfully complete tasks related to individual musical performance or project presentation, without direct oversight, demonstrating skills for use in the workplace.
MU.912.O.3.2:	Interpret and perform expressive elements indicated by the musical score and/or conductor.
MU.912.S.2.2:	Transfer expressive elements and performance techniques from one piece of music to another.
MU.912.S.3.1:	Synthesize a broad range of musical skills by performing a varied repertoire with expression, appropriate stylistic interpretation, technical accuracy, and kinesthetic energy.
MU.912.S.3.2:	Sight-read music accurately and expressively to show synthesis of skills. **Clarifications:** e.g., musical elements, expressive qualities, performance technique
MU.912.S.3.5:	Develop and demonstrate proper vocal or instrumental technique. **Clarifications:** e.g., posture, breathing, fingering, embouchure, bow technique, tuning, strumming
MA.K12.MTR.1.1:	Mathematicians who participate in effortful learning both individually and with others: • Analyze the problem in a way that makes sense given the task. • Ask questions that will help with solving the task. • Build perseverance by modifying methods as needed while solving a challenging task. • Stay engaged and maintain a positive mindset when working to solve tasks. • Help and support each other when attempting a new method or approach. **Clarifications:** Teachers who encourage students to participate actively in effortful learning both individually and with others: • Cultivate a community of growth mindset learners. • Foster perseverance in students by choosing tasks that are challenging. • Develop students' ability to analyze and problem solve. • Recognize students' effort when solving challenging problems.
MA.K12.MTR.2.1:	Demonstrate understanding by representing problems in multiple ways. Mathematicians who demonstrate understanding by representing problems in multiple ways: • Build understanding through modeling and using manipulatives. • Represent solutions to problems in multiple ways using objects, drawings, tables, graphs and equations. • Progress from modeling problems with objects and drawings to using algorithms and equations. • Express connections between concepts and representations. • Choose a representation based on the given context or purpose. **Clarifications:** Teachers who encourage students to demonstrate understanding by representing problems in multiple ways: • Help students make connections between concepts and representations. • Provide opportunities for students to use manipulatives when investigating concepts. • Guide students from concrete to pictorial to abstract representations as understanding progresses. • Show students that various representations can have different purposes and can be useful in different situations.
MA.K12.MTR.3.1:	Complete tasks with mathematical fluency. Mathematicians who complete tasks with mathematical fluency: • Select efficient and appropriate methods for solving problems within the given context. • Maintain flexibility and accuracy while performing procedures and mental calculations. • Complete tasks accurately and with confidence. • Adapt procedures to apply them to a new context. • Use feedback to improve efficiency when performing calculations. **Clarifications:** Teachers who encourage students to complete tasks with mathematical fluency: • Provide students with the flexibility to solve problems by selecting a procedure that allows them to solve efficiently and accurately. • Offer multiple opportunities for students to practice efficient and generalizable methods. • Provide opportunities for students to reflect on the method they used and determine if a more efficient method could have been used.

MA.K12.MTR.4.1:	Engage in discussions that reflect on the mathematical thinking of self and others. Mathematicians who engage in discussions that reflect on the mathematical thinking of self and others: • Communicate mathematical ideas, vocabulary and methods effectively. • Analyze the mathematical thinking of others. • Compare the efficiency of a method to those expressed by others. • Recognize errors and suggest how to correctly solve the task. • Justify results by explaining methods and processes. • Construct possible arguments based on evidence. **Clarifications:** Teachers who encourage students to engage in discussions that reflect on the mathematical thinking of self and others: • Establish a culture in which students ask questions of the teacher and their peers, and error is an opportunity for learning. • Create opportunities for students to discuss their thinking with peers. • Select, sequence and present student work to advance and deepen understanding of correct and increasingly efficient methods. • Develop students' ability to justify methods and compare their responses to the responses of their peers.
MA.K12.MTR.5.1:	Use patterns and structure to help understand and connect mathematical concepts. Mathematicians who use patterns and structure to help understand and connect mathematical concepts: • Focus on relevant details within a problem. • Create plans and procedures to logically order events, steps or ideas to solve problems. • Decompose a complex problem into manageable parts. • Relate previously learned concepts to new concepts. • Look for similarities among problems. • Connect solutions of problems to more complicated large-scale situations. **Clarifications:** Teachers who encourage students to use patterns and structure to help understand and connect mathematical concepts: • Help students recognize the patterns in the world around them and connect these patterns to mathematical concepts. • Support students to develop generalizations based on the similarities found among problems. • Provide opportunities for students to create plans and procedures to solve problems. • Develop students' ability to construct relationships between their current understanding and more sophisticated ways of thinking.
MA.K12.MTR.6.1:	Assess the reasonableness of solutions. Mathematicians who assess the reasonableness of solutions: • Estimate to discover possible solutions. • Use benchmark quantities to determine if a solution makes sense. • Check calculations when solving problems. • Verify possible solutions by explaining the methods used. • Evaluate results based on the given context. **Clarifications:** Teachers who encourage students to assess the reasonableness of solutions: • Have students estimate or predict solutions prior to solving. • Prompt students to continually ask, "Does this solution make sense? How do you know?" • Reinforce that students check their work as they progress within and after a task. • Strengthen students' ability to verify solutions through justifications.
MA.K12.MTR.7.1:	Apply mathematics to real-world contexts. Mathematicians who apply mathematics to real-world contexts: • Connect mathematical concepts to everyday experiences. • Use models and methods to understand, represent and solve problems. • Perform investigations to gather data or determine if a method is appropriate. • Redesign models and methods to improve accuracy or efficiency. **Clarifications:** Teachers who encourage students to apply mathematics to real-world contexts: • Provide opportunities for students to create models, both concrete and abstract, and perform investigations. • Challenge students to question the accuracy of their models and methods. • Support students as they validate conclusions by comparing them to the given situation. • Indicate how various concepts can be applied to other disciplines.
DA.912.C.1.2:	Apply replication, physical rehearsal, and cognitive rehearsal to aid in the mental and physical retention of patterns, complex steps, and sequences performed by another dancer. **Clarifications:** e.g., mind/body connection, watching, following, marking, visualizing, imagery, using rhythmic clues
DA.912.C.2.1:	Analyze movement from varying perspectives and experiment with a variety of creative solutions to solve technical or choreographic challenges. **Clarifications:** e.g., improvisation, trial and error, collaboration
DA.912.F.3.8:	Demonstrate effective teamwork and accountability, using compromise, collaboration, and conflict resolution, to set and achieve goals as required in the work environment.
DA.912.O.1.3:	Dissect or assemble a step, pattern, or combination to show understanding of the movement, terminology, and progression. **Clarifications:** e.g., tendu-dégagé-grand battement-grand jeté
DA.912.S.2.1:	Sustain focused attention, respect, and discipline during class, rehearsal, and performance.

DA.912.S.2.2:	Apply corrections and concepts from previously learned steps to different material to improve processing of new information. **Clarifications:** e.g., repetition, revision, refinement, focus
ELA.K12.EE.1.1:	Cite evidence to explain and justify reasoning. **Clarifications:** K-1 Students include textual evidence in their oral communication with guidance and support from adults. The evidence can consist of details from the text without naming the text. During 1st grade, students learn how to incorporate the evidence in their writing. 2-3 Students include relevant textual evidence in their written and oral communication. Students should name the text when they refer to it. In 3rd grade, students should use a combination of direct and indirect citations. 4-5 Students continue with previous skills and reference comments made by speakers and peers. Students cite texts that they've directly quoted, paraphrased, or used for information. When writing, students will use the form of citation dictated by the instructor or the style guide referenced by the instructor. 6-8 Students continue with previous skills and use a style guide to create a proper citation. 9-12 Students continue with previous skills and should be aware of existing style guides and the ways in which they differ.
ELA.K12.EE.2.1:	Read and comprehend grade-level complex texts proficiently. **Clarifications:** See Text Complexity for grade-level complexity bands and a text complexity rubric.
ELA.K12.EE.3.1:	Make inferences to support comprehension. **Clarifications:** Students will make inferences before the words infer or inference are introduced. Kindergarten students will answer questions like "Why is the girl smiling?" or make predictions about what will happen based on the title page. Students will use the terms and apply them in 2nd grade and beyond.
ELA.K12.EE.4.1:	Use appropriate collaborative techniques and active listening skills when engaging in discussions in a variety of situations. **Clarifications:** In kindergarten, students learn to listen to one another respectfully. In grades 1-2, students build upon these skills by justifying what they are thinking. For example: "I think _____ because _____." The collaborative conversations are becoming academic conversations. In grades 3-12, students engage in academic conversations discussing claims and justifying their reasoning, refining and applying skills. Students build on ideas, propel the conversation, and support claims and counterclaims with evidence.
ELA.K12.EE.5.1:	Use the accepted rules governing a specific format to create quality work. **Clarifications:** Students will incorporate skills learned into work products to produce quality work. For students to incorporate these skills appropriately, they must receive instruction. A 3rd grade student creating a poster board display must have instruction in how to effectively present information to do quality work.
ELA.K12.EE.6.1:	Use appropriate voice and tone when speaking or writing. **Clarifications:** In kindergarten and 1st grade, students learn the difference between formal and informal language. For example, the way we talk to our friends differs from the way we speak to adults. In 2nd grade and beyond, students practice appropriate social and academic language to discuss texts.
PE.912.C.2.3:	Analyze the movement performance of self and others. **Clarifications:** Some examples are video analysis and checklist.
PE.912.C.2.7:	Evaluate the effectiveness of specific warm-up and cool-down activities.
PE.912.C.2.9:	Explain the precautions to be taken when exercising in extreme weather and/or environmental conditions. **Clarifications:** Some examples of precautions are hydration and appropriate attire.
PE.912.C.2.25:	Analyze and evaluate the risks, safety procedures, rules and equipment associated with specific course activities.
PE.912.M.1.20:	Perform complex combinations and sequences demonstrating smooth transitions while alone, with a partner or in a small group.
PE.912.R.5.5:	Demonstrate appropriate etiquette, care of equipment, respect for facilities and safe behaviors while participating in a variety of physical activities.
ELD.K12.ELL.SI.1:	English language learners communicate for social and instructional purposes within the school setting.

General Course Information and Notes

VERSION DESCRIPTION

Students will participate in activities of their school's marching band. Activities may include, but are not limited to, the study of the chosen program of music for the season, rehearsals of the marching routine to accompany music. There are a variety of ways that students may participate and earn credit in this course. Some students may play instruments, some may work with flags, batons, or other apparatus, some may be dancers, etc.

GENERAL NOTES

Special Note: This course may require students to participate in extra rehearsals and performances beyond the school day. Students in this class may need to obtain (e.g.,

borrow, rent, purchase) an instrument from an outside source.

Florida's Benchmarks for Excellent Student Thinking (B.E.S.T.) Standards
This course includes Florida's B.E.S.T. ELA Expectations (EE) and Mathematical Thinking and Reasoning Standards (MTRs) for students. Florida educators should intentionally embed these standards within the content and their instruction as applicable. For guidance on the implementation of the EEs and MTRs, please visit cpalms.org/Standards/BEST_Standards.aspx and select the appropriate B.E.S.T. Standards package.

English Language Development ELD Standards Special Notes Section:
Teachers are required to provide listening, speaking, reading and writing instruction that allows English language learners (ELL) to communicate for social and instructional purposes within the school setting. For the given level of English language proficiency and with visual, graphic, or interactive support, students will interact with grade level words, expressions, sentences and discourse to process or produce language necessary for academic success. The ELD standard should specify a relevant content area concept or topic of study chosen by curriculum developers and teachers which maximizes an ELL's need for communication and social skills. To access an ELL supporting document which delineates performance definitions and descriptors, please click on the following link: cpalms.org/uploads/docs/standards/eld/SI.pdf

GENERAL INFORMATION

Course Number: 1302355

Course Path: Section: Grades PreK to 12 Education Courses > **Grade Group:** Grades 9 to 12 and Adult Education Courses > **Subject:** Music Education > **SubSubject:** Instrumental Music >
Abbreviated Title: MARCHING BAND

Number of Credits: Half credit (.5)

Course Length: Semester (S)

Course Type: Core Academic Course

Course Level: 2

Course Status: Draft - Course Pending Approval

Grade Level(s): 9,10,11,12

Graduation Requirement: Performing/Fine Arts

Educator Certifications

Music (Elementary and Secondary Grades K-12)
Instrumental Music (Secondary Grades 7-12)
Instrumental Music (Elementary and Secondary Grades K-12)

Orchestra 1 (#1302360) 2022 - And Beyond

Course Standards

Name	Description
MU.912.C.1.1:	Apply listening strategies to promote appreciation and understanding of unfamiliar musical works. **Clarifications:** e.g., listening maps, active listening, checklists
MU.912.C.1.2:	Compare, using correct music vocabulary, the aesthetic impact of two or more performances of a musical work to one's own hypothesis of the composer's intent. **Clarifications:** e.g., quality recordings, individual and peer-group performances, composer notes, instrumentation, expressive elements, title
MU.912.C.1.3:	Analyze instruments of the world and classify them by common traits. **Clarifications:** e.g., classical and folk instruments from around the world
MU.912.C.2.1:	Evaluate and make appropriate adjustments to personal performance in solo and ensembles.
MU.912.C.2.2:	Evaluate performance quality in recorded and/or live performances.
MU.912.C.3.1:	Make critical evaluations, based on exemplary models, of the quality and effectiveness of performances and apply the criteria to personal development in music.
MU.912.F.3.1:	Analyze and describe how meeting one's responsibilities in music offers opportunities to develop leadership skills, and identify personal examples of leadership in school and/or non-school settings.
MU.912.F.3.2:	Summarize copyright laws that govern printed, recorded, and on-line music to promote legal and responsible use of intellectual property and technology.
MU.912.F.3.3:	Define, prioritize, monitor, and successfully complete tasks related to individual musical performance or project presentation, without direct oversight, demonstrating skills for use in the workplace.
MU.912.H.1.1:	Investigate and discuss how a culture's traditions are reflected through its music. **Clarifications:** e.g., patriotic, folk, celebration, entertainment, spiritual
MU.912.H.1.2:	Compare the work of, and influences on, two or more exemplary composers in the performance medium studied in class. **Clarifications:** e.g., vocal, instrumental, guitar, keyboard, electronic, handbells
MU.912.H.1.3:	Compare two or more works of a composer across performance media. **Clarifications:** e.g., orchestral and choral; guitar and string quartet; piano solo and piano concerto
MU.912.H.1.4:	Analyze how Western music has been influenced by historical and current world cultures.
MU.912.H.1.5:	Analyze music within cultures to gain understanding of authentic performance practices.
MU.912.H.2.1:	Evaluate the social impact of music on specific historical periods.
MU.912.H.2.4:	Examine the effects of developing technology on composition, performance, and acquisition of music.
MU.912.O.1.1:	Evaluate the organizational principles and conventions in musical works and discuss their effect on structure. **Clarifications:** e.g., rhythm, melody, timbre, form, tonality, harmony, texture; solo, chamber ensemble, large ensemble
MU.912.O.2.1:	Transfer accepted composition conventions and performance practices of a specific style to a contrasting style of music.
MU.912.O.3.1:	Analyze expressive elements in a musical work and describe how the choices and manipulations of the elements support, for the listener, the implied meaning of the composer/performer. **Clarifications:** e.g., tempo markings, expression markings, articulation markings, phrasing, scales, modes, harmonic structure, timbre choice, rhythm, orchestration
MU.912.O.3.2:	Interpret and perform expressive elements indicated by the musical score and/or conductor.
MU.912.S.1.4:	Perform and notate, independently and accurately, melodies by ear. **Clarifications:** e.g., singing, playing, writing
MU.912.S.2.2:	Transfer expressive elements and performance techniques from one piece of music to another.
MU.912.S.3.1:	Synthesize a broad range of musical skills by performing a varied repertoire with expression, appropriate stylistic interpretation, technical accuracy, and kinesthetic energy.
MU.912.S.3.2:	Sight-read music accurately and expressively to show synthesis of skills. **Clarifications:** e.g., musical elements, expressive qualities, performance technique
MU.912.S.3.4:	Analyze and describe the effect of rehearsal sessions and/or strategies on refinement of skills and techniques.
MU.912.S.3.5:	Develop and demonstrate proper vocal or instrumental technique. **Clarifications:** e.g., posture, breathing, fingering, embouchure, bow technique, tuning, strumming

Mathematicians who participate in effortful learning both individually and with others:

- Analyze the problem in a way that makes sense given the task.
- Ask questions that will help with solving the task.
- Build perseverance by modifying methods as needed while solving a challenging task.
- Stay engaged and maintain a positive mindset when working to solve tasks.
- Help and support each other when attempting a new method or approach.

MA.K12.MTR.1.1:

Clarifications:

Teachers who encourage students to participate actively in effortful learning both individually and with others:

- Cultivate a community of growth mindset learners.
- Foster perseverance in students by choosing tasks that are challenging.
- Develop students' ability to analyze and problem solve.
- Recognize students' effort when solving challenging problems.

Demonstrate understanding by representing problems in multiple ways.

Mathematicians who demonstrate understanding by representing problems in multiple ways:

- Build understanding through modeling and using manipulatives.
- Represent solutions to problems in multiple ways using objects, drawings, tables, graphs and equations.
- Progress from modeling problems with objects and drawings to using algorithms and equations.
- Express connections between concepts and representations.
- Choose a representation based on the given context or purpose.

MA.K12.MTR.2.1:

Clarifications:

Teachers who encourage students to demonstrate understanding by representing problems in multiple ways:

- Help students make connections between concepts and representations.
- Provide opportunities for students to use manipulatives when investigating concepts.
- Guide students from concrete to pictorial to abstract representations as understanding progresses.
- Show students that various representations can have different purposes and can be useful in different situations.

Complete tasks with mathematical fluency.

Mathematicians who complete tasks with mathematical fluency:

- Select efficient and appropriate methods for solving problems within the given context.
- Maintain flexibility and accuracy while performing procedures and mental calculations.
- Complete tasks accurately and with confidence.
- Adapt procedures to apply them to a new context.
- Use feedback to improve efficiency when performing calculations.

MA.K12.MTR.3.1:

Clarifications:

Teachers who encourage students to complete tasks with mathematical fluency:

- Provide students with the flexibility to solve problems by selecting a procedure that allows them to solve efficiently and accurately.
- Offer multiple opportunities for students to practice efficient and generalizable methods.
- Provide opportunities for students to reflect on the method they used and determine if a more efficient method could have been used.

Engage in discussions that reflect on the mathematical thinking of self and others.

Mathematicians who engage in discussions that reflect on the mathematical thinking of self and others:

- Communicate mathematical ideas, vocabulary and methods effectively.
- Analyze the mathematical thinking of others.
- Compare the efficiency of a method to those expressed by others.
- Recognize errors and suggest how to correctly solve the task.
- Justify results by explaining methods and processes.
- Construct possible arguments based on evidence.

MA.K12.MTR.4.1:

Clarifications:

Teachers who encourage students to engage in discussions that reflect on the mathematical thinking of self and others:

- Establish a culture in which students ask questions of the teacher and their peers, and error is an opportunity for learning.
- Create opportunities for students to discuss their thinking with peers.
- Select, sequence and present student work to advance and deepen understanding of correct and increasingly efficient methods.
- Develop students' ability to justify methods and compare their responses to the responses of their peers.

Use patterns and structure to help understand and connect mathematical concepts.

Mathematicians who use patterns and structure to help understand and connect mathematical concepts:

- Focus on relevant details within a problem.
- Create plans and procedures to logically order events, steps or ideas to solve problems.
- Decompose a complex problem into manageable parts.
- Relate previously learned concepts to new concepts.
- Look for similarities among problems.
- Connect solutions of problems to more complicated large-scale situations.

MA.K12.MTR.5.1:

Clarifications:

Teachers who encourage students to use patterns and structure to help understand and connect mathematical concepts:

- Help students recognize the patterns in the world around them and connect these patterns to mathematical concepts.
- Support students to develop generalizations based on the similarities found among problems.
- Provide opportunities for students to create plans and procedures to solve problems.
- Develop students' ability to construct relationships between their current understanding and more sophisticated ways of thinking.

Assess the reasonableness of solutions.

MA.K12.MTR.6.1:	Mathematicians who assess the reasonableness of solutions: • Estimate to discover possible solutions. • Use benchmark quantities to determine if a solution makes sense. • Check calculations when solving problems. • Verify possible solutions by explaining the methods used. • Evaluate results based on the given context. **Clarifications:** Teachers who encourage students to assess the reasonableness of solutions: • Have students estimate or predict solutions prior to solving. • Prompt students to continually ask, "Does this solution make sense? How do you know?" • Reinforce that students check their work as they progress within and after a task. • Strengthen students' ability to verify solutions through justifications.
MA.K12.MTR.7.1:	Apply mathematics to real-world contexts. Mathematicians who apply mathematics to real-world contexts: • Connect mathematical concepts to everyday experiences. • Use models and methods to understand, represent and solve problems. • Perform investigations to gather data or determine if a method is appropriate. • Redesign models and methods to improve accuracy or efficiency. **Clarifications:** Teachers who encourage students to apply mathematics to real-world contexts: • Provide opportunities for students to create models, both concrete and abstract, and perform investigations. • Challenge students to question the accuracy of their models and methods. • Support students as they validate conclusions by comparing them to the given situation. • Indicate how various concepts can be applied to other disciplines.
ELA.K12.EE.1.1:	Cite evidence to explain and justify reasoning. **Clarifications:** K-1 Students include textual evidence in their oral communication with guidance and support from adults. The evidence can consist of details from the text without naming the text. During 1st grade, students learn how to incorporate the evidence in their writing. 2-3 Students include relevant textual evidence in their written and oral communication. Students should name the text when they refer to it. In 3rd grade, students should use a combination of direct and indirect citations. 4-5 Students continue with previous skills and reference comments made by speakers and peers. Students cite texts that they've directly quoted, paraphrased, or used for information. When writing, students will use the form of citation dictated by the instructor or the style guide referenced by the instructor. 6-8 Students continue with previous skills and use a style guide to create a proper citation. 9-12 Students continue with previous skills and should be aware of existing style guides and the ways in which they differ.
ELA.K12.EE.2.1:	Read and comprehend grade-level complex texts proficiently. **Clarifications:** See Text Complexity for grade-level complexity bands and a text complexity rubric.
ELA.K12.EE.3.1:	Make inferences to support comprehension. **Clarifications:** Students will make inferences before the words infer or inference are introduced. Kindergarten students will answer questions like "Why is the girl smiling?" or make predictions about what will happen based on the title page. Students will use the terms and apply them in 2nd grade and beyond.
ELA.K12.EE.4.1:	Use appropriate collaborative techniques and active listening skills when engaging in discussions in a variety of situations. **Clarifications:** In kindergarten, students learn to listen to one another respectfully. In grades 1-2, students build upon these skills by justifying what they are thinking. For example: "I think _____ because _____." The collaborative conversations are becoming academic conversations. In grades 3-12, students engage in academic conversations discussing claims and justifying their reasoning, refining and applying skills. Students build on ideas, propel the conversation, and support claims and counterclaims with evidence.
ELA.K12.EE.5.1:	Use the accepted rules governing a specific format to create quality work. **Clarifications:** Students will incorporate skills learned into work products to produce quality work. For students to incorporate these skills appropriately, they must receive instruction. A 3rd grade student creating a poster board display must have instruction in how to effectively present information to do quality work.
ELA.K12.EE.6.1:	Use appropriate voice and tone when speaking or writing. **Clarifications:** In kindergarten and 1st grade, students learn the difference between formal and informal language. For example, the way we talk to our friends differs from the way we speak to adults. In 2nd grade and beyond, students practice appropriate social and academic language to discuss texts.
DA.912.F.3.8:	Demonstrate effective teamwork and accountability, using compromise, collaboration, and conflict resolution, to set and achieve goals as required in the work environment.
DA.912.S.2.1:	Sustain focused attention, respect, and discipline during class, rehearsal, and performance.
ELD.K12.ELL.SI.1:	English language learners communicate for social and instructional purposes within the school setting.

General Course Information and Notes

VERSION DESCRIPTION

Students who have little or no orchestral experience study and perform high-quality beginning orchestra literature of diverse times and styles. Rehearsals focus on the development of critical listening skills, rudimentary string techniques, music literacy, ensemble skills, and aesthetic awareness. Public performances may serve as a culmination of specific instructional goals. Students may be required to attend and/or participate in rehearsals and performances outside the school day to support, extend, and assess learning in the classroom. Students in this class may need to obtain (e.g., borrow, rent, purchase) an instrument from an outside source.

GENERAL NOTES

Florida's Benchmarks for Excellent Student Thinking (B.E.S.T.) Standards
This course includes Florida's B.E.S.T. ELA Expectations (EE) and Mathematical Thinking and Reasoning Standards (MTRs) for students. Florida educators should intentionally embed these standards within the content and their instruction as applicable. For guidance on the implementation of the EEs and MTRs, please visit cpalms.org/Standards/BEST_Standards.aspx and select the appropriate B.E.S.T. Standards package.

English Language Development ELD Standards Special Notes Section:
Teachers are required to provide listening, speaking, reading and writing instruction that allows English language learners (ELL) to communicate for social and instructional purposes within the school setting. For the given level of English language proficiency and with visual, graphic, or interactive support, students will interact with grade level words, expressions, sentences and discourse to process or produce language necessary for academic success. The ELD standard should specify a relevant content area concept or topic of study chosen by curriculum developers and teachers which maximizes an ELL's need for communication and social skills. To access an ELL supporting document which delineates performance definitions and descriptors, please click on the following link: cpalms.org/uploads/docs/standards/eld/SI.pdf

GENERAL INFORMATION

Course Number: 1302360

Course Path: Section: Grades PreK to 12 Education Courses > **Grade Group:** Grades 9 to 12 and Adult Education Courses > **Subject:** Music Education > **SubSubject:** Instrumental Music >
Abbreviated Title: ORCH 1

Number of Credits: One (1) credit

Course Length: Year (Y)

Course Type: Core Academic Course

Course Level: 2

Course Status: Draft - Course Pending Approval

Grade Level(s): 9,10,11,12

Graduation Requirement: Performing/Fine Arts

Educator Certifications

Music (Elementary and Secondary Grades K-12)
Instrumental Music (Secondary Grades 7-12)
Instrumental Music (Elementary and Secondary Grades K-12)

Orchestra 2 (#1302370) 2022 - And Beyond

Course Standards

Name	Description
MU.912.C.1.1:	Apply listening strategies to promote appreciation and understanding of unfamiliar musical works. **Clarifications:** e.g., listening maps, active listening, checklists
MU.912.C.1.2:	Compare, using correct music vocabulary, the aesthetic impact of two or more performances of a musical work to one's own hypothesis of the composer's intent. **Clarifications:** e.g., quality recordings, individual and peer-group performances, composer notes, instrumentation, expressive elements, title
MU.912.C.1.3:	Analyze instruments of the world and classify them by common traits. **Clarifications:** e.g., classical and folk instruments from around the world
MU.912.C.2.1:	Evaluate and make appropriate adjustments to personal performance in solo and ensembles.
MU.912.C.2.2:	Evaluate performance quality in recorded and/or live performances.
MU.912.C.3.1:	Make critical evaluations, based on exemplary models, of the quality and effectiveness of performances and apply the criteria to personal development in music.
MU.912.F.3.1:	Analyze and describe how meeting one's responsibilities in music offers opportunities to develop leadership skills, and identify personal examples of leadership in school and/or non-school settings.
MU.912.F.3.2:	Summarize copyright laws that govern printed, recorded, and on-line music to promote legal and responsible use of intellectual property and technology.
MU.912.F.3.3:	Define, prioritize, monitor, and successfully complete tasks related to individual musical performance or project presentation, without direct oversight, demonstrating skills for use in the workplace.
MU.912.H.1.1:	Investigate and discuss how a culture's traditions are reflected through its music. **Clarifications:** e.g., patriotic, folk, celebration, entertainment, spiritual
MU.912.H.1.2:	Compare the work of, and influences on, two or more exemplary composers in the performance medium studied in class. **Clarifications:** e.g., vocal, instrumental, guitar, keyboard, electronic, handbells
MU.912.H.1.3:	Compare two or more works of a composer across performance media. **Clarifications:** e.g., orchestral and choral; guitar and string quartet; piano solo and piano concerto
MU.912.H.1.4:	Analyze how Western music has been influenced by historical and current world cultures.
MU.912.H.1.5:	Analyze music within cultures to gain understanding of authentic performance practices.
MU.912.H.2.1:	Evaluate the social impact of music on specific historical periods.
MU.912.H.2.3:	Analyze the evolution of a music genre. **Clarifications:** e.g., jazz, blues
MU.912.H.2.4:	Examine the effects of developing technology on composition, performance, and acquisition of music.
MU.912.O.1.1:	Evaluate the organizational principles and conventions in musical works and discuss their effect on structure. **Clarifications:** e.g., rhythm, melody, timbre, form, tonality, harmony, texture; solo, chamber ensemble, large ensemble
MU.912.O.2.1:	Transfer accepted composition conventions and performance practices of a specific style to a contrasting style of music.
MU.912.O.3.1:	Analyze expressive elements in a musical work and describe how the choices and manipulations of the elements support, for the listener, the implied meaning of the composer/performer. **Clarifications:** e.g., tempo markings, expression markings, articulation markings, phrasing, scales, modes, harmonic structure, timbre choice, rhythm, orchestration
MU.912.O.3.2:	Interpret and perform expressive elements indicated by the musical score and/or conductor.
MU.912.S.1.4:	Perform and notate, independently and accurately, melodies by ear. **Clarifications:** e.g., singing, playing, writing
MU.912.S.2.2:	Transfer expressive elements and performance techniques from one piece of music to another.
MU.912.S.3.1:	Synthesize a broad range of musical skills by performing a varied repertoire with expression, appropriate stylistic interpretation, technical accuracy, and kinesthetic energy.
MU.912.S.3.2:	Sight-read music accurately and expressively to show synthesis of skills. **Clarifications:** e.g., musical elements, expressive qualities, performance technique
MU.912.S.3.4:	Analyze and describe the effect of rehearsal sessions and/or strategies on refinement of skills and techniques.

Develop and demonstrate proper vocal or instrumental technique.

MU.912.S.3.5:

Clarifications:
e.g., posture, breathing, fingering, embouchure, bow technique, tuning, strumming

Mathematicians who participate in effortful learning both individually and with others:

- Analyze the problem in a way that makes sense given the task.
- Ask questions that will help with solving the task.
- Build perseverance by modifying methods as needed while solving a challenging task.
- Stay engaged and maintain a positive mindset when working to solve tasks.
- Help and support each other when attempting a new method or approach.

MA.K12.MTR.1.1:

Clarifications:
Teachers who encourage students to participate actively in effortful learning both individually and with others:

- Cultivate a community of growth mindset learners.
- Foster perseverance in students by choosing tasks that are challenging.
- Develop students' ability to analyze and problem solve.
- Recognize students' effort when solving challenging problems.

Demonstrate understanding by representing problems in multiple ways.
Mathematicians who demonstrate understanding by representing problems in multiple ways:

- Build understanding through modeling and using manipulatives.
- Represent solutions to problems in multiple ways using objects, drawings, tables, graphs and equations.
- Progress from modeling problems with objects and drawings to using algorithms and equations.
- Express connections between concepts and representations.
- Choose a representation based on the given context or purpose.

MA.K12.MTR.2.1:

Clarifications:
Teachers who encourage students to demonstrate understanding by representing problems in multiple ways:

- Help students make connections between concepts and representations.
- Provide opportunities for students to use manipulatives when investigating concepts.
- Guide students from concrete to pictorial to abstract representations as understanding progresses.
- Show students that various representations can have different purposes and can be useful in different situations.

Complete tasks with mathematical fluency.
Mathematicians who complete tasks with mathematical fluency:

- Select efficient and appropriate methods for solving problems within the given context.
- Maintain flexibility and accuracy while performing procedures and mental calculations.
- Complete tasks accurately and with confidence.
- Adapt procedures to apply them to a new context.
- Use feedback to improve efficiency when performing calculations.

MA.K12.MTR.3.1:

Clarifications:
Teachers who encourage students to complete tasks with mathematical fluency:

- Provide students with the flexibility to solve problems by selecting a procedure that allows them to solve efficiently and accurately.
- Offer multiple opportunities for students to practice efficient and generalizable methods.
- Provide opportunities for students to reflect on the method they used and determine if a more efficient method could have been used.

Engage in discussions that reflect on the mathematical thinking of self and others.
Mathematicians who engage in discussions that reflect on the mathematical thinking of self and others:

- Communicate mathematical ideas, vocabulary and methods effectively.
- Analyze the mathematical thinking of others.
- Compare the efficiency of a method to those expressed by others.
- Recognize errors and suggest how to correctly solve the task.
- Justify results by explaining methods and processes.
- Construct possible arguments based on evidence.

MA.K12.MTR.4.1:

Clarifications:
Teachers who encourage students to engage in discussions that reflect on the mathematical thinking of self and others:

- Establish a culture in which students ask questions of the teacher and their peers, and error is an opportunity for learning.
- Create opportunities for students to discuss their thinking with peers.
- Select, sequence and present student work to advance and deepen understanding of correct and increasingly efficient methods.
- Develop students' ability to justify methods and compare their responses to the responses of their peers.

Use patterns and structure to help understand and connect mathematical concepts.
Mathematicians who use patterns and structure to help understand and connect mathematical concepts:

- Focus on relevant details within a problem.
- Create plans and procedures to logically order events, steps or ideas to solve problems.
- Decompose a complex problem into manageable parts.
- Relate previously learned concepts to new concepts.
- Look for similarities among problems.
- Connect solutions of problems to more complicated large-scale situations.

MA.K12.MTR.5.1:

Clarifications:
Teachers who encourage students to use patterns and structure to help understand and connect mathematical concepts:

- Help students recognize the patterns in the world around them and connect these patterns to mathematical concepts.
- Support students to develop generalizations based on the similarities found among problems.

	• Provide opportunities for students to create plans and procedures to solve problems. • Develop students' ability to construct relationships between their current understanding and more sophisticated ways of thinking.
MA.K12.MTR.6.1:	Assess the reasonableness of solutions. Mathematicians who assess the reasonableness of solutions: • Estimate to discover possible solutions. • Use benchmark quantities to determine if a solution makes sense. • Check calculations when solving problems. • Verify possible solutions by explaining the methods used. • Evaluate results based on the given context. **Clarifications:** Teachers who encourage students to assess the reasonableness of solutions: • Have students estimate or predict solutions prior to solving. • Prompt students to continually ask, "Does this solution make sense? How do you know?" • Reinforce that students check their work as they progress within and after a task. • Strengthen students' ability to verify solutions through justifications.
MA.K12.MTR.7.1:	Apply mathematics to real-world contexts. Mathematicians who apply mathematics to real-world contexts: • Connect mathematical concepts to everyday experiences. • Use models and methods to understand, represent and solve problems. • Perform investigations to gather data or determine if a method is appropriate. • Redesign models and methods to improve accuracy or efficiency. **Clarifications:** Teachers who encourage students to apply mathematics to real-world contexts: • Provide opportunities for students to create models, both concrete and abstract, and perform investigations. • Challenge students to question the accuracy of their models and methods. • Support students as they validate conclusions by comparing them to the given situation. • Indicate how various concepts can be applied to other disciplines.
ELA.K12.EE.1.1:	Cite evidence to explain and justify reasoning. **Clarifications:** K-1 Students include textual evidence in their oral communication with guidance and support from adults. The evidence can consist of details from the text without naming the text. During 1st grade, students learn how to incorporate the evidence in their writing. 2-3 Students include relevant textual evidence in their written and oral communication. Students should name the text when they refer to it. In 3rd grade, students should use a combination of direct and indirect citations. 4-5 Students continue with previous skills and reference comments made by speakers and peers. Students cite texts that they've directly quoted, paraphrased, or used for information. When writing, students will use the form of citation dictated by the instructor or the style guide referenced by the instructor. 6-8 Students continue with previous skills and use a style guide to create a proper citation. 9-12 Students continue with previous skills and should be aware of existing style guides and the ways in which they differ.
ELA.K12.EE.2.1:	Read and comprehend grade-level complex texts proficiently. **Clarifications:** See Text Complexity for grade-level complexity bands and a text complexity rubric.
ELA.K12.EE.3.1:	Make inferences to support comprehension. **Clarifications:** Students will make inferences before the words infer or inference are introduced. Kindergarten students will answer questions like "Why is the girl smiling?" or make predictions about what will happen based on the title page. Students will use the terms and apply them in 2nd grade and beyond.
ELA.K12.EE.4.1:	Use appropriate collaborative techniques and active listening skills when engaging in discussions in a variety of situations. **Clarifications:** In kindergarten, students learn to listen to one another respectfully. In grades 1-2, students build upon these skills by justifying what they are thinking. For example: "I think _____ because _____." The collaborative conversations are becoming academic conversations. In grades 3-12, students engage in academic conversations discussing claims and justifying their reasoning, refining and applying skills. Students build on ideas, propel the conversation, and support claims and counterclaims with evidence.
ELA.K12.EE.5.1:	Use the accepted rules governing a specific format to create quality work. **Clarifications:** Students will incorporate skills learned into work products to produce quality work. For students to incorporate these skills appropriately, they must receive instruction. A 3rd grade student creating a poster board display must have instruction in how to effectively present information to do quality work.
ELA.K12.EE.6.1:	Use appropriate voice and tone when speaking or writing. **Clarifications:** In kindergarten and 1st grade, students learn the difference between formal and informal language. For example, the way we talk to our friends differs from the way we speak to adults. In 2nd grade and beyond, students practice appropriate social and academic language to discuss texts.
DA.912.F.3.8:	Demonstrate effective teamwork and accountability, using compromise, collaboration, and conflict resolution, to set and achieve goals as required in the work environment.
DA.912.S.2.1:	Sustain focused attention, respect, and discipline during class, rehearsal, and performance.

ELD.K12.ELL.SI.1:	English language learners communicate for social and instructional purposes within the school setting.

General Course Information and Notes

VERSION DESCRIPTION

Students who have at least one year of orchestral experience study, rehearse, and perform high-quality orchestra literature. Rehearsals focus on the development of critical listening skills, basic string techniques, music literacy, ensemble skills, and aesthetic awareness in the context of relevant history and cultures. Public performances may serve as a culmination of specific instructional goals. Students may be required to attend and/or participate in rehearsals and performances outside the school day to support, extend, and assess learning in the classroom. Students in this class may need to obtain (e.g., borrow, rent, purchase) an instrument from an outside source.

GENERAL NOTES

Florida's Benchmarks for Excellent Student Thinking (B.E.S.T.) Standards
This course includes Florida's B.E.S.T. ELA Expectations (EE) and Mathematical Thinking and Reasoning Standards (MTRs) for students. Florida educators should intentionally embed these standards within the content and their instruction as applicable. For guidance on the implementation of the EEs and MTRs, please visit cpalms.org/Standards/BEST_Standards.aspx and select the appropriate B.E.S.T. Standards package.

English Language Development ELD Standards Special Notes Section:
Teachers are required to provide listening, speaking, reading and writing instruction that allows English language learners (ELL) to communicate for social and instructional purposes within the school setting. For the given level of English language proficiency and with visual, graphic, or interactive support, students will interact with grade level words, expressions, sentences and discourse to process or produce language necessary for academic success. The ELD standard should specify a relevant content area concept or topic of study chosen by curriculum developers and teachers which maximizes an ELL's need for communication and social skills. To access an ELL supporting document which delineates performance definitions and descriptors, please click on the following link: cpalms.org/uploads/docs/standards/eld/SI.pdf

GENERAL INFORMATION

Course Number: 1302370

Course Path: Section: Grades PreK to 12 Education Courses > **Grade Group:** Grades 9 to 12 and Adult Education Courses > **Subject:** Music Education > **SubSubject:** Instrumental Music >

Abbreviated Title: ORCH 2

Number of Credits: One (1) credit

Course Length: Year (Y)

Course Type: Core Academic Course

Course Level: 2

Course Status: Draft - Course Pending Approval

Grade Level(s): 9,10,11,12

Graduation Requirement: Performing/Fine Arts

Educator Certifications

Music (Elementary and Secondary Grades K-12)
Instrumental Music (Secondary Grades 7-12)
Instrumental Music (Elementary and Secondary Grades K-12)

Orchestra 3 (#1302380) 2022 - And Beyond

Course Standards

Name	Description
MU.912.C.1.1:	Apply listening strategies to promote appreciation and understanding of unfamiliar musical works. **Clarifications:** e.g., listening maps, active listening, checklists
MU.912.C.1.2:	Compare, using correct music vocabulary, the aesthetic impact of two or more performances of a musical work to one's own hypothesis of the composer's intent. **Clarifications:** e.g., quality recordings, individual and peer-group performances, composer notes, instrumentation, expressive elements, title
MU.912.C.1.3:	Analyze instruments of the world and classify them by common traits. **Clarifications:** e.g., classical and folk instruments from around the world
MU.912.C.2.1:	Evaluate and make appropriate adjustments to personal performance in solo and ensembles.
MU.912.C.2.2:	Evaluate performance quality in recorded and/or live performances.
MU.912.C.3.1:	Make critical evaluations, based on exemplary models, of the quality and effectiveness of performances and apply the criteria to personal development in music.
MU.912.F.3.1:	Analyze and describe how meeting one's responsibilities in music offers opportunities to develop leadership skills, and identify personal examples of leadership in school and/or non-school settings.
MU.912.F.3.2:	Summarize copyright laws that govern printed, recorded, and on-line music to promote legal and responsible use of intellectual property and technology.
MU.912.F.3.3:	Define, prioritize, monitor, and successfully complete tasks related to individual musical performance or project presentation, without direct oversight, demonstrating skills for use in the workplace.
MU.912.F.3.4:	Design and implement a personal learning plan, related to the study of music, which demonstrates self-assessment, brain-storming, decision-making, and initiative to advance skills and/or knowledge.
MU.912.H.1.1:	Investigate and discuss how a culture's traditions are reflected through its music. **Clarifications:** e.g., patriotic, folk, celebration, entertainment, spiritual
MU.912.H.1.2:	Compare the work of, and influences on, two or more exemplary composers in the performance medium studied in class. **Clarifications:** e.g., vocal, instrumental, guitar, keyboard, electronic, handbells
MU.912.H.1.3:	Compare two or more works of a composer across performance media. **Clarifications:** e.g., orchestral and choral; guitar and string quartet; piano solo and piano concerto
MU.912.H.1.4:	Analyze how Western music has been influenced by historical and current world cultures.
MU.912.H.1.5:	Analyze music within cultures to gain understanding of authentic performance practices.
MU.912.H.2.1:	Evaluate the social impact of music on specific historical periods.
MU.912.H.2.3:	Analyze the evolution of a music genre. **Clarifications:** e.g., jazz, blues
MU.912.H.2.4:	Examine the effects of developing technology on composition, performance, and acquisition of music.
MU.912.H.3.1:	Apply knowledge of science, math, and music to demonstrate, through an acoustic or digital performance medium, how sound production affects musical performance. **Clarifications:** e.g., acoustics, sound amplification, materials, mechanics
MU.912.O.1.1:	Evaluate the organizational principles and conventions in musical works and discuss their effect on structure. **Clarifications:** e.g., rhythm, melody, timbre, form, tonality, harmony, texture; solo, chamber ensemble, large ensemble
MU.912.O.2.1:	Transfer accepted composition conventions and performance practices of a specific style to a contrasting style of music.
MU.912.O.2.2:	Transpose melodies into different modalities through performance and composition.
MU.912.O.3.1:	Analyze expressive elements in a musical work and describe how the choices and manipulations of the elements support, for the listener, the implied meaning of the composer/performer. **Clarifications:** e.g., tempo markings, expression markings, articulation markings, phrasing, scales, modes, harmonic structure, timbre choice, rhythm, orchestration
MU.912.O.3.2:	Interpret and perform expressive elements indicated by the musical score and/or conductor.
MU.912.S.1.4:	Perform and notate, independently and accurately, melodies by ear. **Clarifications:** e.g., singing, playing, writing

MU.912.S.2.1:	Apply the ability to memorize and internalize musical structure, accurate and expressive details, and processing skills to the creation or performance of music literature. **Clarifications:** e.g., memorization, sequential process
MU.912.S.2.2:	Transfer expressive elements and performance techniques from one piece of music to another.
MU.912.S.3.1:	Synthesize a broad range of musical skills by performing a varied repertoire with expression, appropriate stylistic interpretation, technical accuracy, and kinesthetic energy.
MU.912.S.3.2:	Sight-read music accurately and expressively to show synthesis of skills. **Clarifications:** e.g., musical elements, expressive qualities, performance technique
MU.912.S.3.4:	Analyze and describe the effect of rehearsal sessions and/or strategies on refinement of skills and techniques.
MU.912.S.3.5:	Develop and demonstrate proper vocal or instrumental technique. **Clarifications:** e.g., posture, breathing, fingering, embouchure, bow technique, tuning, strumming
MA.K12.MTR.1.1:	Mathematicians who participate in effortful learning both individually and with others: • Analyze the problem in a way that makes sense given the task. • Ask questions that will help with solving the task. • Build perseverance by modifying methods as needed while solving a challenging task. • Stay engaged and maintain a positive mindset when working to solve tasks. • Help and support each other when attempting a new method or approach. **Clarifications:** Teachers who encourage students to participate actively in effortful learning both individually and with others: • Cultivate a community of growth mindset learners. • Foster perseverance in students by choosing tasks that are challenging. • Develop students' ability to analyze and problem solve. • Recognize students' effort when solving challenging problems.
MA.K12.MTR.2.1:	Demonstrate understanding by representing problems in multiple ways. Mathematicians who demonstrate understanding by representing problems in multiple ways: • Build understanding through modeling and using manipulatives. • Represent solutions to problems in multiple ways using objects, drawings, tables, graphs and equations. • Progress from modeling problems with objects and drawings to using algorithms and equations. • Express connections between concepts and representations. • Choose a representation based on the given context or purpose. **Clarifications:** Teachers who encourage students to demonstrate understanding by representing problems in multiple ways: • Help students make connections between concepts and representations. • Provide opportunities for students to use manipulatives when investigating concepts. • Guide students from concrete to pictorial to abstract representations as understanding progresses. • Show students that various representations can have different purposes and can be useful in different situations.
MA.K12.MTR.3.1:	Complete tasks with mathematical fluency. Mathematicians who complete tasks with mathematical fluency: • Select efficient and appropriate methods for solving problems within the given context. • Maintain flexibility and accuracy while performing procedures and mental calculations. • Complete tasks accurately and with confidence. • Adapt procedures to apply them to a new context. • Use feedback to improve efficiency when performing calculations. **Clarifications:** Teachers who encourage students to complete tasks with mathematical fluency: • Provide students with the flexibility to solve problems by selecting a procedure that allows them to solve efficiently and accurately. • Offer multiple opportunities for students to practice efficient and generalizable methods. • Provide opportunities for students to reflect on the method they used and determine if a more efficient method could have been used.
MA.K12.MTR.4.1:	Engage in discussions that reflect on the mathematical thinking of self and others. Mathematicians who engage in discussions that reflect on the mathematical thinking of self and others: • Communicate mathematical ideas, vocabulary and methods effectively. • Analyze the mathematical thinking of others. • Compare the efficiency of a method to those expressed by others. • Recognize errors and suggest how to correctly solve the task. • Justify results by explaining methods and processes. • Construct possible arguments based on evidence. **Clarifications:** Teachers who encourage students to engage in discussions that reflect on the mathematical thinking of self and others: • Establish a culture in which students ask questions of the teacher and their peers, and error is an opportunity for learning. • Create opportunities for students to discuss their thinking with peers. • Select, sequence and present student work to advance and deepen understanding of correct and increasingly efficient methods. • Develop students' ability to justify methods and compare their responses to the responses of their peers.
	Use patterns and structure to help understand and connect mathematical concepts.

MA.K12.MTR.5.1:	Mathematicians who use patterns and structure to help understand and connect mathematical concepts: • Focus on relevant details within a problem. • Create plans and procedures to logically order events, steps or ideas to solve problems. • Decompose a complex problem into manageable parts. • Relate previously learned concepts to new concepts. • Look for similarities among problems. • Connect solutions of problems to more complicated large-scale situations. **Clarifications:** Teachers who encourage students to use patterns and structure to help understand and connect mathematical concepts: • Help students recognize the patterns in the world around them and connect these patterns to mathematical concepts. • Support students to develop generalizations based on the similarities found among problems. • Provide opportunities for students to create plans and procedures to solve problems. • Develop students' ability to construct relationships between their current understanding and more sophisticated ways of thinking.
MA.K12.MTR.6.1:	Assess the reasonableness of solutions. Mathematicians who assess the reasonableness of solutions: • Estimate to discover possible solutions. • Use benchmark quantities to determine if a solution makes sense. • Check calculations when solving problems. • Verify possible solutions by explaining the methods used. • Evaluate results based on the given context. **Clarifications:** Teachers who encourage students to assess the reasonableness of solutions: • Have students estimate or predict solutions prior to solving. • Prompt students to continually ask, "Does this solution make sense? How do you know?" • Reinforce that students check their work as they progress within and after a task. • Strengthen students' ability to verify solutions through justifications.
MA.K12.MTR.7.1:	Apply mathematics to real-world contexts. Mathematicians who apply mathematics to real-world contexts: • Connect mathematical concepts to everyday experiences. • Use models and methods to understand, represent and solve problems. • Perform investigations to gather data or determine if a method is appropriate. • Redesign models and methods to improve accuracy or efficiency. **Clarifications:** Teachers who encourage students to apply mathematics to real-world contexts: • Provide opportunities for students to create models, both concrete and abstract, and perform investigations. • Challenge students to question the accuracy of their models and methods. • Support students as they validate conclusions by comparing them to the given situation. • Indicate how various concepts can be applied to other disciplines.
ELA.K12.EE.1.1:	Cite evidence to explain and justify reasoning. **Clarifications:** K-1 Students include textual evidence in their oral communication with guidance and support from adults. The evidence can consist of details from the text without naming the text. During 1st grade, students learn how to incorporate the evidence in their writing. 2-3 Students include relevant textual evidence in their written and oral communication. Students should name the text when they refer to it. In 3rd grade, students should use a combination of direct and indirect citations. 4-5 Students continue with previous skills and reference comments made by speakers and peers. Students cite texts that they've directly quoted, paraphrased, or used for information. When writing, students will use the form of citation dictated by the instructor or the style guide referenced by the instructor. 6-8 Students continue with previous skills and use a style guide to create a proper citation. 9-12 Students continue with previous skills and should be aware of existing style guides and the ways in which they differ.
ELA.K12.EE.2.1:	Read and comprehend grade-level complex texts proficiently. **Clarifications:** See Text Complexity for grade-level complexity bands and a text complexity rubric.
ELA.K12.EE.3.1:	Make inferences to support comprehension. **Clarifications:** Students will make inferences before the words infer or inference are introduced. Kindergarten students will answer questions like "Why is the girl smiling?" or make predictions about what will happen based on the title page. Students will use the terms and apply them in 2nd grade and beyond.
ELA.K12.EE.4.1:	Use appropriate collaborative techniques and active listening skills when engaging in discussions in a variety of situations. **Clarifications:** In kindergarten, students learn to listen to one another respectfully. In grades 1-2, students build upon these skills by justifying what they are thinking. For example: "I think _____ because _____." The collaborative conversations are becoming academic conversations. In grades 3-12, students engage in academic conversations discussing claims and justifying their reasoning, refining and applying skills. Students build on ideas, propel the conversation, and support claims and counterclaims with evidence.
	Use the accepted rules governing a specific format to create quality work.

ELA.K12.EE.5.1:	**Clarifications:** Students will incorporate skills learned into work products to produce quality work. For students to incorporate these skills appropriately, they must receive instruction. A 3rd grade student creating a poster board display must have instruction in how to effectively present information to do quality work.
ELA.K12.EE.6.1:	Use appropriate voice and tone when speaking or writing. **Clarifications:** In kindergarten and 1st grade, students learn the difference between formal and informal language. For example, the way we talk to our friends differs from the way we speak to adults. In 2nd grade and beyond, students practice appropriate social and academic language to discuss texts.
DA.912.F.3.8:	Demonstrate effective teamwork and accountability, using compromise, collaboration, and conflict resolution, to set and achieve goals as required in the work environment.
DA.912.S.2.1:	Sustain focused attention, respect, and discipline during class, rehearsal, and performance.
ELD.K12.ELL.SI.1:	English language learners communicate for social and instructional purposes within the school setting.

General Course Information and Notes

VERSION DESCRIPTION

Students build on previous orchestral experience through the study and performance of high-quality orchestra literature. Rehearsals focus on the strengthening of critical listening skills, musicianship, string techniques, ensemble skills, and aesthetic awareness in the context of relevant history and cultures. Public performances may serve as a culmination of specific instructional goals. Students may be required to attend and/or participate in rehearsals and performances outside the school day to support, extend, and assess learning in the classroom. Students in this class may need to obtain (e.g., borrow, rent, purchase) an instrument from an outside source.

GENERAL NOTES

Florida's Benchmarks for Excellent Student Thinking (B.E.S.T.) Standards
This course includes Florida's B.E.S.T. ELA Expectations (EE) and Mathematical Thinking and Reasoning Standards (MTRs) for students. Florida educators should intentionally embed these standards within the content and their instruction as applicable. For guidance on the implementation of the EEs and MTRs, please visit cpalms.org/Standards/BEST_Standards.aspx and select the appropriate B.E.S.T. Standards package.

English Language Development ELD Standards Special Notes Section:
Teachers are required to provide listening, speaking, reading and writing instruction that allows English language learners (ELL) to communicate for social and instructional purposes within the school setting. For the given level of English language proficiency and with visual, graphic, or interactive support, students will interact with grade level words, expressions, sentences and discourse to process or produce language necessary for academic success. The ELD standard should specify a relevant content area concept or topic of study chosen by curriculum developers and teachers which maximizes an ELL's need for communication and social skills. To access an ELL supporting document which delineates performance definitions and descriptors, please click on the following link: cpalms.org/uploads/docs/standards/eld/SI.pdf

GENERAL INFORMATION

Course Number: 1302380

Course Path: Section: Grades PreK to 12 Education Courses > **Grade Group:** Grades 9 to 12 and Adult Education Courses > **Subject:** Music Education > **SubSubject:** Instrumental Music > **Abbreviated Title:** ORCH 3

Number of Credits: One (1) credit

Course Length: Year (Y)

Course Type: Core Academic Course

Course Level: 2

Course Status: Draft - Course Pending Approval

Grade Level(s): 9,10,11,12

Graduation Requirement: Performing/Fine Arts

Educator Certifications

Music (Elementary and Secondary Grades K-12)
Instrumental Music (Secondary Grades 7-12)
Instrumental Music (Elementary and Secondary Grades K-12)

Orchestra 4 (#1302390) 2022 - And Beyond

Course Standards

Name	Description
MU.912.C.1.1:	Apply listening strategies to promote appreciation and understanding of unfamiliar musical works. **Clarifications:** e.g., listening maps, active listening, checklists
MU.912.C.1.2:	Compare, using correct music vocabulary, the aesthetic impact of two or more performances of a musical work to one's own hypothesis of the composer's intent. **Clarifications:** e.g., quality recordings, individual and peer-group performances, composer notes, instrumentation, expressive elements, title
MU.912.C.1.3:	Analyze instruments of the world and classify them by common traits. **Clarifications:** e.g., classical and folk instruments from around the world
MU.912.C.2.1:	Evaluate and make appropriate adjustments to personal performance in solo and ensembles.
MU.912.C.2.2:	Evaluate performance quality in recorded and/or live performances.
MU.912.C.3.1:	Make critical evaluations, based on exemplary models, of the quality and effectiveness of performances and apply the criteria to personal development in music.
MU.912.F.1.1:	Analyze and evaluate the effect of "traditional" and contemporary technologies on the development of music.
MU.912.F.2.2:	Analyze the effect of the arts and entertainment industry on the economic and social health of communities and regions. **Clarifications:** e.g., community revitalization, industry choosing new locations, cultural and social enrichment
MU.912.F.3.1:	Analyze and describe how meeting one's responsibilities in music offers opportunities to develop leadership skills, and identify personal examples of leadership in school and/or non-school settings.
MU.912.F.3.2:	Summarize copyright laws that govern printed, recorded, and on-line music to promote legal and responsible use of intellectual property and technology.
MU.912.F.3.3:	Define, prioritize, monitor, and successfully complete tasks related to individual musical performance or project presentation, without direct oversight, demonstrating skills for use in the workplace.
MU.912.F.3.4:	Design and implement a personal learning plan, related to the study of music, which demonstrates self-assessment, brain-storming, decision-making, and initiative to advance skills and/or knowledge.
MU.912.H.1.1:	Investigate and discuss how a culture's traditions are reflected through its music. **Clarifications:** e.g., patriotic, folk, celebration, entertainment, spiritual
MU.912.H.1.2:	Compare the work of, and influences on, two or more exemplary composers in the performance medium studied in class. **Clarifications:** e.g., vocal, instrumental, guitar, keyboard, electronic, handbells
MU.912.H.1.3:	Compare two or more works of a composer across performance media. **Clarifications:** e.g., orchestral and choral; guitar and string quartet; piano solo and piano concerto
MU.912.H.1.4:	Analyze how Western music has been influenced by historical and current world cultures.
MU.912.H.1.5:	Analyze music within cultures to gain understanding of authentic performance practices.
MU.912.H.2.1:	Evaluate the social impact of music on specific historical periods.
MU.912.H.2.2:	Analyze current musical trends, including audience environments and music acquisition, to predict possible directions of music.
MU.912.H.2.3:	Analyze the evolution of a music genre. **Clarifications:** e.g., jazz, blues
MU.912.H.2.4:	Examine the effects of developing technology on composition, performance, and acquisition of music.
MU.912.H.3.1:	Apply knowledge of science, math, and music to demonstrate, through an acoustic or digital performance medium, how sound production affects musical performance. **Clarifications:** e.g., acoustics, sound amplification, materials, mechanics
MU.912.O.1.1:	Evaluate the organizational principles and conventions in musical works and discuss their effect on structure. **Clarifications:** e.g., rhythm, melody, timbre, form, tonality, harmony, texture; solo, chamber ensemble, large ensemble
MU.912.O.2.1:	Transfer accepted composition conventions and performance practices of a specific style to a contrasting style of music.
MU.912.O.2.2:	Transpose melodies into different modalities through performance and composition.
MU.912.O.3.1:	Analyze expressive elements in a musical work and describe how the choices and manipulations of the elements support, for the listener, the implied meaning of the composer/performer. **Clarifications:** e.g., tempo markings, expression markings, articulation markings, phrasing, scales, modes, harmonic structure, timbre choice, rhythm, orchestration

MU.912.O.3.2:	Interpret and perform expressive elements indicated by the musical score and/or conductor.
MU.912.S.1.3:	Arrange a musical work by manipulating two or more aspects of the composition. **Clarifications:** e.g., texture, mode, form, tempo, voicing
MU.912.S.1.4:	Perform and notate, independently and accurately, melodies by ear. **Clarifications:** e.g., singing, playing, writing
MU.912.S.2.1:	Apply the ability to memorize and internalize musical structure, accurate and expressive details, and processing skills to the creation or performance of music literature. **Clarifications:** e.g., memorization, sequential process
MU.912.S.2.2:	Transfer expressive elements and performance techniques from one piece of music to another.
MU.912.S.3.1:	Synthesize a broad range of musical skills by performing a varied repertoire with expression, appropriate stylistic interpretation, technical accuracy, and kinesthetic energy.
MU.912.S.3.2:	Sight-read music accurately and expressively to show synthesis of skills. **Clarifications:** e.g., musical elements, expressive qualities, performance technique
MU.912.S.3.4:	Analyze and describe the effect of rehearsal sessions and/or strategies on refinement of skills and techniques.
MU.912.S.3.5:	Develop and demonstrate proper vocal or instrumental technique. **Clarifications:** e.g., posture, breathing, fingering, embouchure, bow technique, tuning, strumming
MA.K12.MTR.1.1:	Mathematicians who participate in effortful learning both individually and with others: • Analyze the problem in a way that makes sense given the task. • Ask questions that will help with solving the task. • Build perseverance by modifying methods as needed while solving a challenging task. • Stay engaged and maintain a positive mindset when working to solve tasks. • Help and support each other when attempting a new method or approach. **Clarifications:** Teachers who encourage students to participate actively in effortful learning both individually and with others: • Cultivate a community of growth mindset learners. • Foster perseverance in students by choosing tasks that are challenging. • Develop students' ability to analyze and problem solve. • Recognize students' effort when solving challenging problems.
MA.K12.MTR.2.1:	Demonstrate understanding by representing problems in multiple ways. Mathematicians who demonstrate understanding by representing problems in multiple ways: • Build understanding through modeling and using manipulatives. • Represent solutions to problems in multiple ways using objects, drawings, tables, graphs and equations. • Progress from modeling problems with objects and drawings to using algorithms and equations. • Express connections between concepts and representations. • Choose a representation based on the given context or purpose. **Clarifications:** Teachers who encourage students to demonstrate understanding by representing problems in multiple ways: • Help students make connections between concepts and representations. • Provide opportunities for students to use manipulatives when investigating concepts. • Guide students from concrete to pictorial to abstract representations as understanding progresses. • Show students that various representations can have different purposes and can be useful in different situations.
MA.K12.MTR.3.1:	Complete tasks with mathematical fluency. Mathematicians who complete tasks with mathematical fluency: • Select efficient and appropriate methods for solving problems within the given context. • Maintain flexibility and accuracy while performing procedures and mental calculations. • Complete tasks accurately and with confidence. • Adapt procedures to apply them to a new context. • Use feedback to improve efficiency when performing calculations. **Clarifications:** Teachers who encourage students to complete tasks with mathematical fluency: • Provide students with the flexibility to solve problems by selecting a procedure that allows them to solve efficiently and accurately. • Offer multiple opportunities for students to practice efficient and generalizable methods. • Provide opportunities for students to reflect on the method they used and determine if a more efficient method could have been used.
	Engage in discussions that reflect on the mathematical thinking of self and others. Mathematicians who engage in discussions that reflect on the mathematical thinking of self and others: • Communicate mathematical ideas, vocabulary and methods effectively. • Analyze the mathematical thinking of others. • Compare the efficiency of a method to those expressed by others. • Recognize errors and suggest how to correctly solve the task.

MA.K12.MTR.4.1:	• Justify results by explaining methods and processes. • Construct possible arguments based on evidence. **Clarifications:** Teachers who encourage students to engage in discussions that reflect on the mathematical thinking of self and others: • Establish a culture in which students ask questions of the teacher and their peers, and error is an opportunity for learning. • Create opportunities for students to discuss their thinking with peers. • Select, sequence and present student work to advance and deepen understanding of correct and increasingly efficient methods. • Develop students' ability to justify methods and compare their responses to the responses of their peers.
MA.K12.MTR.5.1:	Use patterns and structure to help understand and connect mathematical concepts. Mathematicians who use patterns and structure to help understand and connect mathematical concepts: • Focus on relevant details within a problem. • Create plans and procedures to logically order events, steps or ideas to solve problems. • Decompose a complex problem into manageable parts. • Relate previously learned concepts to new concepts. • Look for similarities among problems. • Connect solutions of problems to more complicated large-scale situations. **Clarifications:** Teachers who encourage students to use patterns and structure to help understand and connect mathematical concepts: • Help students recognize the patterns in the world around them and connect these patterns to mathematical concepts. • Support students to develop generalizations based on the similarities found among problems. • Provide opportunities for students to create plans and procedures to solve problems. • Develop students' ability to construct relationships between their current understanding and more sophisticated ways of thinking.
MA.K12.MTR.6.1:	Assess the reasonableness of solutions. Mathematicians who assess the reasonableness of solutions: • Estimate to discover possible solutions. • Use benchmark quantities to determine if a solution makes sense. • Check calculations when solving problems. • Verify possible solutions by explaining the methods used. • Evaluate results based on the given context. **Clarifications:** Teachers who encourage students to assess the reasonableness of solutions: • Have students estimate or predict solutions prior to solving. • Prompt students to continually ask, "Does this solution make sense? How do you know?" • Reinforce that students check their work as they progress within and after a task. • Strengthen students' ability to verify solutions through justifications.
MA.K12.MTR.7.1:	Apply mathematics to real-world contexts. Mathematicians who apply mathematics to real-world contexts: • Connect mathematical concepts to everyday experiences. • Use models and methods to understand, represent and solve problems. • Perform investigations to gather data or determine if a method is appropriate. • Redesign models and methods to improve accuracy or efficiency. **Clarifications:** Teachers who encourage students to apply mathematics to real-world contexts: • Provide opportunities for students to create models, both concrete and abstract, and perform investigations. • Challenge students to question the accuracy of their models and methods. • Support students as they validate conclusions by comparing them to the given situation. • Indicate how various concepts can be applied to other disciplines.
ELA.K12.EE.1.1:	Cite evidence to explain and justify reasoning. **Clarifications:** K-1 Students include textual evidence in their oral communication with guidance and support from adults. The evidence can consist of details from the text without naming the text. During 1st grade, students learn how to incorporate the evidence in their writing. 2-3 Students include relevant textual evidence in their written and oral communication. Students should name the text when they refer to it. In 3rd grade, students should use a combination of direct and indirect citations. 4-5 Students continue with previous skills and reference comments made by speakers and peers. Students cite texts that they've directly quoted, paraphrased, or used for information. When writing, students will use the form of citation dictated by the instructor or the style guide referenced by the instructor. 6-8 Students continue with previous skills and use a style guide to create a proper citation. 9-12 Students continue with previous skills and should be aware of existing style guides and the ways in which they differ.
ELA.K12.EE.2.1:	Read and comprehend grade-level complex texts proficiently. **Clarifications:** See Text Complexity for grade-level complexity bands and a text complexity rubric.
ELA.K12.EE.3.1:	Make inferences to support comprehension. **Clarifications:** Students will make inferences before the words infer or inference are introduced. Kindergarten students will answer questions like "Why is the girl smiling?" or make predictions about what will happen based on the title page. Students will use the terms and apply them in 2nd grade and beyond.

ELA.K12.EE.4.1:	Use appropriate collaborative techniques and active listening skills when engaging in discussions in a variety of situations. **Clarifications:** In kindergarten, students learn to listen to one another respectfully. In grades 1-2, students build upon these skills by justifying what they are thinking. For example: "I think _____ because _____." The collaborative conversations are becoming academic conversations. In grades 3-12, students engage in academic conversations discussing claims and justifying their reasoning, refining and applying skills. Students build on ideas, propel the conversation, and support claims and counterclaims with evidence.
ELA.K12.EE.5.1:	Use the accepted rules governing a specific format to create quality work. **Clarifications:** Students will incorporate skills learned into work products to produce quality work. For students to incorporate these skills appropriately, they must receive instruction. A 3rd grade student creating a poster board display must have instruction in how to effectively present information to do quality work.
ELA.K12.EE.6.1:	Use appropriate voice and tone when speaking or writing. **Clarifications:** In kindergarten and 1st grade, students learn the difference between formal and informal language. For example, the way we talk to our friends differs from the way we speak to adults. In 2nd grade and beyond, students practice appropriate social and academic language to discuss texts.
DA.912.F.3.8:	Demonstrate effective teamwork and accountability, using compromise, collaboration, and conflict resolution, to set and achieve goals as required in the work environment.
DA.912.S.2.1:	Sustain focused attention, respect, and discipline during class, rehearsal, and performance.
ELD.K12.ELL.SI.1:	English language learners communicate for social and instructional purposes within the school setting.

General Course Information and Notes

VERSION DESCRIPTION

Students with intermediate-level proficiency in string techniques, music literacy, critical listening skills, and musicianship study, rehearse, and perform high-quality orchestra literature. Student musicians strengthen their reflective, analytical, and problem-solving skills to self-diagnose solutions to performance challenges based on their structural, historical, and cultural understanding of the music. Public performances may serve as a culmination of specific instructional goals. Students may be required to attend and/or participate in rehearsals and performances outside the school day to support, extend, and assess learning in the classroom. Students in this class may need to obtain (e.g., borrow, rent, purchase) an instrument from an outside source.

GENERAL NOTES

Florida's Benchmarks for Excellent Student Thinking (B.E.S.T.) Standards
This course includes Florida's B.E.S.T. ELA Expectations (EE) and Mathematical Thinking and Reasoning Standards (MTRs) for students. Florida educators should intentionally embed these standards within the content and their instruction as applicable. For guidance on the implementation of the EEs and MTRs, please visit cpalms.org/Standards/BEST_Standards.aspx and select the appropriate B.E.S.T. Standards package.

English Language Development ELD Standards Special Notes Section:
Teachers are required to provide listening, speaking, reading and writing instruction that allows English language learners (ELL) to communicate for social and instructional purposes within the school setting. For the given level of English language proficiency and with visual, graphic, or interactive support, students will interact with grade level words, expressions, sentences and discourse to process or produce language necessary for academic success. The ELD standard should specify a relevant content area concept or topic of study chosen by curriculum developers and teachers which maximizes an ELL's need for communication and social skills. To access an ELL supporting document which delineates performance definitions and descriptors, please click on the following link: cpalms.org/uploads/docs/standards/eld/SI.pdf

GENERAL INFORMATION

Course Number: 1302390

Course Path: Section: Grades PreK to 12 Education Courses > **Grade Group:** Grades 9 to 12 and Adult Education Courses > **Subject:** Music Education > **SubSubject:** Instrumental Music > **Abbreviated Title:** ORCH 4

Number of Credits: One (1) credit

Course Length: Year (Y)

Course Type: Core Academic Course

Course Level: 2

Course Status: Draft - Course Pending Approval

Grade Level(s): 9,10,11,12

Graduation Requirement: Performing/Fine Arts

Educator Certifications

Music (Elementary and Secondary Grades K-12)

Instrumental Music (Secondary Grades 7-12)
Instrumental Music (Elementary and Secondary Grades K-12)

Orchestra 5 Honors (#1302400) 2022 - And Beyond

Course Standards

Name	Description
MU.912.C.1.1:	Apply listening strategies to promote appreciation and understanding of unfamiliar musical works. **Clarifications:** e.g., listening maps, active listening, checklists
MU.912.C.1.2:	Compare, using correct music vocabulary, the aesthetic impact of two or more performances of a musical work to one's own hypothesis of the composer's intent. **Clarifications:** e.g., quality recordings, individual and peer-group performances, composer notes, instrumentation, expressive elements, title
MU.912.C.1.3:	Analyze instruments of the world and classify them by common traits. **Clarifications:** e.g., classical and folk instruments from around the world
MU.912.C.2.1:	Evaluate and make appropriate adjustments to personal performance in solo and ensembles.
MU.912.C.2.2:	Evaluate performance quality in recorded and/or live performances.
MU.912.C.3.1:	Make critical evaluations, based on exemplary models, of the quality and effectiveness of performances and apply the criteria to personal development in music.
MU.912.F.1.1:	Analyze and evaluate the effect of "traditional" and contemporary technologies on the development of music.
MU.912.F.2.1:	Design or refine a résumé for application to higher education or the workforce that highlights marketable skills and knowledge gained through music training. **Clarifications:** e.g., repertoire lists, technology-based work, ability to research and analyze, and examples of leadership and collaborative skills
MU.912.F.2.2:	Analyze the effect of the arts and entertainment industry on the economic and social health of communities and regions. **Clarifications:** e.g., community revitalization, industry choosing new locations, cultural and social enrichment
MU.912.F.3.1:	Analyze and describe how meeting one's responsibilities in music offers opportunities to develop leadership skills, and identify personal examples of leadership in school and/or non-school settings.
MU.912.F.3.2:	Summarize copyright laws that govern printed, recorded, and on-line music to promote legal and responsible use of intellectual property and technology.
MU.912.F.3.3:	Define, prioritize, monitor, and successfully complete tasks related to individual musical performance or project presentation, without direct oversight, demonstrating skills for use in the workplace.
MU.912.F.3.4:	Design and implement a personal learning plan, related to the study of music, which demonstrates self-assessment, brain-storming, decision-making, and initiative to advance skills and/or knowledge.
MU.912.H.1.1:	Investigate and discuss how a culture's traditions are reflected through its music. **Clarifications:** e.g., patriotic, folk, celebration, entertainment, spiritual
MU.912.H.1.2:	Compare the work of, and influences on, two or more exemplary composers in the performance medium studied in class. **Clarifications:** e.g., vocal, instrumental, guitar, keyboard, electronic, handbells
MU.912.H.1.3:	Compare two or more works of a composer across performance media. **Clarifications:** e.g., orchestral and choral; guitar and string quartet; piano solo and piano concerto
MU.912.H.1.4:	Analyze how Western music has been influenced by historical and current world cultures.
MU.912.H.1.5:	Analyze music within cultures to gain understanding of authentic performance practices.
MU.912.H.2.1:	Evaluate the social impact of music on specific historical periods.
MU.912.H.2.2:	Analyze current musical trends, including audience environments and music acquisition, to predict possible directions of music.
MU.912.H.2.3:	Analyze the evolution of a music genre. **Clarifications:** e.g., jazz, blues
MU.912.H.2.4:	Examine the effects of developing technology on composition, performance, and acquisition of music.
MU.912.H.3.1:	Apply knowledge of science, math, and music to demonstrate, through an acoustic or digital performance medium, how sound production affects musical performance. **Clarifications:** e.g., acoustics, sound amplification, materials, mechanics
MU.912.O.1.1:	Evaluate the organizational principles and conventions in musical works and discuss their effect on structure. **Clarifications:** e.g., rhythm, melody, timbre, form, tonality, harmony, texture; solo, chamber ensemble, large ensemble
MU.912.O.2.1:	Transfer accepted composition conventions and performance practices of a specific style to a contrasting style of music.
MU.912.O.2.2:	Transpose melodies into different modalities through performance and composition.

MU.912.O.3.1:	Analyze expressive elements in a musical work and describe how the choices and manipulations of the elements support, for the listener, the implied meaning of the composer/performer. **Clarifications:** e.g., tempo markings, expression markings, articulation markings, phrasing, scales, modes, harmonic structure, timbre choice, rhythm, orchestration
MU.912.O.3.2:	Interpret and perform expressive elements indicated by the musical score and/or conductor.
MU.912.S.1.3:	Arrange a musical work by manipulating two or more aspects of the composition. **Clarifications:** e.g., texture, mode, form, tempo, voicing
MU.912.S.1.4:	Perform and notate, independently and accurately, melodies by ear. **Clarifications:** e.g., singing, playing, writing
MU.912.S.2.1:	Apply the ability to memorize and internalize musical structure, accurate and expressive details, and processing skills to the creation or performance of music literature. **Clarifications:** e.g., memorization, sequential process
MU.912.S.2.2:	Transfer expressive elements and performance techniques from one piece of music to another.
MU.912.S.3.1:	Synthesize a broad range of musical skills by performing a varied repertoire with expression, appropriate stylistic interpretation, technical accuracy, and kinesthetic energy.
MU.912.S.3.2:	Sight-read music accurately and expressively to show synthesis of skills. **Clarifications:** e.g., musical elements, expressive qualities, performance technique
MU.912.S.3.4:	Analyze and describe the effect of rehearsal sessions and/or strategies on refinement of skills and techniques.
MU.912.S.3.5:	Develop and demonstrate proper vocal or instrumental technique. **Clarifications:** e.g., posture, breathing, fingering, embouchure, bow technique, tuning, strumming
MA.K12.MTR.1.1:	Mathematicians who participate in effortful learning both individually and with others: • Analyze the problem in a way that makes sense given the task. • Ask questions that will help with solving the task. • Build perseverance by modifying methods as needed while solving a challenging task. • Stay engaged and maintain a positive mindset when working to solve tasks. • Help and support each other when attempting a new method or approach. **Clarifications:** Teachers who encourage students to participate actively in effortful learning both individually and with others: • Cultivate a community of growth mindset learners. • Foster perseverance in students by choosing tasks that are challenging. • Develop students' ability to analyze and problem solve. • Recognize students' effort when solving challenging problems.
MA.K12.MTR.2.1:	Demonstrate understanding by representing problems in multiple ways. Mathematicians who demonstrate understanding by representing problems in multiple ways: • Build understanding through modeling and using manipulatives. • Represent solutions to problems in multiple ways using objects, drawings, tables, graphs and equations. • Progress from modeling problems with objects and drawings to using algorithms and equations. • Express connections between concepts and representations. • Choose a representation based on the given context or purpose. **Clarifications:** Teachers who encourage students to demonstrate understanding by representing problems in multiple ways: • Help students make connections between concepts and representations. • Provide opportunities for students to use manipulatives when investigating concepts. • Guide students from concrete to pictorial to abstract representations as understanding progresses. • Show students that various representations can have different purposes and can be useful in different situations.
MA.K12.MTR.3.1:	Complete tasks with mathematical fluency. Mathematicians who complete tasks with mathematical fluency: • Select efficient and appropriate methods for solving problems within the given context. • Maintain flexibility and accuracy while performing procedures and mental calculations. • Complete tasks accurately and with confidence. • Adapt procedures to apply them to a new context. • Use feedback to improve efficiency when performing calculations. **Clarifications:** Teachers who encourage students to complete tasks with mathematical fluency: • Provide students with the flexibility to solve problems by selecting a procedure that allows them to solve efficiently and accurately. • Offer multiple opportunities for students to practice efficient and generalizable methods. • Provide opportunities for students to reflect on the method they used and determine if a more efficient method could have been used.
	Engage in discussions that reflect on the mathematical thinking of self and others. Mathematicians who engage in discussions that reflect on the mathematical thinking of self and others:

MA.K12.MTR.4.1:	• Communicate mathematical ideas, vocabulary and methods effectively. • Analyze the mathematical thinking of others. • Compare the efficiency of a method to those expressed by others. • Recognize errors and suggest how to correctly solve the task. • Justify results by explaining methods and processes. • Construct possible arguments based on evidence. **Clarifications:** Teachers who encourage students to engage in discussions that reflect on the mathematical thinking of self and others: • Establish a culture in which students ask questions of the teacher and their peers, and error is an opportunity for learning. • Create opportunities for students to discuss their thinking with peers. • Select, sequence and present student work to advance and deepen understanding of correct and increasingly efficient methods. • Develop students' ability to justify methods and compare their responses to the responses of their peers.
MA.K12.MTR.5.1:	Use patterns and structure to help understand and connect mathematical concepts. Mathematicians who use patterns and structure to help understand and connect mathematical concepts: • Focus on relevant details within a problem. • Create plans and procedures to logically order events, steps or ideas to solve problems. • Decompose a complex problem into manageable parts. • Relate previously learned concepts to new concepts. • Look for similarities among problems. • Connect solutions of problems to more complicated large-scale situations. **Clarifications:** Teachers who encourage students to use patterns and structure to help understand and connect mathematical concepts: • Help students recognize the patterns in the world around them and connect these patterns to mathematical concepts. • Support students to develop generalizations based on the similarities found among problems. • Provide opportunities for students to create plans and procedures to solve problems. • Develop students' ability to construct relationships between their current understanding and more sophisticated ways of thinking.
MA.K12.MTR.6.1:	Assess the reasonableness of solutions. Mathematicians who assess the reasonableness of solutions: • Estimate to discover possible solutions. • Use benchmark quantities to determine if a solution makes sense. • Check calculations when solving problems. • Verify possible solutions by explaining the methods used. • Evaluate results based on the given context. **Clarifications:** Teachers who encourage students to assess the reasonableness of solutions: • Have students estimate or predict solutions prior to solving. • Prompt students to continually ask, "Does this solution make sense? How do you know?" • Reinforce that students check their work as they progress within and after a task. • Strengthen students' ability to verify solutions through justifications.
MA.K12.MTR.7.1:	Apply mathematics to real-world contexts. Mathematicians who apply mathematics to real-world contexts: • Connect mathematical concepts to everyday experiences. • Use models and methods to understand, represent and solve problems. • Perform investigations to gather data or determine if a method is appropriate. • Redesign models and methods to improve accuracy or efficiency. **Clarifications:** Teachers who encourage students to apply mathematics to real-world contexts: • Provide opportunities for students to create models, both concrete and abstract, and perform investigations. • Challenge students to question the accuracy of their models and methods. • Support students as they validate conclusions by comparing them to the given situation. • Indicate how various concepts can be applied to other disciplines.
ELA.K12.EE.1.1:	Cite evidence to explain and justify reasoning. **Clarifications:** K-1 Students include textual evidence in their oral communication with guidance and support from adults. The evidence can consist of details from the text without naming the text. During 1st grade, students learn how to incorporate the evidence in their writing. 2-3 Students include relevant textual evidence in their written and oral communication. Students should name the text when they refer to it. In 3rd grade, students should use a combination of direct and indirect citations. 4-5 Students continue with previous skills and reference comments made by speakers and peers. Students cite texts that they've directly quoted, paraphrased, or used for information. When writing, students will use the form of citation dictated by the instructor or the style guide referenced by the instructor. 6-8 Students continue with previous skills and use a style guide to create a proper citation. 9-12 Students continue with previous skills and should be aware of existing style guides and the ways in which they differ.
ELA.K12.EE.2.1:	Read and comprehend grade-level complex texts proficiently. **Clarifications:** See Text Complexity for grade-level complexity bands and a text complexity rubric.
	Make inferences to support comprehension.

ELA.K12.EE.3.1:	**Clarifications:** Students will make inferences before the words infer or inference are introduced. Kindergarten students will answer questions like "Why is the girl smiling?" or make predictions about what will happen based on the title page. Students will use the terms and apply them in 2nd grade and beyond.
ELA.K12.EE.4.1:	Use appropriate collaborative techniques and active listening skills when engaging in discussions in a variety of situations. **Clarifications:** In kindergarten, students learn to listen to one another respectfully. In grades 1-2, students build upon these skills by justifying what they are thinking. For example: "I think _____ because _____." The collaborative conversations are becoming academic conversations. In grades 3-12, students engage in academic conversations discussing claims and justifying their reasoning, refining and applying skills. Students build on ideas, propel the conversation, and support claims and counterclaims with evidence.
ELA.K12.EE.5.1:	Use the accepted rules governing a specific format to create quality work. **Clarifications:** Students will incorporate skills learned into work products to produce quality work. For students to incorporate these skills appropriately, they must receive instruction. A 3rd grade student creating a poster board display must have instruction in how to effectively present information to do quality work.
ELA.K12.EE.6.1:	Use appropriate voice and tone when speaking or writing. **Clarifications:** In kindergarten and 1st grade, students learn the difference between formal and informal language. For example, the way we talk to our friends differs from the way we speak to adults. In 2nd grade and beyond, students practice appropriate social and academic language to discuss texts.
DA.912.F.3.8:	Demonstrate effective teamwork and accountability, using compromise, collaboration, and conflict resolution, to set and achieve goals as required in the work environment.
DA.912.S.2.1:	Sustain focused attention, respect, and discipline during class, rehearsal, and performance.
ELD.K12.ELL.SI.1:	English language learners communicate for social and instructional purposes within the school setting.

General Course Information and Notes

VERSION DESCRIPTION

Students with considerable orchestral experience advance their string and ensemble performance techniques, music literacy, music theory, and aesthetic engagement through high-quality orchestra literature. Student musicians use reflection and problem-solving skills to improve performance significantly based on structural, cultural, and historical understanding of the music. Public performances may serve as a culmination of specific instructional goals. Students may be required to attend and/or participate in rehearsals and performances outside the school day to support, extend, and assess learning in the classroom. Students in this class may need to obtain (e.g., borrow, rent, purchase) an instrument from an outside source.

GENERAL NOTES

Honors and Advanced Level Course Note: Advanced courses require a greater demand on students through increased academic rigor. Academic rigor is obtained through the application, analysis, evaluation, and creation of complex ideas that are often abstract and multi-faceted. Students are challenged to think and collaborate critically on the content they are learning. Honors level rigor will be achieved by increasing text complexity through text selection, focus on high-level qualitative measures, and complexity of task. Instruction will be structured to give students a deeper understanding of conceptual themes and organization within and across disciplines. Academic rigor is more than simply assigning to students a greater quantity of work.

Florida's Benchmarks for Excellent Student Thinking (B.E.S.T.) Standards
This course includes Florida's B.E.S.T. ELA Expectations (EE) and Mathematical Thinking and Reasoning Standards (MTRs) for students. Florida educators should intentionally embed these standards within the content and their instruction as applicable. For guidance on the implementation of the EEs and MTRs, please visit cpalms.org/Standards/BEST_Standards.aspx and select the appropriate B.E.S.T. Standards package.

English Language Development ELD Standards Special Notes Section:
Teachers are required to provide listening, speaking, reading and writing instruction that allows English language learners (ELL) to communicate for social and instructional purposes within the school setting. For the given level of English language proficiency and with visual, graphic, or interactive support, students will interact with grade level words, expressions, sentences and discourse to process or produce language necessary for academic success. The ELD standard should specify a relevant content area concept or topic of study chosen by curriculum developers and teachers which maximizes an ELL's need for communication and social skills. To access an ELL supporting document which delineates performance definitions and descriptors, please click on the following link: cpalms.org/uploads/docs/standards/eld/SI.pdf

GENERAL INFORMATION

Course Number: 1302400

Course Path: Section: Grades PreK to 12 Education Courses > **Grade Group:** Grades 9 to 12 and Adult Education Courses > **Subject:** Music Education > **SubSubject:** Instrumental Music >
Abbreviated Title: ORCH 5 HON

Number of Credits: One (1) credit

Course Length: Year (Y)
Course Attributes:

- Honors

Course Type: Core Academic Course
Course Level: 3
Course Status: Draft - Course Pending Approval
Grade Level(s): 9,10,11,12
Graduation Requirement: Performing/Fine Arts

Educator Certifications

Music (Elementary and Secondary Grades K-12)
Instrumental Music (Secondary Grades 7-12)
Instrumental Music (Elementary and Secondary Grades K-12)

Orchestra 6 Honors (#1302410) 2022 - And Beyond

Course Standards

Name	Description
MU.912.C.1.1:	Apply listening strategies to promote appreciation and understanding of unfamiliar musical works. **Clarifications:** e.g., listening maps, active listening, checklists
MU.912.C.1.2:	Compare, using correct music vocabulary, the aesthetic impact of two or more performances of a musical work to one's own hypothesis of the composer's intent. **Clarifications:** e.g., quality recordings, individual and peer-group performances, composer notes, instrumentation, expressive elements, title
MU.912.C.1.3:	Analyze instruments of the world and classify them by common traits. **Clarifications:** e.g., classical and folk instruments from around the world
MU.912.C.2.1:	Evaluate and make appropriate adjustments to personal performance in solo and ensembles.
MU.912.C.2.2:	Evaluate performance quality in recorded and/or live performances.
MU.912.C.3.1:	Make critical evaluations, based on exemplary models, of the quality and effectiveness of performances and apply the criteria to personal development in music.
MU.912.F.1.1:	Analyze and evaluate the effect of "traditional" and contemporary technologies on the development of music.
MU.912.F.2.1:	Design or refine a résumé for application to higher education or the workforce that highlights marketable skills and knowledge gained through music training. **Clarifications:** e.g., repertoire lists, technology-based work, ability to research and analyze, and examples of leadership and collaborative skills
MU.912.F.2.2:	Analyze the effect of the arts and entertainment industry on the economic and social health of communities and regions. **Clarifications:** e.g., community revitalization, industry choosing new locations, cultural and social enrichment
MU.912.F.2.3:	Compare the organizational structure of a professional orchestra, chorus, quintet, or other ensemble to that of a business. **Clarifications:** e.g., leadership, financial needs and structure, marketing, personnel matters, manager, travel
MU.912.F.3.1:	Analyze and describe how meeting one's responsibilities in music offers opportunities to develop leadership skills, and identify personal examples of leadership in school and/or non-school settings.
MU.912.F.3.2:	Summarize copyright laws that govern printed, recorded, and on-line music to promote legal and responsible use of intellectual property and technology.
MU.912.F.3.3:	Define, prioritize, monitor, and successfully complete tasks related to individual musical performance or project presentation, without direct oversight, demonstrating skills for use in the workplace.
MU.912.F.3.4:	Design and implement a personal learning plan, related to the study of music, which demonstrates self-assessment, brain-storming, decision-making, and initiative to advance skills and/or knowledge.
MU.912.H.1.1:	Investigate and discuss how a culture's traditions are reflected through its music. **Clarifications:** e.g., patriotic, folk, celebration, entertainment, spiritual
MU.912.H.1.2:	Compare the work of, and influences on, two or more exemplary composers in the performance medium studied in class. **Clarifications:** e.g., vocal, instrumental, guitar, keyboard, electronic, handbells
MU.912.H.1.3:	Compare two or more works of a composer across performance media. **Clarifications:** e.g., orchestral and choral; guitar and string quartet; piano solo and piano concerto
MU.912.H.1.4:	Analyze how Western music has been influenced by historical and current world cultures.
MU.912.H.1.5:	Analyze music within cultures to gain understanding of authentic performance practices.
MU.912.H.2.1:	Evaluate the social impact of music on specific historical periods.
MU.912.H.2.2:	Analyze current musical trends, including audience environments and music acquisition, to predict possible directions of music.
MU.912.H.2.3:	Analyze the evolution of a music genre. **Clarifications:** e.g., jazz, blues
MU.912.H.2.4:	Examine the effects of developing technology on composition, performance, and acquisition of music.
MU.912.H.3.1:	Apply knowledge of science, math, and music to demonstrate, through an acoustic or digital performance medium, how sound production affects musical performance. **Clarifications:** e.g., acoustics, sound amplification, materials, mechanics
MU.912.O.1.1:	Evaluate the organizational principles and conventions in musical works and discuss their effect on structure. **Clarifications:**

	e.g., rhythm, melody, timbre, form, tonality, harmony, texture; solo, chamber ensemble, large ensemble
MU.912.O.2.1:	Transfer accepted composition conventions and performance practices of a specific style to a contrasting style of music.
MU.912.O.2.2:	Transpose melodies into different modalities through performance and composition.
MU.912.O.3.1:	Analyze expressive elements in a musical work and describe how the choices and manipulations of the elements support, for the listener, the implied meaning of the composer/performer. **Clarifications:** e.g., tempo markings, expression markings, articulation markings, phrasing, scales, modes, harmonic structure, timbre choice, rhythm, orchestration
MU.912.O.3.2:	Interpret and perform expressive elements indicated by the musical score and/or conductor.
MU.912.S.1.3:	Arrange a musical work by manipulating two or more aspects of the composition. **Clarifications:** e.g., texture, mode, form, tempo, voicing
MU.912.S.1.4:	Perform and notate, independently and accurately, melodies by ear. **Clarifications:** e.g., singing, playing, writing
MU.912.S.2.1:	Apply the ability to memorize and internalize musical structure, accurate and expressive details, and processing skills to the creation or performance of music literature. **Clarifications:** e.g., memorization, sequential process
MU.912.S.2.2:	Transfer expressive elements and performance techniques from one piece of music to another.
MU.912.S.3.1:	Synthesize a broad range of musical skills by performing a varied repertoire with expression, appropriate stylistic interpretation, technical accuracy, and kinesthetic energy.
MU.912.S.3.2:	Sight-read music accurately and expressively to show synthesis of skills. **Clarifications:** e.g., musical elements, expressive qualities, performance technique
MU.912.S.3.3:	Transcribe aurally presented songs into melodic and/or rhythmic notation to show synthesis of aural and notational skills.
MU.912.S.3.4:	Analyze and describe the effect of rehearsal sessions and/or strategies on refinement of skills and techniques.
MU.912.S.3.5:	Develop and demonstrate proper vocal or instrumental technique. **Clarifications:** e.g., posture, breathing, fingering, embouchure, bow technique, tuning, strumming
MA.K12.MTR.1.1:	Mathematicians who participate in effortful learning both individually and with others: • Analyze the problem in a way that makes sense given the task. • Ask questions that will help with solving the task. • Build perseverance by modifying methods as needed while solving a challenging task. • Stay engaged and maintain a positive mindset when working to solve tasks. • Help and support each other when attempting a new method or approach. **Clarifications:** Teachers who encourage students to participate actively in effortful learning both individually and with others: • Cultivate a community of growth mindset learners. • Foster perseverance in students by choosing tasks that are challenging. • Develop students' ability to analyze and problem solve. • Recognize students' effort when solving challenging problems.
MA.K12.MTR.2.1:	Demonstrate understanding by representing problems in multiple ways. Mathematicians who demonstrate understanding by representing problems in multiple ways: • Build understanding through modeling and using manipulatives. • Represent solutions to problems in multiple ways using objects, drawings, tables, graphs and equations. • Progress from modeling problems with objects and drawings to using algorithms and equations. • Express connections between concepts and representations. • Choose a representation based on the given context or purpose. **Clarifications:** Teachers who encourage students to demonstrate understanding by representing problems in multiple ways: • Help students make connections between concepts and representations. • Provide opportunities for students to use manipulatives when investigating concepts. • Guide students from concrete to pictorial to abstract representations as understanding progresses. • Show students that various representations can have different purposes and can be useful in different situations.
MA.K12.MTR.3.1:	Complete tasks with mathematical fluency. Mathematicians who complete tasks with mathematical fluency: • Select efficient and appropriate methods for solving problems within the given context. • Maintain flexibility and accuracy while performing procedures and mental calculations. • Complete tasks accurately and with confidence. • Adapt procedures to apply them to a new context. • Use feedback to improve efficiency when performing calculations. **Clarifications:** Teachers who encourage students to complete tasks with mathematical fluency: • Provide students with the flexibility to solve problems by selecting a procedure that allows them to solve efficiently and accurately. • Offer multiple opportunities for students to practice efficient and generalizable methods.

	• Provide opportunities for students to reflect on the method they used and determine if a more efficient method could have been used.
MA.K12.MTR.4.1:	Engage in discussions that reflect on the mathematical thinking of self and others. Mathematicians who engage in discussions that reflect on the mathematical thinking of self and others: • Communicate mathematical ideas, vocabulary and methods effectively. • Analyze the mathematical thinking of others. • Compare the efficiency of a method to those expressed by others. • Recognize errors and suggest how to correctly solve the task. • Justify results by explaining methods and processes. • Construct possible arguments based on evidence. **Clarifications:** Teachers who encourage students to engage in discussions that reflect on the mathematical thinking of self and others: • Establish a culture in which students ask questions of the teacher and their peers, and error is an opportunity for learning. • Create opportunities for students to discuss their thinking with peers. • Select, sequence and present student work to advance and deepen understanding of correct and increasingly efficient methods. • Develop students' ability to justify methods and compare their responses to the responses of their peers.
MA.K12.MTR.5.1:	Use patterns and structure to help understand and connect mathematical concepts. Mathematicians who use patterns and structure to help understand and connect mathematical concepts: • Focus on relevant details within a problem. • Create plans and procedures to logically order events, steps or ideas to solve problems. • Decompose a complex problem into manageable parts. • Relate previously learned concepts to new concepts. • Look for similarities among problems. • Connect solutions of problems to more complicated large-scale situations. **Clarifications:** Teachers who encourage students to use patterns and structure to help understand and connect mathematical concepts: • Help students recognize the patterns in the world around them and connect these patterns to mathematical concepts. • Support students to develop generalizations based on the similarities found among problems. • Provide opportunities for students to create plans and procedures to solve problems. • Develop students' ability to construct relationships between their current understanding and more sophisticated ways of thinking.
MA.K12.MTR.6.1:	Assess the reasonableness of solutions. Mathematicians who assess the reasonableness of solutions: • Estimate to discover possible solutions. • Use benchmark quantities to determine if a solution makes sense. • Check calculations when solving problems. • Verify possible solutions by explaining the methods used. • Evaluate results based on the given context. **Clarifications:** Teachers who encourage students to assess the reasonableness of solutions: • Have students estimate or predict solutions prior to solving. • Prompt students to continually ask, "Does this solution make sense? How do you know?" • Reinforce that students check their work as they progress within and after a task. • Strengthen students' ability to verify solutions through justifications.
MA.K12.MTR.7.1:	Apply mathematics to real-world contexts. Mathematicians who apply mathematics to real-world contexts: • Connect mathematical concepts to everyday experiences. • Use models and methods to understand, represent and solve problems. • Perform investigations to gather data or determine if a method is appropriate. • Redesign models and methods to improve accuracy or efficiency. **Clarifications:** Teachers who encourage students to apply mathematics to real-world contexts: • Provide opportunities for students to create models, both concrete and abstract, and perform investigations. • Challenge students to question the accuracy of their models and methods. • Support students as they validate conclusions by comparing them to the given situation. • Indicate how various concepts can be applied to other disciplines.
ELA.K12.EE.1.1:	Cite evidence to explain and justify reasoning. **Clarifications:** K-1 Students include textual evidence in their oral communication with guidance and support from adults. The evidence can consist of details from the text without naming the text. During 1st grade, students learn how to incorporate the evidence in their writing. 2-3 Students include relevant textual evidence in their written and oral communication. Students should name the text when they refer to it. In 3rd grade, students should use a combination of direct and indirect citations. 4-5 Students continue with previous skills and reference comments made by speakers and peers. Students cite texts that they've directly quoted, paraphrased, or used for information. When writing, students will use the form of citation dictated by the instructor or the style guide referenced by the instructor. 6-8 Students continue with previous skills and use a style guide to create a proper citation. 9-12 Students continue with previous skills and should be aware of existing style guides and the ways in which they differ.

ELA.K12.EE.2.1:	Read and comprehend grade-level complex texts proficiently. **Clarifications:** See Text Complexity for grade-level complexity bands and a text complexity rubric.
ELA.K12.EE.3.1:	Make inferences to support comprehension. **Clarifications:** Students will make inferences before the words infer or inference are introduced. Kindergarten students will answer questions like "Why is the girl smiling?" or make predictions about what will happen based on the title page. Students will use the terms and apply them in 2nd grade and beyond.
ELA.K12.EE.4.1:	Use appropriate collaborative techniques and active listening skills when engaging in discussions in a variety of situations. **Clarifications:** In kindergarten, students learn to listen to one another respectfully. In grades 1-2, students build upon these skills by justifying what they are thinking. For example: "I think _____ because _____." The collaborative conversations are becoming academic conversations. In grades 3-12, students engage in academic conversations discussing claims and justifying their reasoning, refining and applying skills. Students build on ideas, propel the conversation, and support claims and counterclaims with evidence.
ELA.K12.EE.5.1:	Use the accepted rules governing a specific format to create quality work. **Clarifications:** Students will incorporate skills learned into work products to produce quality work. For students to incorporate these skills appropriately, they must receive instruction. A 3rd grade student creating a poster board display must have instruction in how to effectively present information to do quality work.
ELA.K12.EE.6.1:	Use appropriate voice and tone when speaking or writing. **Clarifications:** In kindergarten and 1st grade, students learn the difference between formal and informal language. For example, the way we talk to our friends differs from the way we speak to adults. In 2nd grade and beyond, students practice appropriate social and academic language to discuss texts.
DA.912.F.3.8:	Demonstrate effective teamwork and accountability, using compromise, collaboration, and conflict resolution, to set and achieve goals as required in the work environment.
DA.912.S.2.1:	Sustain focused attention, respect, and discipline during class, rehearsal, and performance.
ELD.K12.ELL.SI.1:	English language learners communicate for social and instructional purposes within the school setting.

General Course Information and Notes

VERSION DESCRIPTION

Students with substantial orchestral experience focus on mastery of advanced music skills, techniques, and processes through study, rehearsal, and performance of high-quality orchestra literature. Advanced string players self-diagnose and consider multiple solutions to artistic challenges based on background knowledge of the repertoire, and explore creativity through composition, arranging, and/or use of technology. Public performances may serve as a culmination of specific instructional goals. Students may be required to attend and/or participate in rehearsals and performances outside the school day to support, extend, and assess learning in the classroom. Students in this class may need to obtain (e.g., borrow, rent, purchase) an instrument from an outside source.

GENERAL NOTES

Honors and Advanced Level Course Note: Advanced courses require a greater demand on students through increased academic rigor. Academic rigor is obtained through the application, analysis, evaluation, and creation of complex ideas that are often abstract and multi-faceted. Students are challenged to think and collaborate critically on the content they are learning. Honors level rigor will be achieved by increasing text complexity through text selection, focus on high-level qualitative measures, and complexity of task. Instruction will be structured to give students a deeper understanding of conceptual themes and organization within and across disciplines. Academic rigor is more than simply assigning to students a greater quantity of work.

Florida's Benchmarks for Excellent Student Thinking (B.E.S.T.) Standards
This course includes Florida's B.E.S.T. ELA Expectations (EE) and Mathematical Thinking and Reasoning Standards (MTRs) for students. Florida educators should intentionally embed these standards within the content and their instruction as applicable. For guidance on the implementation of the EEs and MTRs, please visit cpalms.org/Standards/BEST_Standards.aspx and select the appropriate B.E.S.T. Standards package.

English Language Development ELD Standards Special Notes Section:
Teachers are required to provide listening, speaking, reading and writing instruction that allows English language learners (ELL) to communicate for social and instructional purposes within the school setting. For the given level of English language proficiency and with visual, graphic, or interactive support, students will interact with grade level words, expressions, sentences and discourse to process or produce language necessary for academic success. The ELD standard should specify a relevant content area concept or topic of study chosen by curriculum developers and teachers which maximizes an ELL's need for communication and social skills. To access an ELL supporting document which delineates performance definitions and descriptors, please click on the following link: cpalms.org/uploads/docs/standards/eld/SI.pdf

GENERAL INFORMATION

Course Number: 1302410

Course Path: Section: Grades PreK to 12 Education Courses > **Grade Group:** Grades 9 to 12 and Adult Education Courses > **Subject:** Music Education >

SubSubject: Instrumental Music >
Abbreviated Title: ORCH 6 HON
Number of Credits: One (1) credit
Course Length: Year (Y)
Course Attributes:
- Honors

Course Type: Core Academic Course
Course Level: 3
Course Status: Draft - Course Pending Approval
Grade Level(s): 9,10,11,12
Graduation Requirement: Performing/Fine Arts

Educator Certifications

Music (Elementary and Secondary Grades K-12)
Instrumental Music (Secondary Grades 7-12)
Instrumental Music (Elementary and Secondary Grades K-12)

Instrumental Techniques 1 (#1302420) 2022 - And Beyond

Course Standards

Name	Description
MU.912.C.1.1:	Apply listening strategies to promote appreciation and understanding of unfamiliar musical works. **Clarifications:** e.g., listening maps, active listening, checklists
MU.912.C.2.1:	Evaluate and make appropriate adjustments to personal performance in solo and ensembles.
MU.912.C.2.2:	Evaluate performance quality in recorded and/or live performances.
MU.912.C.3.1:	Make critical evaluations, based on exemplary models, of the quality and effectiveness of performances and apply the criteria to personal development in music.
MU.912.F.3.3:	Define, prioritize, monitor, and successfully complete tasks related to individual musical performance or project presentation, without direct oversight, demonstrating skills for use in the workplace.
MU.912.O.2.1:	Transfer accepted composition conventions and performance practices of a specific style to a contrasting style of music.
MU.912.O.3.2:	Interpret and perform expressive elements indicated by the musical score and/or conductor.
MU.912.S.2.2:	Transfer expressive elements and performance techniques from one piece of music to another.
MU.912.S.3.1:	Synthesize a broad range of musical skills by performing a varied repertoire with expression, appropriate stylistic interpretation, technical accuracy, and kinesthetic energy.
MU.912.S.3.4:	Analyze and describe the effect of rehearsal sessions and/or strategies on refinement of skills and techniques.
MU.912.S.3.5:	Develop and demonstrate proper vocal or instrumental technique. **Clarifications:** e.g., posture, breathing, fingering, embouchure, bow technique, tuning, strumming
MA.K12.MTR.1.1:	Mathematicians who participate in effortful learning both individually and with others: • Analyze the problem in a way that makes sense given the task. • Ask questions that will help with solving the task. • Build perseverance by modifying methods as needed while solving a challenging task. • Stay engaged and maintain a positive mindset when working to solve tasks. • Help and support each other when attempting a new method or approach. **Clarifications:** Teachers who encourage students to participate actively in effortful learning both individually and with others: • Cultivate a community of growth mindset learners. • Foster perseverance in students by choosing tasks that are challenging. • Develop students' ability to analyze and problem solve. • Recognize students' effort when solving challenging problems.
MA.K12.MTR.2.1:	Demonstrate understanding by representing problems in multiple ways. Mathematicians who demonstrate understanding by representing problems in multiple ways: • Build understanding through modeling and using manipulatives. • Represent solutions to problems in multiple ways using objects, drawings, tables, graphs and equations. • Progress from modeling problems with objects and drawings to using algorithms and equations. • Express connections between concepts and representations. • Choose a representation based on the given context or purpose. **Clarifications:** Teachers who encourage students to demonstrate understanding by representing problems in multiple ways: • Help students make connections between concepts and representations. • Provide opportunities for students to use manipulatives when investigating concepts. • Guide students from concrete to pictorial to abstract representations as understanding progresses. • Show students that various representations can have different purposes and can be useful in different situations.
MA.K12.MTR.3.1:	Complete tasks with mathematical fluency. Mathematicians who complete tasks with mathematical fluency: • Select efficient and appropriate methods for solving problems within the given context. • Maintain flexibility and accuracy while performing procedures and mental calculations. • Complete tasks accurately and with confidence. • Adapt procedures to apply them to a new context. • Use feedback to improve efficiency when performing calculations. **Clarifications:** Teachers who encourage students to complete tasks with mathematical fluency: • Provide students with the flexibility to solve problems by selecting a procedure that allows them to solve efficiently and accurately. • Offer multiple opportunities for students to practice efficient and generalizable methods. • Provide opportunities for students to reflect on the method they used and determine if a more efficient method could have been used.
	Engage in discussions that reflect on the mathematical thinking of self and others. Mathematicians who engage in discussions that reflect on the mathematical thinking of self and others:

MA.K12.MTR.4.1:	• Communicate mathematical ideas, vocabulary and methods effectively. • Analyze the mathematical thinking of others. • Compare the efficiency of a method to those expressed by others. • Recognize errors and suggest how to correctly solve the task. • Justify results by explaining methods and processes. • Construct possible arguments based on evidence. **Clarifications:** Teachers who encourage students to engage in discussions that reflect on the mathematical thinking of self and others: • Establish a culture in which students ask questions of the teacher and their peers, and error is an opportunity for learning. • Create opportunities for students to discuss their thinking with peers. • Select, sequence and present student work to advance and deepen understanding of correct and increasingly efficient methods. • Develop students' ability to justify methods and compare their responses to the responses of their peers.
MA.K12.MTR.5.1:	Use patterns and structure to help understand and connect mathematical concepts. Mathematicians who use patterns and structure to help understand and connect mathematical concepts: • Focus on relevant details within a problem. • Create plans and procedures to logically order events, steps or ideas to solve problems. • Decompose a complex problem into manageable parts. • Relate previously learned concepts to new concepts. • Look for similarities among problems. • Connect solutions of problems to more complicated large-scale situations. **Clarifications:** Teachers who encourage students to use patterns and structure to help understand and connect mathematical concepts: • Help students recognize the patterns in the world around them and connect these patterns to mathematical concepts. • Support students to develop generalizations based on the similarities found among problems. • Provide opportunities for students to create plans and procedures to solve problems. • Develop students' ability to construct relationships between their current understanding and more sophisticated ways of thinking.
MA.K12.MTR.6.1:	Assess the reasonableness of solutions. Mathematicians who assess the reasonableness of solutions: • Estimate to discover possible solutions. • Use benchmark quantities to determine if a solution makes sense. • Check calculations when solving problems. • Verify possible solutions by explaining the methods used. • Evaluate results based on the given context. **Clarifications:** Teachers who encourage students to assess the reasonableness of solutions: • Have students estimate or predict solutions prior to solving. • Prompt students to continually ask, "Does this solution make sense? How do you know?" • Reinforce that students check their work as they progress within and after a task. • Strengthen students' ability to verify solutions through justifications.
MA.K12.MTR.7.1:	Apply mathematics to real-world contexts. Mathematicians who apply mathematics to real-world contexts: • Connect mathematical concepts to everyday experiences. • Use models and methods to understand, represent and solve problems. • Perform investigations to gather data or determine if a method is appropriate. • Redesign models and methods to improve accuracy or efficiency. **Clarifications:** Teachers who encourage students to apply mathematics to real-world contexts: • Provide opportunities for students to create models, both concrete and abstract, and perform investigations. • Challenge students to question the accuracy of their models and methods. • Support students as they validate conclusions by comparing them to the given situation. • Indicate how various concepts can be applied to other disciplines.
ELA.K12.EE.1.1:	Cite evidence to explain and justify reasoning. **Clarifications:** K-1 Students include textual evidence in their oral communication with guidance and support from adults. The evidence can consist of details from the text without naming the text. During 1st grade, students learn how to incorporate the evidence in their writing. 2-3 Students include relevant textual evidence in their written and oral communication. Students should name the text when they refer to it. In 3rd grade, students should use a combination of direct and indirect citations. 4-5 Students continue with previous skills and reference comments made by speakers and peers. Students cite texts that they've directly quoted, paraphrased, or used for information. When writing, students will use the form of citation dictated by the instructor or the style guide referenced by the instructor. 6-8 Students continue with previous skills and use a style guide to create a proper citation. 9-12 Students continue with previous skills and should be aware of existing style guides and the ways in which they differ.
ELA.K12.EE.2.1:	Read and comprehend grade-level complex texts proficiently. **Clarifications:** See Text Complexity for grade-level complexity bands and a text complexity rubric.
	Make inferences to support comprehension.

ELA.K12.EE.3.1:	**Clarifications:** Students will make inferences before the words infer or inference are introduced. Kindergarten students will answer questions like "Why is the girl smiling?" or make predictions about what will happen based on the title page. Students will use the terms and apply them in 2nd grade and beyond.
ELA.K12.EE.4.1:	Use appropriate collaborative techniques and active listening skills when engaging in discussions in a variety of situations. **Clarifications:** In kindergarten, students learn to listen to one another respectfully. In grades 1-2, students build upon these skills by justifying what they are thinking. For example: "I think _____ because _____." The collaborative conversations are becoming academic conversations. In grades 3-12, students engage in academic conversations discussing claims and justifying their reasoning, refining and applying skills. Students build on ideas, propel the conversation, and support claims and counterclaims with evidence.
ELA.K12.EE.5.1:	Use the accepted rules governing a specific format to create quality work. **Clarifications:** Students will incorporate skills learned into work products to produce quality work. For students to incorporate these skills appropriately, they must receive instruction. A 3rd grade student creating a poster board display must have instruction in how to effectively present information to do quality work.
ELA.K12.EE.6.1:	Use appropriate voice and tone when speaking or writing. **Clarifications:** In kindergarten and 1st grade, students learn the difference between formal and informal language. For example, the way we talk to our friends differs from the way we speak to adults. In 2nd grade and beyond, students practice appropriate social and academic language to discuss texts.
DA.912.S.2.1:	Sustain focused attention, respect, and discipline during class, rehearsal, and performance.
ELD.K12.ELL.SI.1:	English language learners communicate for social and instructional purposes within the school setting.

General Course Information and Notes

VERSION DESCRIPTION

Students in this entry-level class focus on the development of musical and technical skills on a specific instrument through etudes, scales, and selected music literature. Through problem-solving, critical thinking, and reflection, students develop the physical and cognitive skills to be more disciplined performers. Public performances may serve as a culmination of specific instructional goals. Students may be required to attend and/or participate in rehearsals and performances outside the school day to support, extend, and assess learning in the classroom. This course may also require students to obtain a musical instrument (e.g., borrow, rent, purchase) from an outside source.

GENERAL NOTES

Florida's Benchmarks for Excellent Student Thinking (B.E.S.T.) Standards
This course includes Florida's B.E.S.T. ELA Expectations (EE) and Mathematical Thinking and Reasoning Standards (MTRs) for students. Florida educators should intentionally embed these standards within the content and their instruction as applicable. For guidance on the implementation of the EEs and MTRs, please visit cpalms.org/Standards/BEST_Standards.aspx and select the appropriate B.E.S.T. Standards package.

English Language Development ELD Standards Special Notes Section:
Teachers are required to provide listening, speaking, reading and writing instruction that allows English language learners (ELL) to communicate for social and instructional purposes within the school setting. For the given level of English language proficiency and with visual, graphic, or interactive support, students will interact with grade level words, expressions, sentences and discourse to process or produce language necessary for academic success. The ELD standard should specify a relevant content area concept or topic of study chosen by curriculum developers and teachers which maximizes an ELL's need for communication and social skills. To access an ELL supporting document which delineates performance definitions and descriptors, please click on the following link: cpalms.org/uploads/docs/standards/eld/SI.pdf

GENERAL INFORMATION

Course Number: 1302420

Course Path: Section: Grades PreK to 12 Education Courses > **Grade Group:** Grades 9 to 12 and Adult Education Courses > **Subject:** Music Education > **SubSubject:** Instrumental Music > **Abbreviated Title:** INSTRU TECNQS 1

Number of Credits: One (1) credit

Course Length: Year (Y)

Course Type: Core Academic Course

Course Level: 2

Course Status: Draft - Course Pending Approval

Grade Level(s): 9,10,11,12

Graduation Requirement: Performing/Fine Arts

Educator Certifications

Music (Elementary and Secondary Grades K-12)
Instrumental Music (Secondary Grades 7-12)
Instrumental Music (Elementary and Secondary Grades K-12)

Instrumental Techniques 2 (#1302430) 2022 - And Beyond

Course Standards

Name	Description
MU.912.C.1.1:	Apply listening strategies to promote appreciation and understanding of unfamiliar musical works. **Clarifications:** e.g., listening maps, active listening, checklists
MU.912.C.2.1:	Evaluate and make appropriate adjustments to personal performance in solo and ensembles.
MU.912.C.2.2:	Evaluate performance quality in recorded and/or live performances.
MU.912.C.3.1:	Make critical evaluations, based on exemplary models, of the quality and effectiveness of performances and apply the criteria to personal development in music.
MU.912.F.3.3:	Define, prioritize, monitor, and successfully complete tasks related to individual musical performance or project presentation, without direct oversight, demonstrating skills for use in the workplace.
MU.912.F.3.4:	Design and implement a personal learning plan, related to the study of music, which demonstrates self-assessment, brain-storming, decision-making, and initiative to advance skills and/or knowledge.
MU.912.O.2.1:	Transfer accepted composition conventions and performance practices of a specific style to a contrasting style of music.
MU.912.O.3.2:	Interpret and perform expressive elements indicated by the musical score and/or conductor.
MU.912.S.2.2:	Transfer expressive elements and performance techniques from one piece of music to another.
MU.912.S.3.1:	Synthesize a broad range of musical skills by performing a varied repertoire with expression, appropriate stylistic interpretation, technical accuracy, and kinesthetic energy.
MU.912.S.3.2:	Sight-read music accurately and expressively to show synthesis of skills. **Clarifications:** e.g., musical elements, expressive qualities, performance technique
MU.912.S.3.4:	Analyze and describe the effect of rehearsal sessions and/or strategies on refinement of skills and techniques.
MU.912.S.3.5:	Develop and demonstrate proper vocal or instrumental technique. **Clarifications:** e.g., posture, breathing, fingering, embouchure, bow technique, tuning, strumming
MA.K12.MTR.1.1:	Mathematicians who participate in effortful learning both individually and with others: • Analyze the problem in a way that makes sense given the task. • Ask questions that will help with solving the task. • Build perseverance by modifying methods as needed while solving a challenging task. • Stay engaged and maintain a positive mindset when working to solve tasks. • Help and support each other when attempting a new method or approach. **Clarifications:** Teachers who encourage students to participate actively in effortful learning both individually and with others: • Cultivate a community of growth mindset learners. • Foster perseverance in students by choosing tasks that are challenging. • Develop students' ability to analyze and problem solve. • Recognize students' effort when solving challenging problems.
MA.K12.MTR.2.1:	Demonstrate understanding by representing problems in multiple ways. Mathematicians who demonstrate understanding by representing problems in multiple ways: • Build understanding through modeling and using manipulatives. • Represent solutions to problems in multiple ways using objects, drawings, tables, graphs and equations. • Progress from modeling problems with objects and drawings to using algorithms and equations. • Express connections between concepts and representations. • Choose a representation based on the given context or purpose. **Clarifications:** Teachers who encourage students to demonstrate understanding by representing problems in multiple ways: • Help students make connections between concepts and representations. • Provide opportunities for students to use manipulatives when investigating concepts. • Guide students from concrete to pictorial to abstract representations as understanding progresses. • Show students that various representations can have different purposes and can be useful in different situations.
MA.K12.MTR.3.1:	Complete tasks with mathematical fluency. Mathematicians who complete tasks with mathematical fluency: • Select efficient and appropriate methods for solving problems within the given context. • Maintain flexibility and accuracy while performing procedures and mental calculations. • Complete tasks accurately and with confidence. • Adapt procedures to apply them to a new context. • Use feedback to improve efficiency when performing calculations. **Clarifications:** Teachers who encourage students to complete tasks with mathematical fluency:

- Provide students with the flexibility to solve problems by selecting a procedure that allows them to solve efficiently and accurately.
- Offer multiple opportunities for students to practice efficient and generalizable methods.
- Provide opportunities for students to reflect on the method they used and determine if a more efficient method could have been used.

MA.K12.MTR.4.1:

Engage in discussions that reflect on the mathematical thinking of self and others.
Mathematicians who engage in discussions that reflect on the mathematical thinking of self and others:

- Communicate mathematical ideas, vocabulary and methods effectively.
- Analyze the mathematical thinking of others.
- Compare the efficiency of a method to those expressed by others.
- Recognize errors and suggest how to correctly solve the task.
- Justify results by explaining methods and processes.
- Construct possible arguments based on evidence.

Clarifications:
Teachers who encourage students to engage in discussions that reflect on the mathematical thinking of self and others:

- Establish a culture in which students ask questions of the teacher and their peers, and error is an opportunity for learning.
- Create opportunities for students to discuss their thinking with peers.
- Select, sequence and present student work to advance and deepen understanding of correct and increasingly efficient methods.
- Develop students' ability to justify methods and compare their responses to the responses of their peers.

MA.K12.MTR.5.1:

Use patterns and structure to help understand and connect mathematical concepts.
Mathematicians who use patterns and structure to help understand and connect mathematical concepts:

- Focus on relevant details within a problem.
- Create plans and procedures to logically order events, steps or ideas to solve problems.
- Decompose a complex problem into manageable parts.
- Relate previously learned concepts to new concepts.
- Look for similarities among problems.
- Connect solutions of problems to more complicated large-scale situations.

Clarifications:
Teachers who encourage students to use patterns and structure to help understand and connect mathematical concepts:

- Help students recognize the patterns in the world around them and connect these patterns to mathematical concepts.
- Support students to develop generalizations based on the similarities found among problems.
- Provide opportunities for students to create plans and procedures to solve problems.
- Develop students' ability to construct relationships between their current understanding and more sophisticated ways of thinking.

MA.K12.MTR.6.1:

Assess the reasonableness of solutions.
Mathematicians who assess the reasonableness of solutions:

- Estimate to discover possible solutions.
- Use benchmark quantities to determine if a solution makes sense.
- Check calculations when solving problems.
- Verify possible solutions by explaining the methods used.
- Evaluate results based on the given context.

Clarifications:
Teachers who encourage students to assess the reasonableness of solutions:

- Have students estimate or predict solutions prior to solving.
- Prompt students to continually ask, "Does this solution make sense? How do you know?"
- Reinforce that students check their work as they progress within and after a task.
- Strengthen students' ability to verify solutions through justifications.

MA.K12.MTR.7.1:

Apply mathematics to real-world contexts.
Mathematicians who apply mathematics to real-world contexts:

- Connect mathematical concepts to everyday experiences.
- Use models and methods to understand, represent and solve problems.
- Perform investigations to gather data or determine if a method is appropriate. • Redesign models and methods to improve accuracy or efficiency.

Clarifications:
Teachers who encourage students to apply mathematics to real-world contexts:

- Provide opportunities for students to create models, both concrete and abstract, and perform investigations.
- Challenge students to question the accuracy of their models and methods.
- Support students as they validate conclusions by comparing them to the given situation.
- Indicate how various concepts can be applied to other disciplines.

ELA.K12.EE.1.1:

Cite evidence to explain and justify reasoning.

Clarifications:
K-1 Students include textual evidence in their oral communication with guidance and support from adults. The evidence can consist of details from the text without naming the text. During 1st grade, students learn how to incorporate the evidence in their writing.
2-3 Students include relevant textual evidence in their written and oral communication. Students should name the text when they refer to it. In 3rd grade, students should use a combination of direct and indirect citations.

4-5 Students continue with previous skills and reference comments made by speakers and peers. Students cite texts that they've directly quoted, paraphrased, or used for information. When writing, students will use the form of citation dictated by the instructor or the style guide referenced by the instructor.

6-8 Students continue with previous skills and use a style guide to create a proper citation.

	9-12 Students continue with previous skills and should be aware of existing style guides and the ways in which they differ.
ELA.K12.EE.2.1:	Read and comprehend grade-level complex texts proficiently. **Clarifications:** See Text Complexity for grade-level complexity bands and a text complexity rubric.
ELA.K12.EE.3.1:	Make inferences to support comprehension. **Clarifications:** Students will make inferences before the words infer or inference are introduced. Kindergarten students will answer questions like "Why is the girl smiling?" or make predictions about what will happen based on the title page. Students will use the terms and apply them in 2nd grade and beyond.
ELA.K12.EE.4.1:	Use appropriate collaborative techniques and active listening skills when engaging in discussions in a variety of situations. **Clarifications:** In kindergarten, students learn to listen to one another respectfully. In grades 1-2, students build upon these skills by justifying what they are thinking. For example: "I think _____ because _____." The collaborative conversations are becoming academic conversations. In grades 3-12, students engage in academic conversations discussing claims and justifying their reasoning, refining and applying skills. Students build on ideas, propel the conversation, and support claims and counterclaims with evidence.
ELA.K12.EE.5.1:	Use the accepted rules governing a specific format to create quality work. **Clarifications:** Students will incorporate skills learned into work products to produce quality work. For students to incorporate these skills appropriately, they must receive instruction. A 3rd grade student creating a poster board display must have instruction in how to effectively present information to do quality work.
ELA.K12.EE.6.1:	Use appropriate voice and tone when speaking or writing. **Clarifications:** In kindergarten and 1st grade, students learn the difference between formal and informal language. For example, the way we talk to our friends differs from the way we speak to adults. In 2nd grade and beyond, students practice appropriate social and academic language to discuss texts.
DA.912.S.2.1:	Sustain focused attention, respect, and discipline during class, rehearsal, and performance.
ELD.K12.ELL.SI.1:	English language learners communicate for social and instructional purposes within the school setting.

General Course Information and Notes

VERSION DESCRIPTION

Students in this novice-level class continue to develop musical and technical skills on a specific instrument through developmentally appropriate solo literature, etudes, scales, and exercises. Through problem-solving, critical thinking, and reflection, students develop the physical and cognitive skills necessary to be more disciplined performers. Public performances may serve as a culmination of specific instructional goals. Students may be required to attend and/or participate in rehearsals and performances outside the school day to support, extend, and assess learning in the classroom. This course may also require students to obtain a musical instrument (e.g., borrow, rent, purchase) from an outside source.

GENERAL NOTES

Florida's Benchmarks for Excellent Student Thinking (B.E.S.T.) Standards
This course includes Florida's B.E.S.T. ELA Expectations (EE) and Mathematical Thinking and Reasoning Standards (MTRs) for students. Florida educators should intentionally embed these standards within the content and their instruction as applicable. For guidance on the implementation of the EEs and MTRs, please visit cpalms.org/Standards/BEST_Standards.aspx and select the appropriate B.E.S.T. Standards package.

English Language Development ELD Standards Special Notes Section:
Teachers are required to provide listening, speaking, reading and writing instruction that allows English language learners (ELL) to communicate for social and instructional purposes within the school setting. For the given level of English language proficiency and with visual, graphic, or interactive support, students will interact with grade level words, expressions, sentences and discourse to process or produce language necessary for academic success. The ELD standard should specify a relevant content area concept or topic of study chosen by curriculum developers and teachers which maximizes an ELL's need for communication and social skills. To access an ELL supporting document which delineates performance definitions and descriptors, please click on the following link: cpalms.org/uploads/docs/standards/eld/SI.pdf

GENERAL INFORMATION

Course Number: 1302430

Course Path: Section: Grades PreK to 12 Education Courses > **Grade Group:** Grades 9 to 12 and Adult Education Courses > **Subject:** Music Education > **SubSubject:** Instrumental Music > **Abbreviated Title:** INSTRU TECNQS 2

Number of Credits: One (1) credit

Course Length: Year (Y)

Course Type: Core Academic Course

Course Level: 2

Course Status: Draft - Course Pending Approval

Grade Level(s): 9,10,11,12

Graduation Requirement: Performing/Fine Arts

Educator Certifications

Music (Elementary and Secondary Grades K-12)
Instrumental Music (Secondary Grades 7-12)
Instrumental Music (Elementary and Secondary Grades K-12)

Instrumental Techniques 3 (#1302440) 2022 - And Beyond

Course Standards

Name	Description
MU.912.C.1.1:	Apply listening strategies to promote appreciation and understanding of unfamiliar musical works. **Clarifications:** e.g., listening maps, active listening, checklists
MU.912.C.2.1:	Evaluate and make appropriate adjustments to personal performance in solo and ensembles.
MU.912.C.2.2:	Evaluate performance quality in recorded and/or live performances.
MU.912.C.3.1:	Make critical evaluations, based on exemplary models, of the quality and effectiveness of performances and apply the criteria to personal development in music.
MU.912.F.3.3:	Define, prioritize, monitor, and successfully complete tasks related to individual musical performance or project presentation, without direct oversight, demonstrating skills for use in the workplace.
MU.912.F.3.4:	Design and implement a personal learning plan, related to the study of music, which demonstrates self-assessment, brain-storming, decision-making, and initiative to advance skills and/or knowledge.
MU.912.H.1.1:	Investigate and discuss how a culture's traditions are reflected through its music. **Clarifications:** e.g., patriotic, folk, celebration, entertainment, spiritual
MU.912.H.3.1:	Apply knowledge of science, math, and music to demonstrate, through an acoustic or digital performance medium, how sound production affects musical performance. **Clarifications:** e.g., acoustics, sound amplification, materials, mechanics
MU.912.O.2.1:	Transfer accepted composition conventions and performance practices of a specific style to a contrasting style of music.
MU.912.O.3.1:	Analyze expressive elements in a musical work and describe how the choices and manipulations of the elements support, for the listener, the implied meaning of the composer/performer. **Clarifications:** e.g., tempo markings, expression markings, articulation markings, phrasing, scales, modes, harmonic structure, timbre choice, rhythm, orchestration
MU.912.O.3.2:	Interpret and perform expressive elements indicated by the musical score and/or conductor.
MU.912.S.2.2:	Transfer expressive elements and performance techniques from one piece of music to another.
MU.912.S.3.1:	Synthesize a broad range of musical skills by performing a varied repertoire with expression, appropriate stylistic interpretation, technical accuracy, and kinesthetic energy.
MU.912.S.3.2:	Sight-read music accurately and expressively to show synthesis of skills. **Clarifications:** e.g., musical elements, expressive qualities, performance technique
MU.912.S.3.4:	Analyze and describe the effect of rehearsal sessions and/or strategies on refinement of skills and techniques.
MU.912.S.3.5:	Develop and demonstrate proper vocal or instrumental technique. **Clarifications:** e.g., posture, breathing, fingering, embouchure, bow technique, tuning, strumming
MA.K12.MTR.1.1:	Mathematicians who participate in effortful learning both individually and with others: • Analyze the problem in a way that makes sense given the task. • Ask questions that will help with solving the task. • Build perseverance by modifying methods as needed while solving a challenging task. • Stay engaged and maintain a positive mindset when working to solve tasks. • Help and support each other when attempting a new method or approach. **Clarifications:** Teachers who encourage students to participate actively in effortful learning both individually and with others: • Cultivate a community of growth mindset learners. • Foster perseverance in students by choosing tasks that are challenging. • Develop students' ability to analyze and problem solve. • Recognize students' effort when solving challenging problems.
MA.K12.MTR.2.1:	Demonstrate understanding by representing problems in multiple ways. Mathematicians who demonstrate understanding by representing problems in multiple ways: • Build understanding through modeling and using manipulatives. • Represent solutions to problems in multiple ways using objects, drawings, tables, graphs and equations. • Progress from modeling problems with objects and drawings to using algorithms and equations. • Express connections between concepts and representations. • Choose a representation based on the given context or purpose. **Clarifications:** Teachers who encourage students to demonstrate understanding by representing problems in multiple ways: • Help students make connections between concepts and representations.

- Provide opportunities for students to use manipulatives when investigating concepts.
- Guide students from concrete to pictorial to abstract representations as understanding progresses.
- Show students that various representations can have different purposes and can be useful in different situations.

MA.K12.MTR.3.1:

Complete tasks with mathematical fluency.
Mathematicians who complete tasks with mathematical fluency:

- Select efficient and appropriate methods for solving problems within the given context.
- Maintain flexibility and accuracy while performing procedures and mental calculations.
- Complete tasks accurately and with confidence.
- Adapt procedures to apply them to a new context.
- Use feedback to improve efficiency when performing calculations.

Clarifications:
Teachers who encourage students to complete tasks with mathematical fluency:

- Provide students with the flexibility to solve problems by selecting a procedure that allows them to solve efficiently and accurately.
- Offer multiple opportunities for students to practice efficient and generalizable methods.
- Provide opportunities for students to reflect on the method they used and determine if a more efficient method could have been used.

MA.K12.MTR.4.1:

Engage in discussions that reflect on the mathematical thinking of self and others.
Mathematicians who engage in discussions that reflect on the mathematical thinking of self and others:

- Communicate mathematical ideas, vocabulary and methods effectively.
- Analyze the mathematical thinking of others.
- Compare the efficiency of a method to those expressed by others.
- Recognize errors and suggest how to correctly solve the task.
- Justify results by explaining methods and processes.
- Construct possible arguments based on evidence.

Clarifications:
Teachers who encourage students to engage in discussions that reflect on the mathematical thinking of self and others:

- Establish a culture in which students ask questions of the teacher and their peers, and error is an opportunity for learning.
- Create opportunities for students to discuss their thinking with peers.
- Select, sequence and present student work to advance and deepen understanding of correct and increasingly efficient methods.
- Develop students' ability to justify methods and compare their responses to the responses of their peers.

MA.K12.MTR.5.1:

Use patterns and structure to help understand and connect mathematical concepts.
Mathematicians who use patterns and structure to help understand and connect mathematical concepts:

- Focus on relevant details within a problem.
- Create plans and procedures to logically order events, steps or ideas to solve problems.
- Decompose a complex problem into manageable parts.
- Relate previously learned concepts to new concepts.
- Look for similarities among problems.
- Connect solutions of problems to more complicated large-scale situations.

Clarifications:
Teachers who encourage students to use patterns and structure to help understand and connect mathematical concepts:

- Help students recognize the patterns in the world around them and connect these patterns to mathematical concepts.
- Support students to develop generalizations based on the similarities found among problems.
- Provide opportunities for students to create plans and procedures to solve problems.
- Develop students' ability to construct relationships between their current understanding and more sophisticated ways of thinking.

MA.K12.MTR.6.1:

Assess the reasonableness of solutions.
Mathematicians who assess the reasonableness of solutions:

- Estimate to discover possible solutions.
- Use benchmark quantities to determine if a solution makes sense.
- Check calculations when solving problems.
- Verify possible solutions by explaining the methods used.
- Evaluate results based on the given context.

Clarifications:
Teachers who encourage students to assess the reasonableness of solutions:

- Have students estimate or predict solutions prior to solving.
- Prompt students to continually ask, "Does this solution make sense? How do you know?"
- Reinforce that students check their work as they progress within and after a task.
- Strengthen students' ability to verify solutions through justifications.

MA.K12.MTR.7.1:

Apply mathematics to real-world contexts.
Mathematicians who apply mathematics to real-world contexts:

- Connect mathematical concepts to everyday experiences.
- Use models and methods to understand, represent and solve problems.
- Perform investigations to gather data or determine if a method is appropriate. • Redesign models and methods to improve accuracy or efficiency.

Clarifications:
Teachers who encourage students to apply mathematics to real-world contexts:

- Provide opportunities for students to create models, both concrete and abstract, and perform investigations.
- Challenge students to question the accuracy of their models and methods.

	• Support students as they validate conclusions by comparing them to the given situation. • Indicate how various concepts can be applied to other disciplines.
ELA.K12.EE.1.1:	Cite evidence to explain and justify reasoning. **Clarifications:** K-1 Students include textual evidence in their oral communication with guidance and support from adults. The evidence can consist of details from the text without naming the text. During 1st grade, students learn how to incorporate the evidence in their writing. 2-3 Students include relevant textual evidence in their written and oral communication. Students should name the text when they refer to it. In 3rd grade, students should use a combination of direct and indirect citations. 4-5 Students continue with previous skills and reference comments made by speakers and peers. Students cite texts that they've directly quoted, paraphrased, or used for information. When writing, students will use the form of citation dictated by the instructor or the style guide referenced by the instructor. 6-8 Students continue with previous skills and use a style guide to create a proper citation. 9-12 Students continue with previous skills and should be aware of existing style guides and the ways in which they differ.
ELA.K12.EE.2.1:	Read and comprehend grade-level complex texts proficiently. **Clarifications:** See Text Complexity for grade-level complexity bands and a text complexity rubric.
ELA.K12.EE.3.1:	Make inferences to support comprehension. **Clarifications:** Students will make inferences before the words infer or inference are introduced. Kindergarten students will answer questions like "Why is the girl smiling?" or make predictions about what will happen based on the title page. Students will use the terms and apply them in 2nd grade and beyond.
ELA.K12.EE.4.1:	Use appropriate collaborative techniques and active listening skills when engaging in discussions in a variety of situations. **Clarifications:** In kindergarten, students learn to listen to one another respectfully. In grades 1-2, students build upon these skills by justifying what they are thinking. For example: "I think _____ because _____." The collaborative conversations are becoming academic conversations. In grades 3-12, students engage in academic conversations discussing claims and justifying their reasoning, refining and applying skills. Students build on ideas, propel the conversation, and support claims and counterclaims with evidence.
ELA.K12.EE.5.1:	Use the accepted rules governing a specific format to create quality work. **Clarifications:** Students will incorporate skills learned into work products to produce quality work. For students to incorporate these skills appropriately, they must receive instruction. A 3rd grade student creating a poster board display must have instruction in how to effectively present information to do quality work.
ELA.K12.EE.6.1:	Use appropriate voice and tone when speaking or writing. **Clarifications:** In kindergarten and 1st grade, students learn the difference between formal and informal language. For example, the way we talk to our friends differs from the way we speak to adults. In 2nd grade and beyond, students practice appropriate social and academic language to discuss texts.
DA.912.S.2.1:	Sustain focused attention, respect, and discipline during class, rehearsal, and performance.
ELD.K12.ELL.SI.1:	English language learners communicate for social and instructional purposes within the school setting.

General Course Information and Notes

VERSION DESCRIPTION

Students in this intermediate-level class develop their musical and technical skills further on a specific instrument, and expand their technical and performance skills, enhanced by historical and cultural background knowledge of the music. Students explore more demanding solo literature, etudes, and technical exercises with increasing independence. Public performances may serve as a culmination of specific instructional goals. Students may be required to attend and/or participate in rehearsals and performances outside the school day to support, extend, and assess learning in the classroom. This course may also require students to obtain a musical instrument (e.g., borrow, rent, purchase) from an outside source.

GENERAL NOTES

Florida's Benchmarks for Excellent Student Thinking (B.E.S.T.) Standards
This course includes Florida's B.E.S.T. ELA Expectations (EE) and Mathematical Thinking and Reasoning Standards (MTRs) for students. Florida educators should intentionally embed these standards within the content and their instruction as applicable. For guidance on the implementation of the EEs and MTRs, please visit cpalms.org/Standards/BEST_Standards.aspx and select the appropriate B.E.S.T. Standards package.

English Language Development ELD Standards Special Notes Section:
Teachers are required to provide listening, speaking, reading and writing instruction that allows English language learners (ELL) to communicate for social and instructional purposes within the school setting. For the given level of English language proficiency and with visual, graphic, or interactive support, students will interact with grade level words, expressions, sentences and discourse to process or produce language necessary for academic success. The ELD standard should specify a relevant content area concept or topic of study chosen by curriculum developers and teachers which maximizes an ELL's need for communication and social skills. To access an ELL supporting document which delineates performance definitions and descriptors, please click on the following link: cpalms.org/uploads/docs/standards/eld/SI.pdf

GENERAL INFORMATION

Course Number: 1302440

Course Path: Section: Grades PreK to 12 Education Courses > **Grade Group:** Grades 9 to 12 and Adult Education Courses > **Subject:** Music Education > **SubSubject:** Instrumental Music >

Abbreviated Title: INSTRU TECNQS 3

Number of Credits: One (1) credit

Course Length: Year (Y)

Course Type: Core Academic Course

Course Level: 2

Course Status: Draft - Course Pending Approval

Grade Level(s): 9,10,11,12

Graduation Requirement: Performing/Fine Arts

Educator Certifications

Music (Elementary and Secondary Grades K-12)
Instrumental Music (Secondary Grades 7-12)
Instrumental Music (Elementary and Secondary Grades K-12)

Instrumental Techniques 4 Honors (#1302450) 2022 - And Beyond

Course Standards

Name	Description
MU.912.C.1.1:	Apply listening strategies to promote appreciation and understanding of unfamiliar musical works. **Clarifications:** e.g., listening maps, active listening, checklists
MU.912.C.1.2:	Compare, using correct music vocabulary, the aesthetic impact of two or more performances of a musical work to one's own hypothesis of the composer's intent. **Clarifications:** e.g., quality recordings, individual and peer-group performances, composer notes, instrumentation, expressive elements, title
MU.912.C.2.1:	Evaluate and make appropriate adjustments to personal performance in solo and ensembles.
MU.912.C.2.2:	Evaluate performance quality in recorded and/or live performances.
MU.912.C.3.1:	Make critical evaluations, based on exemplary models, of the quality and effectiveness of performances and apply the criteria to personal development in music.
MU.912.F.2.1:	Design or refine a résumé for application to higher education or the workforce that highlights marketable skills and knowledge gained through music training. **Clarifications:** e.g., repertoire lists, technology-based work, ability to research and analyze, and examples of leadership and collaborative skills
MU.912.F.3.1:	Analyze and describe how meeting one's responsibilities in music offers opportunities to develop leadership skills, and identify personal examples of leadership in school and/or non-school settings.
MU.912.F.3.3:	Define, prioritize, monitor, and successfully complete tasks related to individual musical performance or project presentation, without direct oversight, demonstrating skills for use in the workplace.
MU.912.F.3.4:	Design and implement a personal learning plan, related to the study of music, which demonstrates self-assessment, brain-storming, decision-making, and initiative to advance skills and/or knowledge.
MU.912.H.1.1:	Investigate and discuss how a culture's traditions are reflected through its music. **Clarifications:** e.g., patriotic, folk, celebration, entertainment, spiritual
MU.912.H.3.1:	Apply knowledge of science, math, and music to demonstrate, through an acoustic or digital performance medium, how sound production affects musical performance. **Clarifications:** e.g., acoustics, sound amplification, materials, mechanics
MU.912.O.2.1:	Transfer accepted composition conventions and performance practices of a specific style to a contrasting style of music.
MU.912.O.2.2:	Transpose melodies into different modalities through performance and composition.
MU.912.O.3.1:	Analyze expressive elements in a musical work and describe how the choices and manipulations of the elements support, for the listener, the implied meaning of the composer/performer. **Clarifications:** e.g., tempo markings, expression markings, articulation markings, phrasing, scales, modes, harmonic structure, timbre choice, rhythm, orchestration
MU.912.O.3.2:	Interpret and perform expressive elements indicated by the musical score and/or conductor.
MU.912.S.2.1:	Apply the ability to memorize and internalize musical structure, accurate and expressive details, and processing skills to the creation or performance of music literature. **Clarifications:** e.g., memorization, sequential process
MU.912.S.2.2:	Transfer expressive elements and performance techniques from one piece of music to another.
MU.912.S.3.1:	Synthesize a broad range of musical skills by performing a varied repertoire with expression, appropriate stylistic interpretation, technical accuracy, and kinesthetic energy.
MU.912.S.3.2:	Sight-read music accurately and expressively to show synthesis of skills. **Clarifications:** e.g., musical elements, expressive qualities, performance technique
MU.912.S.3.4:	Analyze and describe the effect of rehearsal sessions and/or strategies on refinement of skills and techniques.
MU.912.S.3.5:	Develop and demonstrate proper vocal or instrumental technique. **Clarifications:** e.g., posture, breathing, fingering, embouchure, bow technique, tuning, strumming
MA.K12.MTR.1.1:	Mathematicians who participate in effortful learning both individually and with others: • Analyze the problem in a way that makes sense given the task. • Ask questions that will help with solving the task. • Build perseverance by modifying methods as needed while solving a challenging task. • Stay engaged and maintain a positive mindset when working to solve tasks. • Help and support each other when attempting a new method or approach. **Clarifications:**

Teachers who encourage students to participate actively in effortful learning both individually and with others:

- Cultivate a community of growth mindset learners.
- Foster perseverance in students by choosing tasks that are challenging.
- Develop students' ability to analyze and problem solve.
- Recognize students' effort when solving challenging problems.

MA.K12.MTR.2.1:

Demonstrate understanding by representing problems in multiple ways.
Mathematicians who demonstrate understanding by representing problems in multiple ways:

- Build understanding through modeling and using manipulatives.
- Represent solutions to problems in multiple ways using objects, drawings, tables, graphs and equations.
- Progress from modeling problems with objects and drawings to using algorithms and equations.
- Express connections between concepts and representations.
- Choose a representation based on the given context or purpose.

Clarifications:
Teachers who encourage students to demonstrate understanding by representing problems in multiple ways:

- Help students make connections between concepts and representations.
- Provide opportunities for students to use manipulatives when investigating concepts.
- Guide students from concrete to pictorial to abstract representations as understanding progresses.
- Show students that various representations can have different purposes and can be useful in different situations.

MA.K12.MTR.3.1:

Complete tasks with mathematical fluency.
Mathematicians who complete tasks with mathematical fluency:

- Select efficient and appropriate methods for solving problems within the given context.
- Maintain flexibility and accuracy while performing procedures and mental calculations.
- Complete tasks accurately and with confidence.
- Adapt procedures to apply them to a new context.
- Use feedback to improve efficiency when performing calculations.

Clarifications:
Teachers who encourage students to complete tasks with mathematical fluency:

- Provide students with the flexibility to solve problems by selecting a procedure that allows them to solve efficiently and accurately.
- Offer multiple opportunities for students to practice efficient and generalizable methods.
- Provide opportunities for students to reflect on the method they used and determine if a more efficient method could have been used.

MA.K12.MTR.4.1:

Engage in discussions that reflect on the mathematical thinking of self and others.
Mathematicians who engage in discussions that reflect on the mathematical thinking of self and others:

- Communicate mathematical ideas, vocabulary and methods effectively.
- Analyze the mathematical thinking of others.
- Compare the efficiency of a method to those expressed by others.
- Recognize errors and suggest how to correctly solve the task.
- Justify results by explaining methods and processes.
- Construct possible arguments based on evidence.

Clarifications:
Teachers who encourage students to engage in discussions that reflect on the mathematical thinking of self and others:

- Establish a culture in which students ask questions of the teacher and their peers, and error is an opportunity for learning.
- Create opportunities for students to discuss their thinking with peers.
- Select, sequence and present student work to advance and deepen understanding of correct and increasingly efficient methods.
- Develop students' ability to justify methods and compare their responses to the responses of their peers.

MA.K12.MTR.5.1:

Use patterns and structure to help understand and connect mathematical concepts.
Mathematicians who use patterns and structure to help understand and connect mathematical concepts:

- Focus on relevant details within a problem.
- Create plans and procedures to logically order events, steps or ideas to solve problems.
- Decompose a complex problem into manageable parts.
- Relate previously learned concepts to new concepts.
- Look for similarities among problems.
- Connect solutions of problems to more complicated large-scale situations.

Clarifications:
Teachers who encourage students to use patterns and structure to help understand and connect mathematical concepts:

- Help students recognize the patterns in the world around them and connect these patterns to mathematical concepts.
- Support students to develop generalizations based on the similarities found among problems.
- Provide opportunities for students to create plans and procedures to solve problems.
- Develop students' ability to construct relationships between their current understanding and more sophisticated ways of thinking.

MA.K12.MTR.6.1:

Assess the reasonableness of solutions.
Mathematicians who assess the reasonableness of solutions:

- Estimate to discover possible solutions.
- Use benchmark quantities to determine if a solution makes sense.
- Check calculations when solving problems.
- Verify possible solutions by explaining the methods used.
- Evaluate results based on the given context.

	Clarifications: Teachers who encourage students to assess the reasonableness of solutions: • Have students estimate or predict solutions prior to solving. • Prompt students to continually ask, "Does this solution make sense? How do you know?" • Reinforce that students check their work as they progress within and after a task. • Strengthen students' ability to verify solutions through justifications.
MA.K12.MTR.7.1:	Apply mathematics to real-world contexts. Mathematicians who apply mathematics to real-world contexts: • Connect mathematical concepts to everyday experiences. • Use models and methods to understand, represent and solve problems. • Perform investigations to gather data or determine if a method is appropriate. • Redesign models and methods to improve accuracy or efficiency. **Clarifications:** Teachers who encourage students to apply mathematics to real-world contexts: • Provide opportunities for students to create models, both concrete and abstract, and perform investigations. • Challenge students to question the accuracy of their models and methods. • Support students as they validate conclusions by comparing them to the given situation. • Indicate how various concepts can be applied to other disciplines.
ELA.K12.EE.1.1:	Cite evidence to explain and justify reasoning. **Clarifications:** K-1 Students include textual evidence in their oral communication with guidance and support from adults. The evidence can consist of details from the text without naming the text. During 1st grade, students learn how to incorporate the evidence in their writing. 2-3 Students include relevant textual evidence in their written and oral communication. Students should name the text when they refer to it. In 3rd grade, students should use a combination of direct and indirect citations. 4-5 Students continue with previous skills and reference comments made by speakers and peers. Students cite texts that they've directly quoted, paraphrased, or used for information. When writing, students will use the form of citation dictated by the instructor or the style guide referenced by the instructor. 6-8 Students continue with previous skills and use a style guide to create a proper citation. 9-12 Students continue with previous skills and should be aware of existing style guides and the ways in which they differ.
ELA.K12.EE.2.1:	Read and comprehend grade-level complex texts proficiently. **Clarifications:** See Text Complexity for grade-level complexity bands and a text complexity rubric.
ELA.K12.EE.3.1:	Make inferences to support comprehension. **Clarifications:** Students will make inferences before the words infer or inference are introduced. Kindergarten students will answer questions like "Why is the girl smiling?" or make predictions about what will happen based on the title page. Students will use the terms and apply them in 2nd grade and beyond.
ELA.K12.EE.4.1:	Use appropriate collaborative techniques and active listening skills when engaging in discussions in a variety of situations. **Clarifications:** In kindergarten, students learn to listen to one another respectfully. In grades 1-2, students build upon these skills by justifying what they are thinking. For example: "I think _____ because _____." The collaborative conversations are becoming academic conversations. In grades 3-12, students engage in academic conversations discussing claims and justifying their reasoning, refining and applying skills. Students build on ideas, propel the conversation, and support claims and counterclaims with evidence.
ELA.K12.EE.5.1:	Use the accepted rules governing a specific format to create quality work. **Clarifications:** Students will incorporate skills learned into work products to produce quality work. For students to incorporate these skills appropriately, they must receive instruction. A 3rd grade student creating a poster board display must have instruction in how to effectively present information to do quality work.
ELA.K12.EE.6.1:	Use appropriate voice and tone when speaking or writing. **Clarifications:** In kindergarten and 1st grade, students learn the difference between formal and informal language. For example, the way we talk to our friends differs from the way we speak to adults. In 2nd grade and beyond, students practice appropriate social and academic language to discuss texts.
DA.912.S.2.1:	Sustain focused attention, respect, and discipline during class, rehearsal, and performance.
ELD.K12.ELL.SI.1:	English language learners communicate for social and instructional purposes within the school setting.

General Course Information and Notes

VERSION DESCRIPTION

Students in this advanced class refine their musicianship and performance skills on a specified instrument. Students prepare for post-secondary and community music experiences and develop artistry independently through a variety of advanced solos, etudes, and excerpts. Public performances may serve as a culmination of specific instructional goals. Students may be required to attend and/or participate in rehearsals and performances outside the school day to support, extend, and assess learning in the classroom. This course may also require students to obtain a musical instrument (e.g., borrow, rent, purchase) from an outside source.

GENERAL NOTES

Honors and Advanced Level Course Note: Advanced courses require a greater demand on students through increased academic rigor. Academic rigor is obtained through the application, analysis, evaluation, and creation of complex ideas that are often abstract and multi-faceted. Students are challenged to think and collaborate critically on the content they are learning. Honors level rigor will be achieved by increasing text complexity through text selection, focus on high-level qualitative measures, and complexity of task. Instruction will be structured to give students a deeper understanding of conceptual themes and organization within and across disciplines. Academic rigor is more than simply assigning to students a greater quantity of work.

Florida's Benchmarks for Excellent Student Thinking (B.E.S.T.) Standards
This course includes Florida's B.E.S.T. ELA Expectations (EE) and Mathematical Thinking and Reasoning Standards (MTRs) for students. Florida educators should intentionally embed these standards within the content and their instruction as applicable. For guidance on the implementation of the EEs and MTRs, please visit cpalms.org/Standards/BEST_Standards.aspx and select the appropriate B.E.S.T. Standards package.

English Language Development ELD Standards Special Notes Section:
Teachers are required to provide listening, speaking, reading and writing instruction that allows English language learners (ELL) to communicate for social and instructional purposes within the school setting. For the given level of English language proficiency and with visual, graphic, or interactive support, students will interact with grade level words, expressions, sentences and discourse to process or produce language necessary for academic success. The ELD standard should specify a relevant content area concept or topic of study chosen by curriculum developers and teachers which maximizes an ELL's need for communication and social skills. To access an ELL supporting document which delineates performance definitions and descriptors, please click on the following link: cpalms.org/uploads/docs/standards/eld/SI.pdf

GENERAL INFORMATION

Course Number: 1302450

Course Path: Section: Grades PreK to 12 Education Courses > **Grade Group:** Grades 9 to 12 and Adult Education Courses > **Subject:** Music Education > **SubSubject:** Instrumental Music >

Abbreviated Title: INSTRU TECNQS 4 HON

Number of Credits: One (1) credit

Course Length: Year (Y)

Course Attributes:

- Honors

Course Type: Core Academic Course

Course Level: 3

Course Status: Draft - Course Pending Approval

Grade Level(s): 9,10,11,12

Graduation Requirement: Performing/Fine Arts

Educator Certifications

Music (Elementary and Secondary Grades K-12)
Instrumental Music (Secondary Grades 7-12)
Instrumental Music (Elementary and Secondary Grades K-12)

Instrumental Ensemble 1 (#1302460) 2022 - And Beyond

Course Standards

Name	Description
MU.912.C.1.1:	Apply listening strategies to promote appreciation and understanding of unfamiliar musical works. **Clarifications:** e.g., listening maps, active listening, checklists
MU.912.C.2.1:	Evaluate and make appropriate adjustments to personal performance in solo and ensembles.
MU.912.C.2.2:	Evaluate performance quality in recorded and/or live performances.
MU.912.C.3.1:	Make critical evaluations, based on exemplary models, of the quality and effectiveness of performances and apply the criteria to personal development in music.
MU.912.F.3.2:	Summarize copyright laws that govern printed, recorded, and on-line music to promote legal and responsible use of intellectual property and technology.
MU.912.H.1.5:	Analyze music within cultures to gain understanding of authentic performance practices.
MU.912.H.2.4:	Examine the effects of developing technology on composition, performance, and acquisition of music.
MU.912.O.3.2:	Interpret and perform expressive elements indicated by the musical score and/or conductor.
MU.912.S.1.3:	Arrange a musical work by manipulating two or more aspects of the composition. **Clarifications:** e.g., texture, mode, form, tempo, voicing
MU.912.S.2.2:	Transfer expressive elements and performance techniques from one piece of music to another.
MU.912.S.3.1:	Synthesize a broad range of musical skills by performing a varied repertoire with expression, appropriate stylistic interpretation, technical accuracy, and kinesthetic energy.
MU.912.S.3.2:	Sight-read music accurately and expressively to show synthesis of skills. **Clarifications:** e.g., musical elements, expressive qualities, performance technique
MU.912.S.3.5:	Develop and demonstrate proper vocal or instrumental technique. **Clarifications:** e.g., posture, breathing, fingering, embouchure, bow technique, tuning, strumming
MA.K12.MTR.1.1:	Mathematicians who participate in effortful learning both individually and with others: • Analyze the problem in a way that makes sense given the task. • Ask questions that will help with solving the task. • Build perseverance by modifying methods as needed while solving a challenging task. • Stay engaged and maintain a positive mindset when working to solve tasks. • Help and support each other when attempting a new method or approach. **Clarifications:** Teachers who encourage students to participate actively in effortful learning both individually and with others: • Cultivate a community of growth mindset learners. • Foster perseverance in students by choosing tasks that are challenging. • Develop students' ability to analyze and problem solve. • Recognize students' effort when solving challenging problems.
MA.K12.MTR.2.1:	Demonstrate understanding by representing problems in multiple ways. Mathematicians who demonstrate understanding by representing problems in multiple ways: • Build understanding through modeling and using manipulatives. • Represent solutions to problems in multiple ways using objects, drawings, tables, graphs and equations. • Progress from modeling problems with objects and drawings to using algorithms and equations. • Express connections between concepts and representations. • Choose a representation based on the given context or purpose. **Clarifications:** Teachers who encourage students to demonstrate understanding by representing problems in multiple ways: • Help students make connections between concepts and representations. • Provide opportunities for students to use manipulatives when investigating concepts. • Guide students from concrete to pictorial to abstract representations as understanding progresses. • Show students that various representations can have different purposes and can be useful in different situations.
MA.K12.MTR.3.1:	Complete tasks with mathematical fluency. Mathematicians who complete tasks with mathematical fluency: • Select efficient and appropriate methods for solving problems within the given context. • Maintain flexibility and accuracy while performing procedures and mental calculations. • Complete tasks accurately and with confidence. • Adapt procedures to apply them to a new context. • Use feedback to improve efficiency when performing calculations. **Clarifications:**

Teachers who encourage students to complete tasks with mathematical fluency:

- Provide students with the flexibility to solve problems by selecting a procedure that allows them to solve efficiently and accurately.
- Offer multiple opportunities for students to practice efficient and generalizable methods.
- Provide opportunities for students to reflect on the method they used and determine if a more efficient method could have been used.

MA.K12.MTR.4.1:

Engage in discussions that reflect on the mathematical thinking of self and others.
Mathematicians who engage in discussions that reflect on the mathematical thinking of self and others:

- Communicate mathematical ideas, vocabulary and methods effectively.
- Analyze the mathematical thinking of others.
- Compare the efficiency of a method to those expressed by others.
- Recognize errors and suggest how to correctly solve the task.
- Justify results by explaining methods and processes.
- Construct possible arguments based on evidence.

Clarifications:
Teachers who encourage students to engage in discussions that reflect on the mathematical thinking of self and others:

- Establish a culture in which students ask questions of the teacher and their peers, and error is an opportunity for learning.
- Create opportunities for students to discuss their thinking with peers.
- Select, sequence and present student work to advance and deepen understanding of correct and increasingly efficient methods.
- Develop students' ability to justify methods and compare their responses to the responses of their peers.

MA.K12.MTR.5.1:

Use patterns and structure to help understand and connect mathematical concepts.
Mathematicians who use patterns and structure to help understand and connect mathematical concepts:

- Focus on relevant details within a problem.
- Create plans and procedures to logically order events, steps or ideas to solve problems.
- Decompose a complex problem into manageable parts.
- Relate previously learned concepts to new concepts.
- Look for similarities among problems.
- Connect solutions of problems to more complicated large-scale situations.

Clarifications:
Teachers who encourage students to use patterns and structure to help understand and connect mathematical concepts:

- Help students recognize the patterns in the world around them and connect these patterns to mathematical concepts.
- Support students to develop generalizations based on the similarities found among problems.
- Provide opportunities for students to create plans and procedures to solve problems.
- Develop students' ability to construct relationships between their current understanding and more sophisticated ways of thinking.

MA.K12.MTR.6.1:

Assess the reasonableness of solutions.
Mathematicians who assess the reasonableness of solutions:

- Estimate to discover possible solutions.
- Use benchmark quantities to determine if a solution makes sense.
- Check calculations when solving problems.
- Verify possible solutions by explaining the methods used.
- Evaluate results based on the given context.

Clarifications:
Teachers who encourage students to assess the reasonableness of solutions:

- Have students estimate or predict solutions prior to solving.
- Prompt students to continually ask, "Does this solution make sense? How do you know?"
- Reinforce that students check their work as they progress within and after a task.
- Strengthen students' ability to verify solutions through justifications.

MA.K12.MTR.7.1:

Apply mathematics to real-world contexts.
Mathematicians who apply mathematics to real-world contexts:

- Connect mathematical concepts to everyday experiences.
- Use models and methods to understand, represent and solve problems.
- Perform investigations to gather data or determine if a method is appropriate. • Redesign models and methods to improve accuracy or efficiency.

Clarifications:
Teachers who encourage students to apply mathematics to real-world contexts:

- Provide opportunities for students to create models, both concrete and abstract, and perform investigations.
- Challenge students to question the accuracy of their models and methods.
- Support students as they validate conclusions by comparing them to the given situation.
- Indicate how various concepts can be applied to other disciplines.

ELA.K12.EE.1.1:

Cite evidence to explain and justify reasoning.

Clarifications:
K-1 Students include textual evidence in their oral communication with guidance and support from adults. The evidence can consist of details from the text without naming the text. During 1st grade, students learn how to incorporate the evidence in their writing.
2-3 Students include relevant textual evidence in their written and oral communication. Students should name the text when they refer to it. In 3rd grade, students should use a combination of direct and indirect citations.

4-5 Students continue with previous skills and reference comments made by speakers and peers. Students cite texts that they've directly quoted, paraphrased, or used for information. When writing, students will use the form of citation dictated by the instructor or the style guide referenced by the instructor.

	6-8 Students continue with previous skills and use a style guide to create a proper citation. 9-12 Students continue with previous skills and should be aware of existing style guides and the ways in which they differ.
ELA.K12.EE.2.1:	Read and comprehend grade-level complex texts proficiently. **Clarifications:** See Text Complexity for grade-level complexity bands and a text complexity rubric.
ELA.K12.EE.3.1:	Make inferences to support comprehension. **Clarifications:** Students will make inferences before the words infer or inference are introduced. Kindergarten students will answer questions like "Why is the girl smiling?" or make predictions about what will happen based on the title page. Students will use the terms and apply them in 2nd grade and beyond.
ELA.K12.EE.4.1:	Use appropriate collaborative techniques and active listening skills when engaging in discussions in a variety of situations. **Clarifications:** In kindergarten, students learn to listen to one another respectfully. In grades 1-2, students build upon these skills by justifying what they are thinking. For example: "I think _____ because _____." The collaborative conversations are becoming academic conversations. In grades 3-12, students engage in academic conversations discussing claims and justifying their reasoning, refining and applying skills. Students build on ideas, propel the conversation, and support claims and counterclaims with evidence.
ELA.K12.EE.5.1:	Use the accepted rules governing a specific format to create quality work. **Clarifications:** Students will incorporate skills learned into work products to produce quality work. For students to incorporate these skills appropriately, they must receive instruction. A 3rd grade student creating a poster board display must have instruction in how to effectively present information to do quality work.
ELA.K12.EE.6.1:	Use appropriate voice and tone when speaking or writing. **Clarifications:** In kindergarten and 1st grade, students learn the difference between formal and informal language. For example, the way we talk to our friends differs from the way we speak to adults. In 2nd grade and beyond, students practice appropriate social and academic language to discuss texts.
DA.912.F.3.8:	Demonstrate effective teamwork and accountability, using compromise, collaboration, and conflict resolution, to set and achieve goals as required in the work environment.
DA.912.S.2.1:	Sustain focused attention, respect, and discipline during class, rehearsal, and performance.
ELD.K12.ELL.SI.1:	English language learners communicate for social and instructional purposes within the school setting.

General Course Information and Notes

VERSION DESCRIPTION

Students with little or no experience in an instrumental ensemble develop basic musicianship and ensemble performance skills through the study of basic, high-quality music in diverse styles. Student musicians focus on building foundational music techniques, music literacy, listening skills, and aesthetic awareness. Public performances may serve as a culmination of specific instructional goals. Students may be required to attend and/or participate in rehearsals and performances outside the school day to support, extend, and assess learning in the classroom. This course may also require students to obtain a musical instrument (e.g., borrow, rent, purchase) from an outside source.

GENERAL NOTES

Florida's Benchmarks for Excellent Student Thinking (B.E.S.T.) Standards
This course includes Florida's B.E.S.T. ELA Expectations (EE) and Mathematical Thinking and Reasoning Standards (MTRs) for students. Florida educators should intentionally embed these standards within the content and their instruction as applicable. For guidance on the implementation of the EEs and MTRs, please visit cpalms.org/Standards/BEST_Standards.aspx and select the appropriate B.E.S.T. Standards package.

English Language Development ELD Standards Special Notes Section:
Teachers are required to provide listening, speaking, reading and writing instruction that allows English language learners (ELL) to communicate for social and instructional purposes within the school setting. For the given level of English language proficiency and with visual, graphic, or interactive support, students will interact with grade level words, expressions, sentences and discourse to process or produce language necessary for academic success. The ELD standard should specify a relevant content area concept or topic of study chosen by curriculum developers and teachers which maximizes an ELL's need for communication and social skills. To access an ELL supporting document which delineates performance definitions and descriptors, please click on the following link: cpalms.org/uploads/docs/standards/eld/SI.pdf

GENERAL INFORMATION

Course Number: 1302460

Course Path: Section: Grades PreK to 12 Education Courses > **Grade Group:** Grades 9 to 12 and Adult Education Courses > **Subject:** Music Education > **SubSubject:** Instrumental Music >
Abbreviated Title: INSTRU ENS 1

Number of Credits: One (1) credit

Course Length: Year (Y)

Course Type: Core Academic Course
Course Level: 2
Course Status: Draft - Course Pending Approval
Grade Level(s): 9,10,11,12
Graduation Requirement: Performing/Fine Arts

Educator Certifications

Music (Elementary and Secondary Grades K-12)
Instrumental Music (Secondary Grades 7-12)
Instrumental Music (Elementary and Secondary Grades K-12)

Instrumental Ensemble 2 (#1302470) 2022 - And Beyond

Course Standards

Name	Description
MU.912.C.1.1:	Apply listening strategies to promote appreciation and understanding of unfamiliar musical works. **Clarifications:** e.g., listening maps, active listening, checklists
MU.912.C.2.1:	Evaluate and make appropriate adjustments to personal performance in solo and ensembles.
MU.912.C.2.2:	Evaluate performance quality in recorded and/or live performances.
MU.912.C.3.1:	Make critical evaluations, based on exemplary models, of the quality and effectiveness of performances and apply the criteria to personal development in music.
MU.912.F.3.2:	Summarize copyright laws that govern printed, recorded, and on-line music to promote legal and responsible use of intellectual property and technology.
MU.912.H.1.5:	Analyze music within cultures to gain understanding of authentic performance practices.
MU.912.H.2.4:	Examine the effects of developing technology on composition, performance, and acquisition of music.
MU.912.O.1.1:	Evaluate the organizational principles and conventions in musical works and discuss their effect on structure. **Clarifications:** e.g., rhythm, melody, timbre, form, tonality, harmony, texture; solo, chamber ensemble, large ensemble
MU.912.O.3.1:	Analyze expressive elements in a musical work and describe how the choices and manipulations of the elements support, for the listener, the implied meaning of the composer/performer. **Clarifications:** e.g., tempo markings, expression markings, articulation markings, phrasing, scales, modes, harmonic structure, timbre choice, rhythm, orchestration
MU.912.O.3.2:	Interpret and perform expressive elements indicated by the musical score and/or conductor.
MU.912.S.1.3:	Arrange a musical work by manipulating two or more aspects of the composition. **Clarifications:** e.g., texture, mode, form, tempo, voicing
MU.912.S.2.1:	Apply the ability to memorize and internalize musical structure, accurate and expressive details, and processing skills to the creation or performance of music literature. **Clarifications:** e.g., memorization, sequential process
MU.912.S.2.2:	Transfer expressive elements and performance techniques from one piece of music to another.
MU.912.S.3.1:	Synthesize a broad range of musical skills by performing a varied repertoire with expression, appropriate stylistic interpretation, technical accuracy, and kinesthetic energy.
MU.912.S.3.2:	Sight-read music accurately and expressively to show synthesis of skills. **Clarifications:** e.g., musical elements, expressive qualities, performance technique
MU.912.S.3.5:	Develop and demonstrate proper vocal or instrumental technique. **Clarifications:** e.g., posture, breathing, fingering, embouchure, bow technique, tuning, strumming
MA.K12.MTR.1.1:	Mathematicians who participate in effortful learning both individually and with others: • Analyze the problem in a way that makes sense given the task. • Ask questions that will help with solving the task. • Build perseverance by modifying methods as needed while solving a challenging task. • Stay engaged and maintain a positive mindset when working to solve tasks. • Help and support each other when attempting a new method or approach. **Clarifications:** Teachers who encourage students to participate actively in effortful learning both individually and with others: • Cultivate a community of growth mindset learners. • Foster perseverance in students by choosing tasks that are challenging. • Develop students' ability to analyze and problem solve. • Recognize students' effort when solving challenging problems.
MA.K12.MTR.2.1:	Demonstrate understanding by representing problems in multiple ways. Mathematicians who demonstrate understanding by representing problems in multiple ways: • Build understanding through modeling and using manipulatives. • Represent solutions to problems in multiple ways using objects, drawings, tables, graphs and equations. • Progress from modeling problems with objects and drawings to using algorithms and equations. • Express connections between concepts and representations. • Choose a representation based on the given context or purpose. **Clarifications:** Teachers who encourage students to demonstrate understanding by representing problems in multiple ways:

- Help students make connections between concepts and representations.
- Provide opportunities for students to use manipulatives when investigating concepts.
- Guide students from concrete to pictorial to abstract representations as understanding progresses.
- Show students that various representations can have different purposes and can be useful in different situations.

MA.K12.MTR.3.1:

Complete tasks with mathematical fluency.
Mathematicians who complete tasks with mathematical fluency:

- Select efficient and appropriate methods for solving problems within the given context.
- Maintain flexibility and accuracy while performing procedures and mental calculations.
- Complete tasks accurately and with confidence.
- Adapt procedures to apply them to a new context.
- Use feedback to improve efficiency when performing calculations.

Clarifications:
Teachers who encourage students to complete tasks with mathematical fluency:

- Provide students with the flexibility to solve problems by selecting a procedure that allows them to solve efficiently and accurately.
- Offer multiple opportunities for students to practice efficient and generalizable methods.
- Provide opportunities for students to reflect on the method they used and determine if a more efficient method could have been used.

MA.K12.MTR.4.1:

Engage in discussions that reflect on the mathematical thinking of self and others.
Mathematicians who engage in discussions that reflect on the mathematical thinking of self and others:

- Communicate mathematical ideas, vocabulary and methods effectively.
- Analyze the mathematical thinking of others.
- Compare the efficiency of a method to those expressed by others.
- Recognize errors and suggest how to correctly solve the task.
- Justify results by explaining methods and processes.
- Construct possible arguments based on evidence.

Clarifications:
Teachers who encourage students to engage in discussions that reflect on the mathematical thinking of self and others:

- Establish a culture in which students ask questions of the teacher and their peers, and error is an opportunity for learning.
- Create opportunities for students to discuss their thinking with peers.
- Select, sequence and present student work to advance and deepen understanding of correct and increasingly efficient methods.
- Develop students' ability to justify methods and compare their responses to the responses of their peers.

MA.K12.MTR.5.1:

Use patterns and structure to help understand and connect mathematical concepts.
Mathematicians who use patterns and structure to help understand and connect mathematical concepts:

- Focus on relevant details within a problem.
- Create plans and procedures to logically order events, steps or ideas to solve problems.
- Decompose a complex problem into manageable parts.
- Relate previously learned concepts to new concepts.
- Look for similarities among problems.
- Connect solutions of problems to more complicated large-scale situations.

Clarifications:
Teachers who encourage students to use patterns and structure to help understand and connect mathematical concepts:

- Help students recognize the patterns in the world around them and connect these patterns to mathematical concepts.
- Support students to develop generalizations based on the similarities found among problems.
- Provide opportunities for students to create plans and procedures to solve problems.
- Develop students' ability to construct relationships between their current understanding and more sophisticated ways of thinking.

MA.K12.MTR.6.1:

Assess the reasonableness of solutions.
Mathematicians who assess the reasonableness of solutions:

- Estimate to discover possible solutions.
- Use benchmark quantities to determine if a solution makes sense.
- Check calculations when solving problems.
- Verify possible solutions by explaining the methods used.
- Evaluate results based on the given context.

Clarifications:
Teachers who encourage students to assess the reasonableness of solutions:

- Have students estimate or predict solutions prior to solving.
- Prompt students to continually ask, "Does this solution make sense? How do you know?"
- Reinforce that students check their work as they progress within and after a task.
- Strengthen students' ability to verify solutions through justifications.

MA.K12.MTR.7.1:

Apply mathematics to real-world contexts.
Mathematicians who apply mathematics to real-world contexts:

- Connect mathematical concepts to everyday experiences.
- Use models and methods to understand, represent and solve problems.
- Perform investigations to gather data or determine if a method is appropriate. • Redesign models and methods to improve accuracy or efficiency.

Clarifications:
Teachers who encourage students to apply mathematics to real-world contexts:

- Provide opportunities for students to create models, both concrete and abstract, and perform investigations.

	• Challenge students to question the accuracy of their models and methods. • Support students as they validate conclusions by comparing them to the given situation. • Indicate how various concepts can be applied to other disciplines.
ELA.K12.EE.1.1:	Cite evidence to explain and justify reasoning. **Clarifications:** K-1 Students include textual evidence in their oral communication with guidance and support from adults. The evidence can consist of details from the text without naming the text. During 1st grade, students learn how to incorporate the evidence in their writing. 2-3 Students include relevant textual evidence in their written and oral communication. Students should name the text when they refer to it. In 3rd grade, students should use a combination of direct and indirect citations. 4-5 Students continue with previous skills and reference comments made by speakers and peers. Students cite texts that they've directly quoted, paraphrased, or used for information. When writing, students will use the form of citation dictated by the instructor or the style guide referenced by the instructor. 6-8 Students continue with previous skills and use a style guide to create a proper citation. 9-12 Students continue with previous skills and should be aware of existing style guides and the ways in which they differ.
ELA.K12.EE.2.1:	Read and comprehend grade-level complex texts proficiently. **Clarifications:** See Text Complexity for grade-level complexity bands and a text complexity rubric.
ELA.K12.EE.3.1:	Make inferences to support comprehension. **Clarifications:** Students will make inferences before the words infer or inference are introduced. Kindergarten students will answer questions like "Why is the girl smiling?" or make predictions about what will happen based on the title page. Students will use the terms and apply them in 2nd grade and beyond.
ELA.K12.EE.4.1:	Use appropriate collaborative techniques and active listening skills when engaging in discussions in a variety of situations. **Clarifications:** In kindergarten, students learn to listen to one another respectfully. In grades 1-2, students build upon these skills by justifying what they are thinking. For example: "I think _____ because _____." The collaborative conversations are becoming academic conversations. In grades 3-12, students engage in academic conversations discussing claims and justifying their reasoning, refining and applying skills. Students build on ideas, propel the conversation, and support claims and counterclaims with evidence.
ELA.K12.EE.5.1:	Use the accepted rules governing a specific format to create quality work. **Clarifications:** Students will incorporate skills learned into work products to produce quality work. For students to incorporate these skills appropriately, they must receive instruction. A 3rd grade student creating a poster board display must have instruction in how to effectively present information to do quality work.
ELA.K12.EE.6.1:	Use appropriate voice and tone when speaking or writing. **Clarifications:** In kindergarten and 1st grade, students learn the difference between formal and informal language. For example, the way we talk to our friends differs from the way we speak to adults. In 2nd grade and beyond, students practice appropriate social and academic language to discuss texts.
DA.912.F.3.8:	Demonstrate effective teamwork and accountability, using compromise, collaboration, and conflict resolution, to set and achieve goals as required in the work environment.
DA.912.S.2.1:	Sustain focused attention, respect, and discipline during class, rehearsal, and performance.
ELD.K12.ELL.SI.1:	English language learners communicate for social and instructional purposes within the school setting.

General Course Information and Notes

VERSION DESCRIPTION

Students with previous instrumental ensemble experience continue building musicianship and performance skills through the study of high-quality music in diverse styles. Student musicians learn to self-assess and collaborate as they rehearse, perform, and study relevant musical styles and time periods. Public performances may serve as a culmination of specific instructional goals. Students may be required to attend and/or participate in rehearsals and performances outside the school day to support, extend, and assess learning in the classroom. This course may also require students to obtain a musical instrument (e.g., borrow, rent, purchase) from an outside source.

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Teachers are required to provide listening, speaking, reading and writing instruction that allows English language learners (ELL) to communicate for social and instructional purposes within the school setting. For the given level of English language proficiency and with visual, graphic, or interactive support, students will interact with grade level words, expressions, sentences and discourse to process or produce language necessary for academic success. The ELD standard should specify a relevant content area

concept or topic of study chosen by curriculum developers and teachers which maximizes an ELL's need for communication and social skills. To access an ELL supporting document which delineates performance definitions and descriptors, please click on the following link: cpalms.org/uploads/docs/standards/eld/SI.pdf

GENERAL INFORMATION

Course Number: 1302470

Course Path: Section: Grades PreK to 12 Education Courses > **Grade Group:** Grades 9 to 12 and Adult Education Courses > **Subject:** Music Education > **SubSubject:** Instrumental Music >

Abbreviated Title: INSTRU ENS 2

Number of Credits: One (1) credit

Course Length: Year (Y)

Course Type: Core Academic Course

Course Level: 2

Course Status: Draft - Course Pending Approval

Grade Level(s): 9,10,11,12

Graduation Requirement: Performing/Fine Arts

Educator Certifications

Music (Elementary and Secondary Grades K-12)
Instrumental Music (Secondary Grades 7-12)
Instrumental Music (Elementary and Secondary Grades K-12)

Instrumental Ensemble 3 (#1302480) 2022 - And Beyond

Course Standards

Name	Description
MU.912.C.1.1:	Apply listening strategies to promote appreciation and understanding of unfamiliar musical works. **Clarifications:** e.g., listening maps, active listening, checklists
MU.912.C.1.2:	Compare, using correct music vocabulary, the aesthetic impact of two or more performances of a musical work to one's own hypothesis of the composer's intent. **Clarifications:** e.g., quality recordings, individual and peer-group performances, composer notes, instrumentation, expressive elements, title
MU.912.C.2.1:	Evaluate and make appropriate adjustments to personal performance in solo and ensembles.
MU.912.C.2.2:	Evaluate performance quality in recorded and/or live performances.
MU.912.C.3.1:	Make critical evaluations, based on exemplary models, of the quality and effectiveness of performances and apply the criteria to personal development in music.
MU.912.F.2.1:	Design or refine a résumé for application to higher education or the workforce that highlights marketable skills and knowledge gained through music training. **Clarifications:** e.g., repertoire lists, technology-based work, ability to research and analyze, and examples of leadership and collaborative skills
MU.912.F.2.3:	Compare the organizational structure of a professional orchestra, chorus, quintet, or other ensemble to that of a business. **Clarifications:** e.g., leadership, financial needs and structure, marketing, personnel matters, manager, travel
MU.912.F.3.1:	Analyze and describe how meeting one's responsibilities in music offers opportunities to develop leadership skills, and identify personal examples of leadership in school and/or non-school settings.
MU.912.F.3.2:	Summarize copyright laws that govern printed, recorded, and on-line music to promote legal and responsible use of intellectual property and technology.
MU.912.F.3.3:	Define, prioritize, monitor, and successfully complete tasks related to individual musical performance or project presentation, without direct oversight, demonstrating skills for use in the workplace.
MU.912.H.1.3:	Compare two or more works of a composer across performance media. **Clarifications:** e.g., orchestral and choral; guitar and string quartet; piano solo and piano concerto
MU.912.H.1.5:	Analyze music within cultures to gain understanding of authentic performance practices.
MU.912.H.2.4:	Examine the effects of developing technology on composition, performance, and acquisition of music.
MU.912.O.1.1:	Evaluate the organizational principles and conventions in musical works and discuss their effect on structure. **Clarifications:** e.g., rhythm, melody, timbre, form, tonality, harmony, texture; solo, chamber ensemble, large ensemble
MU.912.O.2.1:	Transfer accepted composition conventions and performance practices of a specific style to a contrasting style of music.
MU.912.O.3.1:	Analyze expressive elements in a musical work and describe how the choices and manipulations of the elements support, for the listener, the implied meaning of the composer/performer. **Clarifications:** e.g., tempo markings, expression markings, articulation markings, phrasing, scales, modes, harmonic structure, timbre choice, rhythm, orchestration
MU.912.O.3.2:	Interpret and perform expressive elements indicated by the musical score and/or conductor.
MU.912.S.1.3:	Arrange a musical work by manipulating two or more aspects of the composition. **Clarifications:** e.g., texture, mode, form, tempo, voicing
MU.912.S.1.4:	Perform and notate, independently and accurately, melodies by ear. **Clarifications:** e.g., singing, playing, writing
MU.912.S.2.1:	Apply the ability to memorize and internalize musical structure, accurate and expressive details, and processing skills to the creation or performance of music literature. **Clarifications:** e.g., memorization, sequential process
MU.912.S.2.2:	Transfer expressive elements and performance techniques from one piece of music to another.
MU.912.S.3.1:	Synthesize a broad range of musical skills by performing a varied repertoire with expression, appropriate stylistic interpretation, technical accuracy, and kinesthetic energy.
MU.912.S.3.2:	Sight-read music accurately and expressively to show synthesis of skills. **Clarifications:** e.g., musical elements, expressive qualities, performance technique
MU.912.S.3.4:	Analyze and describe the effect of rehearsal sessions and/or strategies on refinement of skills and techniques.

MU.912.S.3.5:	Develop and demonstrate proper vocal or instrumental technique. **Clarifications:** e.g., posture, breathing, fingering, embouchure, bow technique, tuning, strumming
MA.K12.MTR.1.1:	Mathematicians who participate in effortful learning both individually and with others: • Analyze the problem in a way that makes sense given the task. • Ask questions that will help with solving the task. • Build perseverance by modifying methods as needed while solving a challenging task. • Stay engaged and maintain a positive mindset when working to solve tasks. • Help and support each other when attempting a new method or approach. **Clarifications:** Teachers who encourage students to participate actively in effortful learning both individually and with others: • Cultivate a community of growth mindset learners. • Foster perseverance in students by choosing tasks that are challenging. • Develop students' ability to analyze and problem solve. • Recognize students' effort when solving challenging problems.
MA.K12.MTR.2.1:	Demonstrate understanding by representing problems in multiple ways. Mathematicians who demonstrate understanding by representing problems in multiple ways: • Build understanding through modeling and using manipulatives. • Represent solutions to problems in multiple ways using objects, drawings, tables, graphs and equations. • Progress from modeling problems with objects and drawings to using algorithms and equations. • Express connections between concepts and representations. • Choose a representation based on the given context or purpose. **Clarifications:** Teachers who encourage students to demonstrate understanding by representing problems in multiple ways: • Help students make connections between concepts and representations. • Provide opportunities for students to use manipulatives when investigating concepts. • Guide students from concrete to pictorial to abstract representations as understanding progresses. • Show students that various representations can have different purposes and can be useful in different situations.
MA.K12.MTR.3.1:	Complete tasks with mathematical fluency. Mathematicians who complete tasks with mathematical fluency: • Select efficient and appropriate methods for solving problems within the given context. • Maintain flexibility and accuracy while performing procedures and mental calculations. • Complete tasks accurately and with confidence. • Adapt procedures to apply them to a new context. • Use feedback to improve efficiency when performing calculations. **Clarifications:** Teachers who encourage students to complete tasks with mathematical fluency: • Provide students with the flexibility to solve problems by selecting a procedure that allows them to solve efficiently and accurately. • Offer multiple opportunities for students to practice efficient and generalizable methods. • Provide opportunities for students to reflect on the method they used and determine if a more efficient method could have been used.
MA.K12.MTR.4.1:	Engage in discussions that reflect on the mathematical thinking of self and others. Mathematicians who engage in discussions that reflect on the mathematical thinking of self and others: • Communicate mathematical ideas, vocabulary and methods effectively. • Analyze the mathematical thinking of others. • Compare the efficiency of a method to those expressed by others. • Recognize errors and suggest how to correctly solve the task. • Justify results by explaining methods and processes. • Construct possible arguments based on evidence. **Clarifications:** Teachers who encourage students to engage in discussions that reflect on the mathematical thinking of self and others: • Establish a culture in which students ask questions of the teacher and their peers, and error is an opportunity for learning. • Create opportunities for students to discuss their thinking with peers. • Select, sequence and present student work to advance and deepen understanding of correct and increasingly efficient methods. • Develop students' ability to justify methods and compare their responses to the responses of their peers.
MA.K12.MTR.5.1:	Use patterns and structure to help understand and connect mathematical concepts. Mathematicians who use patterns and structure to help understand and connect mathematical concepts: • Focus on relevant details within a problem. • Create plans and procedures to logically order events, steps or ideas to solve problems. • Decompose a complex problem into manageable parts. • Relate previously learned concepts to new concepts. • Look for similarities among problems. • Connect solutions of problems to more complicated large-scale situations. **Clarifications:** Teachers who encourage students to use patterns and structure to help understand and connect mathematical concepts: • Help students recognize the patterns in the world around them and connect these patterns to mathematical concepts. • Support students to develop generalizations based on the similarities found among problems.

	• Provide opportunities for students to create plans and procedures to solve problems. • Develop students' ability to construct relationships between their current understanding and more sophisticated ways of thinking.
MA.K12.MTR.6.1:	Assess the reasonableness of solutions. Mathematicians who assess the reasonableness of solutions: • Estimate to discover possible solutions. • Use benchmark quantities to determine if a solution makes sense. • Check calculations when solving problems. • Verify possible solutions by explaining the methods used. • Evaluate results based on the given context. **Clarifications:** Teachers who encourage students to assess the reasonableness of solutions: • Have students estimate or predict solutions prior to solving. • Prompt students to continually ask, "Does this solution make sense? How do you know?" • Reinforce that students check their work as they progress within and after a task. • Strengthen students' ability to verify solutions through justifications.
MA.K12.MTR.7.1:	Apply mathematics to real-world contexts. Mathematicians who apply mathematics to real-world contexts: • Connect mathematical concepts to everyday experiences. • Use models and methods to understand, represent and solve problems. • Perform investigations to gather data or determine if a method is appropriate. • Redesign models and methods to improve accuracy or efficiency. **Clarifications:** Teachers who encourage students to apply mathematics to real-world contexts: • Provide opportunities for students to create models, both concrete and abstract, and perform investigations. • Challenge students to question the accuracy of their models and methods. • Support students as they validate conclusions by comparing them to the given situation. • Indicate how various concepts can be applied to other disciplines.
ELA.K12.EE.1.1:	Cite evidence to explain and justify reasoning. **Clarifications:** K-1 Students include textual evidence in their oral communication with guidance and support from adults. The evidence can consist of details from the text without naming the text. During 1st grade, students learn how to incorporate the evidence in their writing. 2-3 Students include relevant textual evidence in their written and oral communication. Students should name the text when they refer to it. In 3rd grade, students should use a combination of direct and indirect citations. 4-5 Students continue with previous skills and reference comments made by speakers and peers. Students cite texts that they've directly quoted, paraphrased, or used for information. When writing, students will use the form of citation dictated by the instructor or the style guide referenced by the instructor. 6-8 Students continue with previous skills and use a style guide to create a proper citation. 9-12 Students continue with previous skills and should be aware of existing style guides and the ways in which they differ.
ELA.K12.EE.2.1:	Read and comprehend grade-level complex texts proficiently. **Clarifications:** See Text Complexity for grade-level complexity bands and a text complexity rubric.
ELA.K12.EE.3.1:	Make inferences to support comprehension. **Clarifications:** Students will make inferences before the words infer or inference are introduced. Kindergarten students will answer questions like "Why is the girl smiling?" or make predictions about what will happen based on the title page. Students will use the terms and apply them in 2nd grade and beyond.
ELA.K12.EE.4.1:	Use appropriate collaborative techniques and active listening skills when engaging in discussions in a variety of situations. **Clarifications:** In kindergarten, students learn to listen to one another respectfully. In grades 1-2, students build upon these skills by justifying what they are thinking. For example: "I think _____ because _____." The collaborative conversations are becoming academic conversations. In grades 3-12, students engage in academic conversations discussing claims and justifying their reasoning, refining and applying skills. Students build on ideas, propel the conversation, and support claims and counterclaims with evidence.
ELA.K12.EE.5.1:	Use the accepted rules governing a specific format to create quality work. **Clarifications:** Students will incorporate skills learned into work products to produce quality work. For students to incorporate these skills appropriately, they must receive instruction. A 3rd grade student creating a poster board display must have instruction in how to effectively present information to do quality work.
ELA.K12.EE.6.1:	Use appropriate voice and tone when speaking or writing. **Clarifications:** In kindergarten and 1st grade, students learn the difference between formal and informal language. For example, the way we talk to our friends differs from the way we speak to adults. In 2nd grade and beyond, students practice appropriate social and academic language to discuss texts.
DA.912.F.3.8:	Demonstrate effective teamwork and accountability, using compromise, collaboration, and conflict resolution, to set and achieve goals as required in the work environment.
DA.912.S.2.1:	Sustain focused attention, respect, and discipline during class, rehearsal, and performance.

General Course Information and Notes

VERSION DESCRIPTION

Students strengthen instrumental ensemble performance skills, music literacy, and analytical skills through the study of high-quality music in diverse styles. Student musicians learn to self-assess and collaborate as they rehearse, perform, and study relevant history and cultures. Public performances may serve as a culmination of specific instructional goals. Students may be required to attend and/or participate in rehearsals and performances outside the school day to support, extend, and assess learning in the classroom. This course may also require students to obtain a musical instrument (e.g., borrow, rent, purchase) from an outside source.

GENERAL NOTES

Florida's Benchmarks for Excellent Student Thinking (B.E.S.T.) Standards
This course includes Florida's B.E.S.T. ELA Expectations (EE) and Mathematical Thinking and Reasoning Standards (MTRs) for students. Florida educators should intentionally embed these standards within the content and their instruction as applicable. For guidance on the implementation of the EEs and MTRs, please visit cpalms.org/Standards/BEST_Standards.aspx and select the appropriate B.E.S.T. Standards package.

English Language Development ELD Standards Special Notes Section:
Teachers are required to provide listening, speaking, reading and writing instruction that allows English language learners (ELL) to communicate for social and instructional purposes within the school setting. For the given level of English language proficiency and with visual, graphic, or interactive support, students will interact with grade level words, expressions, sentences and discourse to process or produce language necessary for academic success. The ELD standard should specify a relevant content area concept or topic of study chosen by curriculum developers and teachers which maximizes an ELL's need for communication and social skills. To access an ELL supporting document which delineates performance definitions and descriptors, please click on the following link: cpalms.org/uploads/docs/standards/eld/SI.pdf

GENERAL INFORMATION

Course Number: 1302480

Course Path: Section: Grades PreK to 12 Education Courses > **Grade Group:** Grades 9 to 12 and Adult Education Courses > **Subject:** Music Education > **SubSubject:** Instrumental Music >

Abbreviated Title: INSTRU ENS 3

Number of Credits: One (1) credit

Course Length: Year (Y)

Course Type: Core Academic Course

Course Level: 2

Course Status: Draft - Course Pending Approval

Grade Level(s): 9,10,11,12

Graduation Requirement: Performing/Fine Arts

Educator Certifications

Music (Elementary and Secondary Grades K-12)
Instrumental Music (Secondary Grades 7-12)
Instrumental Music (Elementary and Secondary Grades K-12)

Instrumental Ensemble 4 Honors (#1302490) 2022 - And Beyond

Course Standards

Name	Description
MU.912.C.1.1:	Apply listening strategies to promote appreciation and understanding of unfamiliar musical works. **Clarifications:** e.g., listening maps, active listening, checklists
MU.912.C.1.2:	Compare, using correct music vocabulary, the aesthetic impact of two or more performances of a musical work to one's own hypothesis of the composer's intent. **Clarifications:** e.g., quality recordings, individual and peer-group performances, composer notes, instrumentation, expressive elements, title
MU.912.C.2.1:	Evaluate and make appropriate adjustments to personal performance in solo and ensembles.
MU.912.C.2.2:	Evaluate performance quality in recorded and/or live performances.
MU.912.C.3.1:	Make critical evaluations, based on exemplary models, of the quality and effectiveness of performances and apply the criteria to personal development in music.
MU.912.F.1.1:	Analyze and evaluate the effect of "traditional" and contemporary technologies on the development of music.
MU.912.F.2.1:	Design or refine a résumé for application to higher education or the workforce that highlights marketable skills and knowledge gained through music training. **Clarifications:** e.g., repertoire lists, technology-based work, ability to research and analyze, and examples of leadership and collaborative skills
MU.912.F.2.2:	Analyze the effect of the arts and entertainment industry on the economic and social health of communities and regions. **Clarifications:** e.g., community revitalization, industry choosing new locations, cultural and social enrichment
MU.912.F.2.3:	Compare the organizational structure of a professional orchestra, chorus, quintet, or other ensemble to that of a business. **Clarifications:** e.g., leadership, financial needs and structure, marketing, personnel matters, manager, travel
MU.912.F.3.1:	Analyze and describe how meeting one's responsibilities in music offers opportunities to develop leadership skills, and identify personal examples of leadership in school and/or non-school settings.
MU.912.F.3.2:	Summarize copyright laws that govern printed, recorded, and on-line music to promote legal and responsible use of intellectual property and technology.
MU.912.F.3.3:	Define, prioritize, monitor, and successfully complete tasks related to individual musical performance or project presentation, without direct oversight, demonstrating skills for use in the workplace.
MU.912.F.3.4:	Design and implement a personal learning plan, related to the study of music, which demonstrates self-assessment, brain-storming, decision-making, and initiative to advance skills and/or knowledge.
MU.912.H.1.2:	Compare the work of, and influences on, two or more exemplary composers in the performance medium studied in class. **Clarifications:** e.g., vocal, instrumental, guitar, keyboard, electronic, handbells
MU.912.H.1.3:	Compare two or more works of a composer across performance media. **Clarifications:** e.g., orchestral and choral; guitar and string quartet; piano solo and piano concerto
MU.912.H.1.5:	Analyze music within cultures to gain understanding of authentic performance practices.
MU.912.H.2.1:	Evaluate the social impact of music on specific historical periods.
MU.912.H.2.2:	Analyze current musical trends, including audience environments and music acquisition, to predict possible directions of music.
MU.912.H.2.4:	Examine the effects of developing technology on composition, performance, and acquisition of music.
MU.912.O.1.1:	Evaluate the organizational principles and conventions in musical works and discuss their effect on structure. **Clarifications:** e.g., rhythm, melody, timbre, form, tonality, harmony, texture; solo, chamber ensemble, large ensemble
MU.912.O.2.1:	Transfer accepted composition conventions and performance practices of a specific style to a contrasting style of music.
MU.912.O.3.1:	Analyze expressive elements in a musical work and describe how the choices and manipulations of the elements support, for the listener, the implied meaning of the composer/performer. **Clarifications:** e.g., tempo markings, expression markings, articulation markings, phrasing, scales, modes, harmonic structure, timbre choice, rhythm, orchestration
MU.912.O.3.2:	Interpret and perform expressive elements indicated by the musical score and/or conductor.
MU.912.S.1.3:	Arrange a musical work by manipulating two or more aspects of the composition. **Clarifications:** e.g., texture, mode, form, tempo, voicing
MU.912.S.1.4:	Perform and notate, independently and accurately, melodies by ear. **Clarifications:** e.g., singing, playing, writing

MU.912.S.2.1:	Apply the ability to memorize and internalize musical structure, accurate and expressive details, and processing skills to the creation or performance of music literature. **Clarifications:** e.g., memorization, sequential process
MU.912.S.2.2:	Transfer expressive elements and performance techniques from one piece of music to another.
MU.912.S.3.1:	Synthesize a broad range of musical skills by performing a varied repertoire with expression, appropriate stylistic interpretation, technical accuracy, and kinesthetic energy.
MU.912.S.3.2:	Sight-read music accurately and expressively to show synthesis of skills. **Clarifications:** e.g., musical elements, expressive qualities, performance technique
MU.912.S.3.4:	Analyze and describe the effect of rehearsal sessions and/or strategies on refinement of skills and techniques.
MU.912.S.3.5:	Develop and demonstrate proper vocal or instrumental technique. **Clarifications:** e.g., posture, breathing, fingering, embouchure, bow technique, tuning, strumming
MA.K12.MTR.1.1:	Mathematicians who participate in effortful learning both individually and with others: • Analyze the problem in a way that makes sense given the task. • Ask questions that will help with solving the task. • Build perseverance by modifying methods as needed while solving a challenging task. • Stay engaged and maintain a positive mindset when working to solve tasks. • Help and support each other when attempting a new method or approach. **Clarifications:** Teachers who encourage students to participate actively in effortful learning both individually and with others: • Cultivate a community of growth mindset learners. • Foster perseverance in students by choosing tasks that are challenging. • Develop students' ability to analyze and problem solve. • Recognize students' effort when solving challenging problems.
MA.K12.MTR.2.1:	Demonstrate understanding by representing problems in multiple ways. Mathematicians who demonstrate understanding by representing problems in multiple ways: • Build understanding through modeling and using manipulatives. • Represent solutions to problems in multiple ways using objects, drawings, tables, graphs and equations. • Progress from modeling problems with objects and drawings to using algorithms and equations. • Express connections between concepts and representations. • Choose a representation based on the given context or purpose. **Clarifications:** Teachers who encourage students to demonstrate understanding by representing problems in multiple ways: • Help students make connections between concepts and representations. • Provide opportunities for students to use manipulatives when investigating concepts. • Guide students from concrete to pictorial to abstract representations as understanding progresses. • Show students that various representations can have different purposes and can be useful in different situations.
MA.K12.MTR.3.1:	Complete tasks with mathematical fluency. Mathematicians who complete tasks with mathematical fluency: • Select efficient and appropriate methods for solving problems within the given context. • Maintain flexibility and accuracy while performing procedures and mental calculations. • Complete tasks accurately and with confidence. • Adapt procedures to apply them to a new context. • Use feedback to improve efficiency when performing calculations. **Clarifications:** Teachers who encourage students to complete tasks with mathematical fluency: • Provide students with the flexibility to solve problems by selecting a procedure that allows them to solve efficiently and accurately. • Offer multiple opportunities for students to practice efficient and generalizable methods. • Provide opportunities for students to reflect on the method they used and determine if a more efficient method could have been used.
MA.K12.MTR.4.1:	Engage in discussions that reflect on the mathematical thinking of self and others. Mathematicians who engage in discussions that reflect on the mathematical thinking of self and others: • Communicate mathematical ideas, vocabulary and methods effectively. • Analyze the mathematical thinking of others. • Compare the efficiency of a method to those expressed by others. • Recognize errors and suggest how to correctly solve the task. • Justify results by explaining methods and processes. • Construct possible arguments based on evidence. **Clarifications:** Teachers who encourage students to engage in discussions that reflect on the mathematical thinking of self and others: • Establish a culture in which students ask questions of the teacher and their peers, and error is an opportunity for learning. • Create opportunities for students to discuss their thinking with peers. • Select, sequence and present student work to advance and deepen understanding of correct and increasingly efficient methods. • Develop students' ability to justify methods and compare their responses to the responses of their peers.
	Use patterns and structure to help understand and connect mathematical concepts.

MA.K12.MTR.5.1:	Mathematicians who use patterns and structure to help understand and connect mathematical concepts: • Focus on relevant details within a problem. • Create plans and procedures to logically order events, steps or ideas to solve problems. • Decompose a complex problem into manageable parts. • Relate previously learned concepts to new concepts. • Look for similarities among problems. • Connect solutions of problems to more complicated large-scale situations. **Clarifications:** Teachers who encourage students to use patterns and structure to help understand and connect mathematical concepts: • Help students recognize the patterns in the world around them and connect these patterns to mathematical concepts. • Support students to develop generalizations based on the similarities found among problems. • Provide opportunities for students to create plans and procedures to solve problems. • Develop students' ability to construct relationships between their current understanding and more sophisticated ways of thinking.
MA.K12.MTR.6.1:	Assess the reasonableness of solutions. Mathematicians who assess the reasonableness of solutions: • Estimate to discover possible solutions. • Use benchmark quantities to determine if a solution makes sense. • Check calculations when solving problems. • Verify possible solutions by explaining the methods used. • Evaluate results based on the given context. **Clarifications:** Teachers who encourage students to assess the reasonableness of solutions: • Have students estimate or predict solutions prior to solving. • Prompt students to continually ask, "Does this solution make sense? How do you know?" • Reinforce that students check their work as they progress within and after a task. • Strengthen students' ability to verify solutions through justifications.
MA.K12.MTR.7.1:	Apply mathematics to real-world contexts. Mathematicians who apply mathematics to real-world contexts: • Connect mathematical concepts to everyday experiences. • Use models and methods to understand, represent and solve problems. • Perform investigations to gather data or determine if a method is appropriate. • Redesign models and methods to improve accuracy or efficiency. **Clarifications:** Teachers who encourage students to apply mathematics to real-world contexts: • Provide opportunities for students to create models, both concrete and abstract, and perform investigations. • Challenge students to question the accuracy of their models and methods. • Support students as they validate conclusions by comparing them to the given situation. • Indicate how various concepts can be applied to other disciplines.
ELA.K12.EE.1.1:	Cite evidence to explain and justify reasoning. **Clarifications:** K-1 Students include textual evidence in their oral communication with guidance and support from adults. The evidence can consist of details from the text without naming the text. During 1st grade, students learn how to incorporate the evidence in their writing. 2-3 Students include relevant textual evidence in their written and oral communication. Students should name the text when they refer to it. In 3rd grade, students should use a combination of direct and indirect citations. 4-5 Students continue with previous skills and reference comments made by speakers and peers. Students cite texts that they've directly quoted, paraphrased, or used for information. When writing, students will use the form of citation dictated by the instructor or the style guide referenced by the instructor. 6-8 Students continue with previous skills and use a style guide to create a proper citation. 9-12 Students continue with previous skills and should be aware of existing style guides and the ways in which they differ.
ELA.K12.EE.2.1:	Read and comprehend grade-level complex texts proficiently. **Clarifications:** See Text Complexity for grade-level complexity bands and a text complexity rubric.
ELA.K12.EE.3.1:	Make inferences to support comprehension. **Clarifications:** Students will make inferences before the words infer or inference are introduced. Kindergarten students will answer questions like "Why is the girl smiling?" or make predictions about what will happen based on the title page. Students will use the terms and apply them in 2nd grade and beyond.
ELA.K12.EE.4.1:	Use appropriate collaborative techniques and active listening skills when engaging in discussions in a variety of situations. **Clarifications:** In kindergarten, students learn to listen to one another respectfully. In grades 1-2, students build upon these skills by justifying what they are thinking. For example: "I think _____ because _____." The collaborative conversations are becoming academic conversations. In grades 3-12, students engage in academic conversations discussing claims and justifying their reasoning, refining and applying skills. Students build on ideas, propel the conversation, and support claims and counterclaims with evidence.
	Use the accepted rules governing a specific format to create quality work.

ELA.K12.EE.5.1:	**Clarifications:** Students will incorporate skills learned into work products to produce quality work. For students to incorporate these skills appropriately, they must receive instruction. A 3rd grade student creating a poster board display must have instruction in how to effectively present information to do quality work.
ELA.K12.EE.6.1:	Use appropriate voice and tone when speaking or writing. **Clarifications:** In kindergarten and 1st grade, students learn the difference between formal and informal language. For example, the way we talk to our friends differs from the way we speak to adults. In 2nd grade and beyond, students practice appropriate social and academic language to discuss texts.
DA.912.F.3.8:	Demonstrate effective teamwork and accountability, using compromise, collaboration, and conflict resolution, to set and achieve goals as required in the work environment.
DA.912.S.2.1:	Sustain focused attention, respect, and discipline during class, rehearsal, and performance.
ELD.K12.ELL.SI.1:	English language learners communicate for social and instructional purposes within the school setting.

General Course Information and Notes

VERSION DESCRIPTION

Students with extensive instrumental ensemble experience refine their critical listening, music literacy, and ensemble skills through the study, rehearsal, and performance of high-quality, advanced literature. Students use reflection and problem-solving skills with increasing independence to improve their performance and musical expression. Public performances may serve as a culmination of specific instructional goals. Students may be required to attend and/or participate in rehearsals and performances outside the school day to support, extend, and assess learning in the classroom. This course may also require students to obtain a musical instrument (e.g., borrow, rent, purchase) from an outside source.

GENERAL NOTES

Honors and Advanced Level Course Note: Advanced courses require a greater demand on students through increased academic rigor. Academic rigor is obtained through the application, analysis, evaluation, and creation of complex ideas that are often abstract and multi-faceted. Students are challenged to think and collaborate critically on the content they are learning. Honors level rigor will be achieved by increasing text complexity through text selection, focus on high-level qualitative measures, and complexity of task. Instruction will be structured to give students a deeper understanding of conceptual themes and organization within and across disciplines. Academic rigor is more than simply assigning to students a greater quantity of work.

Florida's Benchmarks for Excellent Student Thinking (B.E.S.T.) Standards
This course includes Florida's B.E.S.T. ELA Expectations (EE) and Mathematical Thinking and Reasoning Standards (MTRs) for students. Florida educators should intentionally embed these standards within the content and their instruction as applicable. For guidance on the implementation of the EEs and MTRs, please visit cpalms.org/Standards/BEST_Standards.aspx and select the appropriate B.E.S.T. Standards package.

English Language Development ELD Standards Special Notes Section:
Teachers are required to provide listening, speaking, reading and writing instruction that allows English language learners (ELL) to communicate for social and instructional purposes within the school setting. For the given level of English language proficiency and with visual, graphic, or interactive support, students will interact with grade level words, expressions, sentences and discourse to process or produce language necessary for academic success. The ELD standard should specify a relevant content area concept or topic of study chosen by curriculum developers and teachers which maximizes an ELL's need for communication and social skills. To access an ELL supporting document which delineates performance definitions and descriptors, please click on the following link: cpalms.org/uploads/docs/standards/eld/SI.pdf

GENERAL INFORMATION

Course Number: 1302490

Course Path: Section: Grades PreK to 12 Education Courses > **Grade Group:** Grades 9 to 12 and Adult Education Courses > **Subject:** Music Education > **SubSubject:** Instrumental Music >
Abbreviated Title: INSTRU ENS 4 HON

Number of Credits: One (1) credit

Course Length: Year (Y)

Course Attributes:
- Honors

Course Type: Core Academic Course

Course Level: 3

Course Status: Draft - Course Pending Approval

Grade Level(s): 9,10,11,12

Graduation Requirement: Performing/Fine Arts

Educator Certifications

Music (Elementary and Secondary Grades K-12)
Instrumental Music (Secondary Grades 7-12)
Instrumental Music (Elementary and Secondary Grades K-12)

Jazz Ensemble 1 (#1302500) 2022 - And Beyond

Course Standards

Name	Description
MU.912.C.1.1:	Apply listening strategies to promote appreciation and understanding of unfamiliar musical works. **Clarifications:** e.g., listening maps, active listening, checklists
MU.912.C.2.1:	Evaluate and make appropriate adjustments to personal performance in solo and ensembles.
MU.912.C.2.2:	Evaluate performance quality in recorded and/or live performances.
MU.912.C.2.3:	Evaluate one's own or other's compositions and/or improvisations and generate improvements independently or cooperatively.
MU.912.C.3.1:	Make critical evaluations, based on exemplary models, of the quality and effectiveness of performances and apply the criteria to personal development in music.
MU.912.F.3.2:	Summarize copyright laws that govern printed, recorded, and on-line music to promote legal and responsible use of intellectual property and technology.
MU.912.H.1.2:	Compare the work of, and influences on, two or more exemplary composers in the performance medium studied in class. **Clarifications:** e.g., vocal, instrumental, guitar, keyboard, electronic, handbells
MU.912.H.1.3:	Compare two or more works of a composer across performance media. **Clarifications:** e.g., orchestral and choral; guitar and string quartet; piano solo and piano concerto
MU.912.H.2.1:	Evaluate the social impact of music on specific historical periods.
MU.912.O.1.1:	Evaluate the organizational principles and conventions in musical works and discuss their effect on structure. **Clarifications:** e.g., rhythm, melody, timbre, form, tonality, harmony, texture; solo, chamber ensemble, large ensemble
MU.912.O.3.2:	Interpret and perform expressive elements indicated by the musical score and/or conductor.
MU.912.S.1.1:	Improvise rhythmic and melodic phrases over harmonic progressions. **Clarifications:** e.g., using text or scat syllables
MU.912.S.1.3:	Arrange a musical work by manipulating two or more aspects of the composition. **Clarifications:** e.g., texture, mode, form, tempo, voicing
MU.912.S.1.4:	Perform and notate, independently and accurately, melodies by ear. **Clarifications:** e.g., singing, playing, writing
MU.912.S.2.2:	Transfer expressive elements and performance techniques from one piece of music to another.
MU.912.S.3.1:	Synthesize a broad range of musical skills by performing a varied repertoire with expression, appropriate stylistic interpretation, technical accuracy, and kinesthetic energy.
MU.912.S.3.4:	Analyze and describe the effect of rehearsal sessions and/or strategies on refinement of skills and techniques.
MU.912.S.3.5:	Develop and demonstrate proper vocal or instrumental technique. **Clarifications:** e.g., posture, breathing, fingering, embouchure, bow technique, tuning, strumming
MA.K12.MTR.1.1:	Mathematicians who participate in effortful learning both individually and with others: • Analyze the problem in a way that makes sense given the task. • Ask questions that will help with solving the task. • Build perseverance by modifying methods as needed while solving a challenging task. • Stay engaged and maintain a positive mindset when working to solve tasks. • Help and support each other when attempting a new method or approach. **Clarifications:** Teachers who encourage students to participate actively in effortful learning both individually and with others: • Cultivate a community of growth mindset learners. • Foster perseverance in students by choosing tasks that are challenging. • Develop students' ability to analyze and problem solve. • Recognize students' effort when solving challenging problems.
MA.K12.MTR.2.1:	Demonstrate understanding by representing problems in multiple ways. Mathematicians who demonstrate understanding by representing problems in multiple ways: • Build understanding through modeling and using manipulatives. • Represent solutions to problems in multiple ways using objects, drawings, tables, graphs and equations. • Progress from modeling problems with objects and drawings to using algorithms and equations. • Express connections between concepts and representations. • Choose a representation based on the given context or purpose.

Clarifications:
Teachers who encourage students to demonstrate understanding by representing problems in multiple ways:

- Help students make connections between concepts and representations.
- Provide opportunities for students to use manipulatives when investigating concepts.
- Guide students from concrete to pictorial to abstract representations as understanding progresses.
- Show students that various representations can have different purposes and can be useful in different situations.

MA.K12.MTR.3.1:

Complete tasks with mathematical fluency.
Mathematicians who complete tasks with mathematical fluency:

- Select efficient and appropriate methods for solving problems within the given context.
- Maintain flexibility and accuracy while performing procedures and mental calculations.
- Complete tasks accurately and with confidence.
- Adapt procedures to apply them to a new context.
- Use feedback to improve efficiency when performing calculations.

Clarifications:
Teachers who encourage students to complete tasks with mathematical fluency:

- Provide students with the flexibility to solve problems by selecting a procedure that allows them to solve efficiently and accurately.
- Offer multiple opportunities for students to practice efficient and generalizable methods.
- Provide opportunities for students to reflect on the method they used and determine if a more efficient method could have been used.

MA.K12.MTR.4.1:

Engage in discussions that reflect on the mathematical thinking of self and others.
Mathematicians who engage in discussions that reflect on the mathematical thinking of self and others:

- Communicate mathematical ideas, vocabulary and methods effectively.
- Analyze the mathematical thinking of others.
- Compare the efficiency of a method to those expressed by others.
- Recognize errors and suggest how to correctly solve the task.
- Justify results by explaining methods and processes.
- Construct possible arguments based on evidence.

Clarifications:
Teachers who encourage students to engage in discussions that reflect on the mathematical thinking of self and others:

- Establish a culture in which students ask questions of the teacher and their peers, and error is an opportunity for learning.
- Create opportunities for students to discuss their thinking with peers.
- Select, sequence and present student work to advance and deepen understanding of correct and increasingly efficient methods.
- Develop students' ability to justify methods and compare their responses to the responses of their peers.

MA.K12.MTR.5.1:

Use patterns and structure to help understand and connect mathematical concepts.
Mathematicians who use patterns and structure to help understand and connect mathematical concepts:

- Focus on relevant details within a problem.
- Create plans and procedures to logically order events, steps or ideas to solve problems.
- Decompose a complex problem into manageable parts.
- Relate previously learned concepts to new concepts.
- Look for similarities among problems.
- Connect solutions of problems to more complicated large-scale situations.

Clarifications:
Teachers who encourage students to use patterns and structure to help understand and connect mathematical concepts:

- Help students recognize the patterns in the world around them and connect these patterns to mathematical concepts.
- Support students to develop generalizations based on the similarities found among problems.
- Provide opportunities for students to create plans and procedures to solve problems.
- Develop students' ability to construct relationships between their current understanding and more sophisticated ways of thinking.

MA.K12.MTR.6.1:

Assess the reasonableness of solutions.
Mathematicians who assess the reasonableness of solutions:

- Estimate to discover possible solutions.
- Use benchmark quantities to determine if a solution makes sense.
- Check calculations when solving problems.
- Verify possible solutions by explaining the methods used.
- Evaluate results based on the given context.

Clarifications:
Teachers who encourage students to assess the reasonableness of solutions:

- Have students estimate or predict solutions prior to solving.
- Prompt students to continually ask, "Does this solution make sense? How do you know?"
- Reinforce that students check their work as they progress within and after a task.
- Strengthen students' ability to verify solutions through justifications.

MA.K12.MTR.7.1:

Apply mathematics to real-world contexts.
Mathematicians who apply mathematics to real-world contexts:

- Connect mathematical concepts to everyday experiences.
- Use models and methods to understand, represent and solve problems.
- Perform investigations to gather data or determine if a method is appropriate. • Redesign models and methods to improve accuracy or efficiency.

Clarifications:
Teachers who encourage students to apply mathematics to real-world contexts:

	• Provide opportunities for students to create models, both concrete and abstract, and perform investigations. • Challenge students to question the accuracy of their models and methods. • Support students as they validate conclusions by comparing them to the given situation. • Indicate how various concepts can be applied to other disciplines.
ELA.K12.EE.1.1:	Cite evidence to explain and justify reasoning. **Clarifications:** K-1 Students include textual evidence in their oral communication with guidance and support from adults. The evidence can consist of details from the text without naming the text. During 1st grade, students learn how to incorporate the evidence in their writing. 2-3 Students include relevant textual evidence in their written and oral communication. Students should name the text when they refer to it. In 3rd grade, students should use a combination of direct and indirect citations. 4-5 Students continue with previous skills and reference comments made by speakers and peers. Students cite texts that they've directly quoted, paraphrased, or used for information. When writing, students will use the form of citation dictated by the instructor or the style guide referenced by the instructor. 6-8 Students continue with previous skills and use a style guide to create a proper citation. 9-12 Students continue with previous skills and should be aware of existing style guides and the ways in which they differ.
ELA.K12.EE.2.1:	Read and comprehend grade-level complex texts proficiently. **Clarifications:** See Text Complexity for grade-level complexity bands and a text complexity rubric.
ELA.K12.EE.3.1:	Make inferences to support comprehension. **Clarifications:** Students will make inferences before the words infer or inference are introduced. Kindergarten students will answer questions like "Why is the girl smiling?" or make predictions about what will happen based on the title page. Students will use the terms and apply them in 2nd grade and beyond.
ELA.K12.EE.4.1:	Use appropriate collaborative techniques and active listening skills when engaging in discussions in a variety of situations. **Clarifications:** In kindergarten, students learn to listen to one another respectfully. In grades 1-2, students build upon these skills by justifying what they are thinking. For example: "I think _____ because _____." The collaborative conversations are becoming academic conversations. In grades 3-12, students engage in academic conversations discussing claims and justifying their reasoning, refining and applying skills. Students build on ideas, propel the conversation, and support claims and counterclaims with evidence.
ELA.K12.EE.5.1:	Use the accepted rules governing a specific format to create quality work. **Clarifications:** Students will incorporate skills learned into work products to produce quality work. For students to incorporate these skills appropriately, they must receive instruction. A 3rd grade student creating a poster board display must have instruction in how to effectively present information to do quality work.
ELA.K12.EE.6.1:	Use appropriate voice and tone when speaking or writing. **Clarifications:** In kindergarten and 1st grade, students learn the difference between formal and informal language. For example, the way we talk to our friends differs from the way we speak to adults. In 2nd grade and beyond, students practice appropriate social and academic language to discuss texts.
DA.912.S.2.1:	Sustain focused attention, respect, and discipline during class, rehearsal, and performance.
ELD.K12.ELL.SI.1:	English language learners communicate for social and instructional purposes within the school setting.

General Course Information and Notes

VERSION DESCRIPTION

Students with experience on an instrument suited for jazz ensemble explore the fundamentals of performance practices, improvisation, and music theory through a diverse repertoire of high-quality jazz literature. Students learn the basics of foundational jazz styles, use chord symbols, develop knowledge of musical structure, and study the history of jazz and its iconic musicians. Public performances may serve as a culmination of specific instructional goals. Students may be required to attend and/or participate in rehearsals and performances outside the school day to support, extend, and assess learning in the classroom. Students in this class may need to obtain (e.g., borrow, rent, purchase) an instrument from an outside source.

GENERAL NOTES

Florida's Benchmarks for Excellent Student Thinking (B.E.S.T.) Standards
This course includes Florida's B.E.S.T. ELA Expectations (EE) and Mathematical Thinking and Reasoning Standards (MTRs) for students. Florida educators should intentionally embed these standards within the content and their instruction as applicable. For guidance on the implementation of the EEs and MTRs, please visit cpalms.org/Standards/BEST_Standards.aspx and select the appropriate B.E.S.T. Standards package.

English Language Development ELD Standards Special Notes Section:
Teachers are required to provide listening, speaking, reading and writing instruction that allows English language learners (ELL) to communicate for social and instructional purposes within the school setting. For the given level of English language proficiency and with visual, graphic, or interactive support, students will interact with grade level words, expressions, sentences and discourse to process or produce language necessary for academic success. The ELD standard should specify a relevant content area

concept or topic of study chosen by curriculum developers and teachers which maximizes an ELL's need for communication and social skills. To access an ELL supporting document which delineates performance definitions and descriptors, please click on the following link: cpalms.org/uploads/docs/standards/eld/SI.pdf

GENERAL INFORMATION

Course Number: 1302500

Course Path: Section: Grades PreK to 12 Education Courses > **Grade Group:** Grades 9 to 12 and Adult Education Courses > **Subject:** Music Education > **SubSubject:** Instrumental Music >

Abbreviated Title: JAZZ ENS 1

Number of Credits: One (1) credit

Course Length: Year (Y)

Course Type: Core Academic Course

Course Level: 2

Course Status: Draft - Course Pending Approval

Grade Level(s): 9,10,11,12

Graduation Requirement: Performing/Fine Arts

Educator Certifications

Music (Elementary and Secondary Grades K-12)
Instrumental Music (Secondary Grades 7-12)
Instrumental Music (Elementary and Secondary Grades K-12)

Jazz Ensemble 2 (#1302510) 2022 - And Beyond

Course Standards

Name	Description
MU.912.C.1.1:	Apply listening strategies to promote appreciation and understanding of unfamiliar musical works. **Clarifications:** e.g., listening maps, active listening, checklists
MU.912.C.1.2:	Compare, using correct music vocabulary, the aesthetic impact of two or more performances of a musical work to one's own hypothesis of the composer's intent. **Clarifications:** e.g., quality recordings, individual and peer-group performances, composer notes, instrumentation, expressive elements, title
MU.912.C.2.1:	Evaluate and make appropriate adjustments to personal performance in solo and ensembles.
MU.912.C.2.2:	Evaluate performance quality in recorded and/or live performances.
MU.912.C.2.3:	Evaluate one's own or other's compositions and/or improvisations and generate improvements independently or cooperatively.
MU.912.C.3.1:	Make critical evaluations, based on exemplary models, of the quality and effectiveness of performances and apply the criteria to personal development in music.
MU.912.F.3.2:	Summarize copyright laws that govern printed, recorded, and on-line music to promote legal and responsible use of intellectual property and technology.
MU.912.F.3.4:	Design and implement a personal learning plan, related to the study of music, which demonstrates self-assessment, brain-storming, decision-making, and initiative to advance skills and/or knowledge.
MU.912.H.1.2:	Compare the work of, and influences on, two or more exemplary composers in the performance medium studied in class. **Clarifications:** e.g., vocal, instrumental, guitar, keyboard, electronic, handbells
MU.912.H.1.3:	Compare two or more works of a composer across performance media. **Clarifications:** e.g., orchestral and choral; guitar and string quartet; piano solo and piano concerto
MU.912.H.2.1:	Evaluate the social impact of music on specific historical periods.
MU.912.H.3.1:	Apply knowledge of science, math, and music to demonstrate, through an acoustic or digital performance medium, how sound production affects musical performance. **Clarifications:** e.g., acoustics, sound amplification, materials, mechanics
MU.912.O.1.1:	Evaluate the organizational principles and conventions in musical works and discuss their effect on structure. **Clarifications:** e.g., rhythm, melody, timbre, form, tonality, harmony, texture; solo, chamber ensemble, large ensemble
MU.912.O.3.2:	Interpret and perform expressive elements indicated by the musical score and/or conductor.
MU.912.S.1.1:	Improvise rhythmic and melodic phrases over harmonic progressions. **Clarifications:** e.g., using text or scat syllables
MU.912.S.1.3:	Arrange a musical work by manipulating two or more aspects of the composition. **Clarifications:** e.g., texture, mode, form, tempo, voicing
MU.912.S.1.4:	Perform and notate, independently and accurately, melodies by ear. **Clarifications:** e.g., singing, playing, writing
MU.912.S.2.1:	Apply the ability to memorize and internalize musical structure, accurate and expressive details, and processing skills to the creation or performance of music literature. **Clarifications:** e.g., memorization, sequential process
MU.912.S.2.2:	Transfer expressive elements and performance techniques from one piece of music to another.
MU.912.S.3.1:	Synthesize a broad range of musical skills by performing a varied repertoire with expression, appropriate stylistic interpretation, technical accuracy, and kinesthetic energy.
MU.912.S.3.2:	Sight-read music accurately and expressively to show synthesis of skills. **Clarifications:** e.g., musical elements, expressive qualities, performance technique
MU.912.S.3.4:	Analyze and describe the effect of rehearsal sessions and/or strategies on refinement of skills and techniques.
MU.912.S.3.5:	Develop and demonstrate proper vocal or instrumental technique. **Clarifications:** e.g., posture, breathing, fingering, embouchure, bow technique, tuning, strumming
	Mathematicians who participate in effortful learning both individually and with others: • Analyze the problem in a way that makes sense given the task.

- Ask questions that will help with solving the task.
- Build perseverance by modifying methods as needed while solving a challenging task.
- Stay engaged and maintain a positive mindset when working to solve tasks.
- Help and support each other when attempting a new method or approach.

MA.K12.MTR.1.1:

Clarifications:
Teachers who encourage students to participate actively in effortful learning both individually and with others:
- Cultivate a community of growth mindset learners.
- Foster perseverance in students by choosing tasks that are challenging.
- Develop students' ability to analyze and problem solve.
- Recognize students' effort when solving challenging problems.

Demonstrate understanding by representing problems in multiple ways.
Mathematicians who demonstrate understanding by representing problems in multiple ways:

- Build understanding through modeling and using manipulatives.
- Represent solutions to problems in multiple ways using objects, drawings, tables, graphs and equations.
- Progress from modeling problems with objects and drawings to using algorithms and equations.
- Express connections between concepts and representations.
- Choose a representation based on the given context or purpose.

MA.K12.MTR.2.1:

Clarifications:
Teachers who encourage students to demonstrate understanding by representing problems in multiple ways:
- Help students make connections between concepts and representations.
- Provide opportunities for students to use manipulatives when investigating concepts.
- Guide students from concrete to pictorial to abstract representations as understanding progresses.
- Show students that various representations can have different purposes and can be useful in different situations.

Complete tasks with mathematical fluency.
Mathematicians who complete tasks with mathematical fluency:

- Select efficient and appropriate methods for solving problems within the given context.
- Maintain flexibility and accuracy while performing procedures and mental calculations.
- Complete tasks accurately and with confidence.
- Adapt procedures to apply them to a new context.
- Use feedback to improve efficiency when performing calculations.

MA.K12.MTR.3.1:

Clarifications:
Teachers who encourage students to complete tasks with mathematical fluency:
- Provide students with the flexibility to solve problems by selecting a procedure that allows them to solve efficiently and accurately.
- Offer multiple opportunities for students to practice efficient and generalizable methods.
- Provide opportunities for students to reflect on the method they used and determine if a more efficient method could have been used.

Engage in discussions that reflect on the mathematical thinking of self and others.
Mathematicians who engage in discussions that reflect on the mathematical thinking of self and others:

- Communicate mathematical ideas, vocabulary and methods effectively.
- Analyze the mathematical thinking of others.
- Compare the efficiency of a method to those expressed by others.
- Recognize errors and suggest how to correctly solve the task.
- Justify results by explaining methods and processes.
- Construct possible arguments based on evidence.

MA.K12.MTR.4.1:

Clarifications:
Teachers who encourage students to engage in discussions that reflect on the mathematical thinking of self and others:
- Establish a culture in which students ask questions of the teacher and their peers, and error is an opportunity for learning.
- Create opportunities for students to discuss their thinking with peers.
- Select, sequence and present student work to advance and deepen understanding of correct and increasingly efficient methods.
- Develop students' ability to justify methods and compare their responses to the responses of their peers.

Use patterns and structure to help understand and connect mathematical concepts.
Mathematicians who use patterns and structure to help understand and connect mathematical concepts:

- Focus on relevant details within a problem.
- Create plans and procedures to logically order events, steps or ideas to solve problems.
- Decompose a complex problem into manageable parts.
- Relate previously learned concepts to new concepts.
- Look for similarities among problems.
- Connect solutions of problems to more complicated large-scale situations.

MA.K12.MTR.5.1:

Clarifications:
Teachers who encourage students to use patterns and structure to help understand and connect mathematical concepts:
- Help students recognize the patterns in the world around them and connect these patterns to mathematical concepts.
- Support students to develop generalizations based on the similarities found among problems.
- Provide opportunities for students to create plans and procedures to solve problems.
- Develop students' ability to construct relationships between their current understanding and more sophisticated ways of thinking.

Assess the reasonableness of solutions.
Mathematicians who assess the reasonableness of solutions:

MA.K12.MTR.6.1:	• Estimate to discover possible solutions. • Use benchmark quantities to determine if a solution makes sense. • Check calculations when solving problems. • Verify possible solutions by explaining the methods used. • Evaluate results based on the given context. **Clarifications:** Teachers who encourage students to assess the reasonableness of solutions: • Have students estimate or predict solutions prior to solving. • Prompt students to continually ask, "Does this solution make sense? How do you know?" • Reinforce that students check their work as they progress within and after a task. • Strengthen students' ability to verify solutions through justifications.
MA.K12.MTR.7.1:	Apply mathematics to real-world contexts. Mathematicians who apply mathematics to real-world contexts: • Connect mathematical concepts to everyday experiences. • Use models and methods to understand, represent and solve problems. • Perform investigations to gather data or determine if a method is appropriate. • Redesign models and methods to improve accuracy or efficiency. **Clarifications:** Teachers who encourage students to apply mathematics to real-world contexts: • Provide opportunities for students to create models, both concrete and abstract, and perform investigations. • Challenge students to question the accuracy of their models and methods. • Support students as they validate conclusions by comparing them to the given situation. • Indicate how various concepts can be applied to other disciplines.
ELA.K12.EE.1.1:	Cite evidence to explain and justify reasoning. **Clarifications:** K-1 Students include textual evidence in their oral communication with guidance and support from adults. The evidence can consist of details from the text without naming the text. During 1st grade, students learn how to incorporate the evidence in their writing. 2-3 Students include relevant textual evidence in their written and oral communication. Students should name the text when they refer to it. In 3rd grade, students should use a combination of direct and indirect citations. 4-5 Students continue with previous skills and reference comments made by speakers and peers. Students cite texts that they've directly quoted, paraphrased, or used for information. When writing, students will use the form of citation dictated by the instructor or the style guide referenced by the instructor. 6-8 Students continue with previous skills and use a style guide to create a proper citation. 9-12 Students continue with previous skills and should be aware of existing style guides and the ways in which they differ.
ELA.K12.EE.2.1:	Read and comprehend grade-level complex texts proficiently. **Clarifications:** See Text Complexity for grade-level complexity bands and a text complexity rubric.
ELA.K12.EE.3.1:	Make inferences to support comprehension. **Clarifications:** Students will make inferences before the words infer or inference are introduced. Kindergarten students will answer questions like "Why is the girl smiling?" or make predictions about what will happen based on the title page. Students will use the terms and apply them in 2nd grade and beyond.
ELA.K12.EE.4.1:	Use appropriate collaborative techniques and active listening skills when engaging in discussions in a variety of situations. **Clarifications:** In kindergarten, students learn to listen to one another respectfully. In grades 1-2, students build upon these skills by justifying what they are thinking. For example: "I think _____ because _____." The collaborative conversations are becoming academic conversations. In grades 3-12, students engage in academic conversations discussing claims and justifying their reasoning, refining and applying skills. Students build on ideas, propel the conversation, and support claims and counterclaims with evidence.
ELA.K12.EE.5.1:	Use the accepted rules governing a specific format to create quality work. **Clarifications:** Students will incorporate skills learned into work products to produce quality work. For students to incorporate these skills appropriately, they must receive instruction. A 3rd grade student creating a poster board display must have instruction in how to effectively present information to do quality work.
ELA.K12.EE.6.1:	Use appropriate voice and tone when speaking or writing. **Clarifications:** In kindergarten and 1st grade, students learn the difference between formal and informal language. For example, the way we talk to our friends differs from the way we speak to adults. In 2nd grade and beyond, students practice appropriate social and academic language to discuss texts.
DA.912.S.2.1:	Sustain focused attention, respect, and discipline during class, rehearsal, and performance.
ELD.K12.ELL.SI.1:	English language learners communicate for social and instructional purposes within the school setting.

General Course Information and Notes

VERSION DESCRIPTION

Students with jazz experience become conversant with basic chord progressions and the scale/chord relationship, strengthen aural skills, and learn to improvise and compose melodies over progressions as they rehearse, perform, and study high-quality jazz ensemble literature. Musicians study jazz history and become familiar with the cultural context of various compositions and artists. Public performances may serve as a culmination of specific instructional goals. Students may be required to attend and/or participate in rehearsals and performances outside the school day to support, extend, and assess learning in the classroom. Students in this class may need to obtain (e.g., borrow, rent, purchase) an instrument from an outside source.

GENERAL NOTES

Florida's Benchmarks for Excellent Student Thinking (B.E.S.T.) Standards
This course includes Florida's B.E.S.T. ELA Expectations (EE) and Mathematical Thinking and Reasoning Standards (MTRs) for students. Florida educators should intentionally embed these standards within the content and their instruction as applicable. For guidance on the implementation of the EEs and MTRs, please visit cpalms.org/Standards/BEST_Standards.aspx and select the appropriate B.E.S.T. Standards package.

English Language Development ELD Standards Special Notes Section:
Teachers are required to provide listening, speaking, reading and writing instruction that allows English language learners (ELL) to communicate for social and instructional purposes within the school setting. For the given level of English language proficiency and with visual, graphic, or interactive support, students will interact with grade level words, expressions, sentences and discourse to process or produce language necessary for academic success. The ELD standard should specify a relevant content area concept or topic of study chosen by curriculum developers and teachers which maximizes an ELL's need for communication and social skills. To access an ELL supporting document which delineates performance definitions and descriptors, please click on the following link: cpalms.org/uploads/docs/standards/eld/SI.pdf

GENERAL INFORMATION

Course Number: 1302510

Course Path: Section: Grades PreK to 12 Education Courses > **Grade Group:** Grades 9 to 12 and Adult Education Courses > **Subject:** Music Education > **SubSubject:** Instrumental Music > **Abbreviated Title:** JAZZ ENS 2

Number of Credits: One (1) credit

Course Length: Year (Y)

Course Type: Core Academic Course

Course Level: 2

Course Status: Draft - Course Pending Approval

Grade Level(s): 9,10,11,12

Graduation Requirement: Performing/Fine Arts

Educator Certifications

Music (Elementary and Secondary Grades K-12)
Instrumental Music (Secondary Grades 7-12)
Instrumental Music (Elementary and Secondary Grades K-12)

Jazz Ensemble 3 (#1302520) 2022 - And Beyond

Course Standards

Name	Description
MU.912.C.1.1:	Apply listening strategies to promote appreciation and understanding of unfamiliar musical works. **Clarifications:** e.g., listening maps, active listening, checklists
MU.912.C.1.2:	Compare, using correct music vocabulary, the aesthetic impact of two or more performances of a musical work to one's own hypothesis of the composer's intent. **Clarifications:** e.g., quality recordings, individual and peer-group performances, composer notes, instrumentation, expressive elements, title
MU.912.C.2.1:	Evaluate and make appropriate adjustments to personal performance in solo and ensembles.
MU.912.C.2.2:	Evaluate performance quality in recorded and/or live performances.
MU.912.C.2.3:	Evaluate one's own or other's compositions and/or improvisations and generate improvements independently or cooperatively.
MU.912.C.3.1:	Make critical evaluations, based on exemplary models, of the quality and effectiveness of performances and apply the criteria to personal development in music.
MU.912.F.2.1:	Design or refine a résumé for application to higher education or the workforce that highlights marketable skills and knowledge gained through music training. **Clarifications:** e.g., repertoire lists, technology-based work, ability to research and analyze, and examples of leadership and collaborative skills
MU.912.F.3.2:	Summarize copyright laws that govern printed, recorded, and on-line music to promote legal and responsible use of intellectual property and technology.
MU.912.F.3.4:	Design and implement a personal learning plan, related to the study of music, which demonstrates self-assessment, brain-storming, decision-making, and initiative to advance skills and/or knowledge.
MU.912.H.1.1:	Investigate and discuss how a culture's traditions are reflected through its music. **Clarifications:** e.g., patriotic, folk, celebration, entertainment, spiritual
MU.912.H.1.2:	Compare the work of, and influences on, two or more exemplary composers in the performance medium studied in class. **Clarifications:** e.g., vocal, instrumental, guitar, keyboard, electronic, handbells
MU.912.H.1.3:	Compare two or more works of a composer across performance media. **Clarifications:** e.g., orchestral and choral; guitar and string quartet; piano solo and piano concerto
MU.912.H.2.4:	Examine the effects of developing technology on composition, performance, and acquisition of music.
MU.912.H.3.1:	Apply knowledge of science, math, and music to demonstrate, through an acoustic or digital performance medium, how sound production affects musical performance. **Clarifications:** e.g., acoustics, sound amplification, materials, mechanics
MU.912.H.3.2:	Combine personal interest with skills and knowledge from a non-music class to explore, design, and present a music-based or music-enhanced topic of interest to demonstrate the ability to make transfers across contexts. **Clarifications:** e.g., music and health, Holocaust, tolerance, African American history, world languages, scientific research, data analysis, problem-solving, public speaking
MU.912.O.1.1:	Evaluate the organizational principles and conventions in musical works and discuss their effect on structure. **Clarifications:** e.g., rhythm, melody, timbre, form, tonality, harmony, texture; solo, chamber ensemble, large ensemble
MU.912.O.3.2:	Interpret and perform expressive elements indicated by the musical score and/or conductor.
MU.912.S.1.1:	Improvise rhythmic and melodic phrases over harmonic progressions. **Clarifications:** e.g., using text or scat syllables
MU.912.S.1.2:	Compose music for voices and/or acoustic, digital, or electronic instruments.
MU.912.S.1.3:	Arrange a musical work by manipulating two or more aspects of the composition. **Clarifications:** e.g., texture, mode, form, tempo, voicing
MU.912.S.1.4:	Perform and notate, independently and accurately, melodies by ear. **Clarifications:** e.g., singing, playing, writing
MU.912.S.2.1:	Apply the ability to memorize and internalize musical structure, accurate and expressive details, and processing skills to the creation or performance of music literature. **Clarifications:**

	e.g., memorization, sequential process
MU.912.S.2.2:	Transfer expressive elements and performance techniques from one piece of music to another.
MU.912.S.3.1:	Synthesize a broad range of musical skills by performing a varied repertoire with expression, appropriate stylistic interpretation, technical accuracy, and kinesthetic energy.
MU.912.S.3.2:	Sight-read music accurately and expressively to show synthesis of skills. **Clarifications:** e.g., musical elements, expressive qualities, performance technique
MU.912.S.3.4:	Analyze and describe the effect of rehearsal sessions and/or strategies on refinement of skills and techniques.
MU.912.S.3.5:	Develop and demonstrate proper vocal or instrumental technique. **Clarifications:** e.g., posture, breathing, fingering, embouchure, bow technique, tuning, strumming
MA.K12.MTR.1.1:	Mathematicians who participate in effortful learning both individually and with others: • Analyze the problem in a way that makes sense given the task. • Ask questions that will help with solving the task. • Build perseverance by modifying methods as needed while solving a challenging task. • Stay engaged and maintain a positive mindset when working to solve tasks. • Help and support each other when attempting a new method or approach. **Clarifications:** Teachers who encourage students to participate actively in effortful learning both individually and with others: • Cultivate a community of growth mindset learners. • Foster perseverance in students by choosing tasks that are challenging. • Develop students' ability to analyze and problem solve. • Recognize students' effort when solving challenging problems.
MA.K12.MTR.2.1:	Demonstrate understanding by representing problems in multiple ways. Mathematicians who demonstrate understanding by representing problems in multiple ways: • Build understanding through modeling and using manipulatives. • Represent solutions to problems in multiple ways using objects, drawings, tables, graphs and equations. • Progress from modeling problems with objects and drawings to using algorithms and equations. • Express connections between concepts and representations. • Choose a representation based on the given context or purpose. **Clarifications:** Teachers who encourage students to demonstrate understanding by representing problems in multiple ways: • Help students make connections between concepts and representations. • Provide opportunities for students to use manipulatives when investigating concepts. • Guide students from concrete to pictorial to abstract representations as understanding progresses. • Show students that various representations can have different purposes and can be useful in different situations.
MA.K12.MTR.3.1:	Complete tasks with mathematical fluency. Mathematicians who complete tasks with mathematical fluency: • Select efficient and appropriate methods for solving problems within the given context. • Maintain flexibility and accuracy while performing procedures and mental calculations. • Complete tasks accurately and with confidence. • Adapt procedures to apply them to a new context. • Use feedback to improve efficiency when performing calculations. **Clarifications:** Teachers who encourage students to complete tasks with mathematical fluency: • Provide students with the flexibility to solve problems by selecting a procedure that allows them to solve efficiently and accurately. • Offer multiple opportunities for students to practice efficient and generalizable methods. • Provide opportunities for students to reflect on the method they used and determine if a more efficient method could have been used.
MA.K12.MTR.4.1:	Engage in discussions that reflect on the mathematical thinking of self and others. Mathematicians who engage in discussions that reflect on the mathematical thinking of self and others: • Communicate mathematical ideas, vocabulary and methods effectively. • Analyze the mathematical thinking of others. • Compare the efficiency of a method to those expressed by others. • Recognize errors and suggest how to correctly solve the task. • Justify results by explaining methods and processes. • Construct possible arguments based on evidence. **Clarifications:** Teachers who encourage students to engage in discussions that reflect on the mathematical thinking of self and others: • Establish a culture in which students ask questions of the teacher and their peers, and error is an opportunity for learning. • Create opportunities for students to discuss their thinking with peers. • Select, sequence and present student work to advance and deepen understanding of correct and increasingly efficient methods. • Develop students' ability to justify methods and compare their responses to the responses of their peers.
	Use patterns and structure to help understand and connect mathematical concepts. Mathematicians who use patterns and structure to help understand and connect mathematical concepts: • Focus on relevant details within a problem.

MA.K12.MTR.5.1:	• Create plans and procedures to logically order events, steps or ideas to solve problems. • Decompose a complex problem into manageable parts. • Relate previously learned concepts to new concepts. • Look for similarities among problems. • Connect solutions of problems to more complicated large-scale situations. **Clarifications:** Teachers who encourage students to use patterns and structure to help understand and connect mathematical concepts: • Help students recognize the patterns in the world around them and connect these patterns to mathematical concepts. • Support students to develop generalizations based on the similarities found among problems. • Provide opportunities for students to create plans and procedures to solve problems. • Develop students' ability to construct relationships between their current understanding and more sophisticated ways of thinking.
MA.K12.MTR.6.1:	Assess the reasonableness of solutions. Mathematicians who assess the reasonableness of solutions: • Estimate to discover possible solutions. • Use benchmark quantities to determine if a solution makes sense. • Check calculations when solving problems. • Verify possible solutions by explaining the methods used. • Evaluate results based on the given context. **Clarifications:** Teachers who encourage students to assess the reasonableness of solutions: • Have students estimate or predict solutions prior to solving. • Prompt students to continually ask, "Does this solution make sense? How do you know?" • Reinforce that students check their work as they progress within and after a task. • Strengthen students' ability to verify solutions through justifications.
MA.K12.MTR.7.1:	Apply mathematics to real-world contexts. Mathematicians who apply mathematics to real-world contexts: • Connect mathematical concepts to everyday experiences. • Use models and methods to understand, represent and solve problems. • Perform investigations to gather data or determine if a method is appropriate. • Redesign models and methods to improve accuracy or efficiency. **Clarifications:** Teachers who encourage students to apply mathematics to real-world contexts: • Provide opportunities for students to create models, both concrete and abstract, and perform investigations. • Challenge students to question the accuracy of their models and methods. • Support students as they validate conclusions by comparing them to the given situation. • Indicate how various concepts can be applied to other disciplines.
ELA.K12.EE.1.1:	Cite evidence to explain and justify reasoning. **Clarifications:** K-1 Students include textual evidence in their oral communication with guidance and support from adults. The evidence can consist of details from the text without naming the text. During 1st grade, students learn how to incorporate the evidence in their writing. 2-3 Students include relevant textual evidence in their written and oral communication. Students should name the text when they refer to it. In 3rd grade, students should use a combination of direct and indirect citations. 4-5 Students continue with previous skills and reference comments made by speakers and peers. Students cite texts that they've directly quoted, paraphrased, or used for information. When writing, students will use the form of citation dictated by the instructor or the style guide referenced by the instructor. 6-8 Students continue with previous skills and use a style guide to create a proper citation. 9-12 Students continue with previous skills and should be aware of existing style guides and the ways in which they differ.
ELA.K12.EE.2.1:	Read and comprehend grade-level complex texts proficiently. **Clarifications:** See Text Complexity for grade-level complexity bands and a text complexity rubric.
ELA.K12.EE.3.1:	Make inferences to support comprehension. **Clarifications:** Students will make inferences before the words infer or inference are introduced. Kindergarten students will answer questions like "Why is the girl smiling?" or make predictions about what will happen based on the title page. Students will use the terms and apply them in 2nd grade and beyond.
ELA.K12.EE.4.1:	Use appropriate collaborative techniques and active listening skills when engaging in discussions in a variety of situations. **Clarifications:** In kindergarten, students learn to listen to one another respectfully. In grades 1-2, students build upon these skills by justifying what they are thinking. For example: "I think _____ because _____." The collaborative conversations are becoming academic conversations. In grades 3-12, students engage in academic conversations discussing claims and justifying their reasoning, refining and applying skills. Students build on ideas, propel the conversation, and support claims and counterclaims with evidence.
ELA.K12.EE.5.1:	Use the accepted rules governing a specific format to create quality work. **Clarifications:** Students will incorporate skills learned into work products to produce quality work. For students to incorporate these skills appropriately, they

	must receive instruction. A 3rd grade student creating a poster board display must have instruction in how to effectively present information to do quality work.
ELA.K12.EE.6.1:	Use appropriate voice and tone when speaking or writing. **Clarifications:** In kindergarten and 1st grade, students learn the difference between formal and informal language. For example, the way we talk to our friends differs from the way we speak to adults. In 2nd grade and beyond, students practice appropriate social and academic language to discuss texts.
DA.912.S.2.1:	Sustain focused attention, respect, and discipline during class, rehearsal, and performance.
ELD.K12.ELL.SI.1:	English language learners communicate for social and instructional purposes within the school setting.

General Course Information and Notes

VERSION DESCRIPTION

Students with considerable jazz experience become conversant with more complex forms and harmonic progressions, and strengthen their aural and improvisational skills as they rehearse, perform, and study high-quality jazz ensemble literature. Musicians apply their theory skills to arranging, transposition, and composing; and study various periods, cultural contexts, compositions, and artists in jazz history. Public performances may serve as a culmination of specific instructional goals. Students may be required to attend and/or participate in rehearsals and performances outside the school day to support, extend, and assess learning in the classroom. Students in this class may need to obtain (e.g., borrow, rent, purchase) an instrument from an outside source.

GENERAL NOTES

Florida's Benchmarks for Excellent Student Thinking (B.E.S.T.) Standards
This course includes Florida's B.E.S.T. ELA Expectations (EE) and Mathematical Thinking and Reasoning Standards (MTRs) for students. Florida educators should intentionally embed these standards within the content and their instruction as applicable. For guidance on the implementation of the EEs and MTRs, please visit cpalms.org/Standards/BEST_Standards.aspx and select the appropriate B.E.S.T. Standards package.

English Language Development ELD Standards Special Notes Section:
Teachers are required to provide listening, speaking, reading and writing instruction that allows English language learners (ELL) to communicate for social and instructional purposes within the school setting. For the given level of English language proficiency and with visual, graphic, or interactive support, students will interact with grade level words, expressions, sentences and discourse to process or produce language necessary for academic success. The ELD standard should specify a relevant content area concept or topic of study chosen by curriculum developers and teachers which maximizes an ELL's need for communication and social skills. To access an ELL supporting document which delineates performance definitions and descriptors, please click on the following link: cpalms.org/uploads/docs/standards/eld/SI.pdf

GENERAL INFORMATION

Course Number: 1302520

Course Path: Section: Grades PreK to 12 Education Courses > **Grade Group:** Grades 9 to 12 and Adult Education Courses > **Subject:** Music Education > **SubSubject:** Instrumental Music >

Abbreviated Title: JAZZ ENS 3

Number of Credits: One (1) credit

Course Length: Year (Y)

Course Type: Core Academic Course

Course Level: 2

Course Status: Draft - Course Pending Approval

Grade Level(s): 9,10,11,12

Graduation Requirement: Performing/Fine Arts

Educator Certifications

Music (Elementary and Secondary Grades K-12)
Instrumental Music (Secondary Grades 7-12)
Instrumental Music (Elementary and Secondary Grades K-12)

Jazz Ensemble 4 Honors (#1302530) 2022 - And Beyond

Course Standards

Name	Description
MU.912.C.1.1:	Apply listening strategies to promote appreciation and understanding of unfamiliar musical works. **Clarifications:** e.g., listening maps, active listening, checklists
MU.912.C.1.2:	Compare, using correct music vocabulary, the aesthetic impact of two or more performances of a musical work to one's own hypothesis of the composer's intent. **Clarifications:** e.g., quality recordings, individual and peer-group performances, composer notes, instrumentation, expressive elements, title
MU.912.C.2.1:	Evaluate and make appropriate adjustments to personal performance in solo and ensembles.
MU.912.C.2.2:	Evaluate performance quality in recorded and/or live performances.
MU.912.C.2.3:	Evaluate one's own or other's compositions and/or improvisations and generate improvements independently or cooperatively.
MU.912.C.3.1:	Make critical evaluations, based on exemplary models, of the quality and effectiveness of performances and apply the criteria to personal development in music.
MU.912.F.1.1:	Analyze and evaluate the effect of "traditional" and contemporary technologies on the development of music.
MU.912.F.2.1:	Design or refine a résumé for application to higher education or the workforce that highlights marketable skills and knowledge gained through music training. **Clarifications:** e.g., repertoire lists, technology-based work, ability to research and analyze, and examples of leadership and collaborative skills
MU.912.F.2.2:	Analyze the effect of the arts and entertainment industry on the economic and social health of communities and regions. **Clarifications:** e.g., community revitalization, industry choosing new locations, cultural and social enrichment
MU.912.F.2.3:	Compare the organizational structure of a professional orchestra, chorus, quintet, or other ensemble to that of a business. **Clarifications:** e.g., leadership, financial needs and structure, marketing, personnel matters, manager, travel
MU.912.F.3.1:	Analyze and describe how meeting one's responsibilities in music offers opportunities to develop leadership skills, and identify personal examples of leadership in school and/or non-school settings.
MU.912.F.3.2:	Summarize copyright laws that govern printed, recorded, and on-line music to promote legal and responsible use of intellectual property and technology.
MU.912.F.3.3:	Define, prioritize, monitor, and successfully complete tasks related to individual musical performance or project presentation, without direct oversight, demonstrating skills for use in the workplace.
MU.912.F.3.4:	Design and implement a personal learning plan, related to the study of music, which demonstrates self-assessment, brain-storming, decision-making, and initiative to advance skills and/or knowledge.
MU.912.H.1.3:	Compare two or more works of a composer across performance media. **Clarifications:** e.g., orchestral and choral; guitar and string quartet; piano solo and piano concerto
MU.912.H.1.4:	Analyze how Western music has been influenced by historical and current world cultures.
MU.912.H.1.5:	Analyze music within cultures to gain understanding of authentic performance practices.
MU.912.H.2.2:	Analyze current musical trends, including audience environments and music acquisition, to predict possible directions of music.
MU.912.H.2.3:	Analyze the evolution of a music genre. **Clarifications:** e.g., jazz, blues
MU.912.H.2.4:	Examine the effects of developing technology on composition, performance, and acquisition of music.
MU.912.H.3.2:	Combine personal interest with skills and knowledge from a non-music class to explore, design, and present a music-based or music-enhanced topic of interest to demonstrate the ability to make transfers across contexts. **Clarifications:** e.g., music and health, Holocaust, tolerance, African American history, world languages, scientific research, data analysis, problem-solving, public speaking
MU.912.O.1.1:	Evaluate the organizational principles and conventions in musical works and discuss their effect on structure. **Clarifications:** e.g., rhythm, melody, timbre, form, tonality, harmony, texture; solo, chamber ensemble, large ensemble
MU.912.O.2.1:	Transfer accepted composition conventions and performance practices of a specific style to a contrasting style of music.
MU.912.O.2.2:	Transpose melodies into different modalities through performance and composition.
MU.912.O.3.1:	Analyze expressive elements in a musical work and describe how the choices and manipulations of the elements support, for the listener, the implied meaning of the composer/performer. **Clarifications:** e.g., tempo markings, expression markings, articulation markings, phrasing, scales, modes, harmonic structure, timbre choice, rhythm, orchestration
MU.912.O.3.2:	Interpret and perform expressive elements indicated by the musical score and/or conductor.

MU.912.S.1.1:	Improvise rhythmic and melodic phrases over harmonic progressions. **Clarifications:** e.g., using text or scat syllables
MU.912.S.1.2:	Compose music for voices and/or acoustic, digital, or electronic instruments.
MU.912.S.1.3:	Arrange a musical work by manipulating two or more aspects of the composition. **Clarifications:** e.g., texture, mode, form, tempo, voicing
MU.912.S.1.4:	Perform and notate, independently and accurately, melodies by ear. **Clarifications:** e.g., singing, playing, writing
MU.912.S.2.1:	Apply the ability to memorize and internalize musical structure, accurate and expressive details, and processing skills to the creation or performance of music literature. **Clarifications:** e.g., memorization, sequential process
MU.912.S.2.2:	Transfer expressive elements and performance techniques from one piece of music to another.
MU.912.S.3.1:	Synthesize a broad range of musical skills by performing a varied repertoire with expression, appropriate stylistic interpretation, technical accuracy, and kinesthetic energy.
MU.912.S.3.2:	Sight-read music accurately and expressively to show synthesis of skills. **Clarifications:** e.g., musical elements, expressive qualities, performance technique
MU.912.S.3.3:	Transcribe aurally presented songs into melodic and/or rhythmic notation to show synthesis of aural and notational skills.
MU.912.S.3.4:	Analyze and describe the effect of rehearsal sessions and/or strategies on refinement of skills and techniques.
MU.912.S.3.5:	Develop and demonstrate proper vocal or instrumental technique. **Clarifications:** e.g., posture, breathing, fingering, embouchure, bow technique, tuning, strumming
MA.K12.MTR.1.1:	Mathematicians who participate in effortful learning both individually and with others: • Analyze the problem in a way that makes sense given the task. • Ask questions that will help with solving the task. • Build perseverance by modifying methods as needed while solving a challenging task. • Stay engaged and maintain a positive mindset when working to solve tasks. • Help and support each other when attempting a new method or approach. **Clarifications:** Teachers who encourage students to participate actively in effortful learning both individually and with others: • Cultivate a community of growth mindset learners. • Foster perseverance in students by choosing tasks that are challenging. • Develop students' ability to analyze and problem solve. • Recognize students' effort when solving challenging problems.
MA.K12.MTR.2.1:	Demonstrate understanding by representing problems in multiple ways. Mathematicians who demonstrate understanding by representing problems in multiple ways: • Build understanding through modeling and using manipulatives. • Represent solutions to problems in multiple ways using objects, drawings, tables, graphs and equations. • Progress from modeling problems with objects and drawings to using algorithms and equations. • Express connections between concepts and representations. • Choose a representation based on the given context or purpose. **Clarifications:** Teachers who encourage students to demonstrate understanding by representing problems in multiple ways: • Help students make connections between concepts and representations. • Provide opportunities for students to use manipulatives when investigating concepts. • Guide students from concrete to pictorial to abstract representations as understanding progresses. • Show students that various representations can have different purposes and can be useful in different situations.
MA.K12.MTR.3.1:	Complete tasks with mathematical fluency. Mathematicians who complete tasks with mathematical fluency: • Select efficient and appropriate methods for solving problems within the given context. • Maintain flexibility and accuracy while performing procedures and mental calculations. • Complete tasks accurately and with confidence. • Adapt procedures to apply them to a new context. • Use feedback to improve efficiency when performing calculations. **Clarifications:** Teachers who encourage students to complete tasks with mathematical fluency: • Provide students with the flexibility to solve problems by selecting a procedure that allows them to solve efficiently and accurately. • Offer multiple opportunities for students to practice efficient and generalizable methods. • Provide opportunities for students to reflect on the method they used and determine if a more efficient method could have been used.
	Engage in discussions that reflect on the mathematical thinking of self and others. Mathematicians who engage in discussions that reflect on the mathematical thinking of self and others: • Communicate mathematical ideas, vocabulary and methods effectively.

MA.K12.MTR.4.1:	• Analyze the mathematical thinking of others. • Compare the efficiency of a method to those expressed by others. • Recognize errors and suggest how to correctly solve the task. • Justify results by explaining methods and processes. • Construct possible arguments based on evidence. **Clarifications:** Teachers who encourage students to engage in discussions that reflect on the mathematical thinking of self and others: • Establish a culture in which students ask questions of the teacher and their peers, and error is an opportunity for learning. • Create opportunities for students to discuss their thinking with peers. • Select, sequence and present student work to advance and deepen understanding of correct and increasingly efficient methods. • Develop students' ability to justify methods and compare their responses to the responses of their peers.
MA.K12.MTR.5.1:	Use patterns and structure to help understand and connect mathematical concepts. Mathematicians who use patterns and structure to help understand and connect mathematical concepts: • Focus on relevant details within a problem. • Create plans and procedures to logically order events, steps or ideas to solve problems. • Decompose a complex problem into manageable parts. • Relate previously learned concepts to new concepts. • Look for similarities among problems. • Connect solutions of problems to more complicated large-scale situations. **Clarifications:** Teachers who encourage students to use patterns and structure to help understand and connect mathematical concepts: • Help students recognize the patterns in the world around them and connect these patterns to mathematical concepts. • Support students to develop generalizations based on the similarities found among problems. • Provide opportunities for students to create plans and procedures to solve problems. • Develop students' ability to construct relationships between their current understanding and more sophisticated ways of thinking.
MA.K12.MTR.6.1:	Assess the reasonableness of solutions. Mathematicians who assess the reasonableness of solutions: • Estimate to discover possible solutions. • Use benchmark quantities to determine if a solution makes sense. • Check calculations when solving problems. • Verify possible solutions by explaining the methods used. • Evaluate results based on the given context. **Clarifications:** Teachers who encourage students to assess the reasonableness of solutions: • Have students estimate or predict solutions prior to solving. • Prompt students to continually ask, "Does this solution make sense? How do you know?" • Reinforce that students check their work as they progress within and after a task. • Strengthen students' ability to verify solutions through justifications.
MA.K12.MTR.7.1:	Apply mathematics to real-world contexts. Mathematicians who apply mathematics to real-world contexts: • Connect mathematical concepts to everyday experiences. • Use models and methods to understand, represent and solve problems. • Perform investigations to gather data or determine if a method is appropriate. • Redesign models and methods to improve accuracy or efficiency. **Clarifications:** Teachers who encourage students to apply mathematics to real-world contexts: • Provide opportunities for students to create models, both concrete and abstract, and perform investigations. • Challenge students to question the accuracy of their models and methods. • Support students as they validate conclusions by comparing them to the given situation. • Indicate how various concepts can be applied to other disciplines.
ELA.K12.EE.1.1:	Cite evidence to explain and justify reasoning. **Clarifications:** K-1 Students include textual evidence in their oral communication with guidance and support from adults. The evidence can consist of details from the text without naming the text. During 1st grade, students learn how to incorporate the evidence in their writing. 2-3 Students include relevant textual evidence in their written and oral communication. Students should name the text when they refer to it. In 3rd grade, students should use a combination of direct and indirect citations. 4-5 Students continue with previous skills and reference comments made by speakers and peers. Students cite texts that they've directly quoted, paraphrased, or used for information. When writing, students will use the form of citation dictated by the instructor or the style guide referenced by the instructor. 6-8 Students continue with previous skills and use a style guide to create a proper citation. 9-12 Students continue with previous skills and should be aware of existing style guides and the ways in which they differ.
ELA.K12.EE.2.1:	Read and comprehend grade-level complex texts proficiently. **Clarifications:** See Text Complexity for grade-level complexity bands and a text complexity rubric.
	Make inferences to support comprehension.

ELA.K12.EE.3.1:	**Clarifications:** Students will make inferences before the words infer or inference are introduced. Kindergarten students will answer questions like "Why is the girl smiling?" or make predictions about what will happen based on the title page. Students will use the terms and apply them in 2nd grade and beyond.
ELA.K12.EE.4.1:	Use appropriate collaborative techniques and active listening skills when engaging in discussions in a variety of situations. **Clarifications:** In kindergarten, students learn to listen to one another respectfully. In grades 1-2, students build upon these skills by justifying what they are thinking. For example: "I think _____ because _____." The collaborative conversations are becoming academic conversations. In grades 3-12, students engage in academic conversations discussing claims and justifying their reasoning, refining and applying skills. Students build on ideas, propel the conversation, and support claims and counterclaims with evidence.
ELA.K12.EE.5.1:	Use the accepted rules governing a specific format to create quality work. **Clarifications:** Students will incorporate skills learned into work products to produce quality work. For students to incorporate these skills appropriately, they must receive instruction. A 3rd grade student creating a poster board display must have instruction in how to effectively present information to do quality work.
ELA.K12.EE.6.1:	Use appropriate voice and tone when speaking or writing. **Clarifications:** In kindergarten and 1st grade, students learn the difference between formal and informal language. For example, the way we talk to our friends differs from the way we speak to adults. In 2nd grade and beyond, students practice appropriate social and academic language to discuss texts.
DA.912.S.2.1:	Sustain focused attention, respect, and discipline during class, rehearsal, and performance.
ELD.K12.ELL.SI.1:	English language learners communicate for social and instructional purposes within the school setting.

General Course Information and Notes

VERSION DESCRIPTION

Students with significant jazz experience become highly conversant with complex harmonic structures; compose or arrange for small groups; improvise over various forms, keys, and styles; and are knowledgeable about the professional jazz scene and its icons. Musicians study the impact of technology on jazz and the music industry, and learn the basics of sound reinforcement for solo and ensemble performance. In keeping with the rigor expected in an Honors course, students undertake independent study that includes synthesis of learning and experience. Public performances may serve as a culmination of specific instructional goals. Students may be required to attend and/or participate in rehearsals and performances outside the school day to support, extend, and assess learning in the classroom. Students in this class may need to obtain (e.g., borrow, rent, purchase) an instrument from an outside source.

GENERAL NOTES

Honors and Advanced Level Course Note: Academic rigor is more than simply assigning to students a greater quantity of work. Through the application, analysis, evaluation, and creation of complex ideas that are often abstract and multi-faceted, students are challenged to think and collaborate critically on the content they are learning.

Florida's Benchmarks for Excellent Student Thinking (B.E.S.T.) Standards
This course includes Florida's B.E.S.T. ELA Expectations (EE) and Mathematical Thinking and Reasoning Standards (MTRs) for students. Florida educators should intentionally embed these standards within the content and their instruction as applicable. For guidance on the implementation of the EEs and MTRs, please visit cpalms.org/Standards/BEST_Standards.aspx and select the appropriate B.E.S.T. Standards package.

English Language Development ELD Standards Special Notes Section:
Teachers are required to provide listening, speaking, reading and writing instruction that allows English language learners (ELL) to communicate for social and instructional purposes within the school setting. For the given level of English language proficiency and with visual, graphic, or interactive support, students will interact with grade level words, expressions, sentences and discourse to process or produce language necessary for academic success. The ELD standard should specify a relevant content area concept or topic of study chosen by curriculum developers and teachers which maximizes an ELL's need for communication and social skills. To access an ELL supporting document which delineates performance definitions and descriptors, please click on the following link: cpalms.org/uploads/docs/standards/eld/SI.pdf

GENERAL INFORMATION

Course Number: 1302530

Course Path: Section: Grades PreK to 12 Education Courses > **Grade Group:** Grades 9 to 12 and Adult Education Courses > **Subject:** Music Education > **SubSubject:** Instrumental Music >

Abbreviated Title: JAZZ ENS 4 HON

Number of Credits: One (1) credit

Course Length: Year (Y)

Course Attributes:

- Honors

Course Type: Core Academic Course

Course Level: 3

Course Status: Draft - Course Pending Approval

Grade Level(s): 9,10,11,12

Graduation Requirement: Performing/Fine Arts

Educator Certifications

Music (Elementary and Secondary Grades K-12)
Instrumental Music (Secondary Grades 7-12)
Instrumental Music (Elementary and Secondary Grades K-12)

M/J Chorus 1 (#1303000) 2022 - And Beyond

Course Standards

Name	Description
MU.68.C.1.1:	Develop strategies for listening to unfamiliar musical works. **Clarifications:** e.g., listening maps, active listening, checklists
MU.68.C.1.4:	Identify, aurally, a variety of vocal styles and ensembles. **Clarifications:** e.g., chant, spiritual, folk, opera, world, jazz, pop, solo, duet, trio, quartet, small ensembles, choirs
MU.68.C.2.2:	Critique, using correct music vocabulary, changes in one's own or others' musical performance resulting from practice or rehearsal. **Clarifications:** e.g., blend, balance, ensemble playing, sonority, technique, tone quality
MU.68.F.3.2:	Investigate and discuss laws that protect intellectual property, and practice safe, legal, and responsible acquisition and use of musical media.
MU.68.H.1.1:	Describe the functions of music from various cultures and time periods.
MU.68.H.2.3:	Classify the literature being studied by genre, style, and/or time period.
MU.68.H.3.1:	Identify connections among music and other content areas and/or contexts through interdisciplinary collaboration. **Clarifications:** e.g., school: other music classes, social studies, dance, physical education, science, health, math, world languages; community: cultural connections and traditions, ceremonial music, sales and advertising, communication
MU.68.H.3.2:	Discuss how the absence of music would affect other content areas and contexts. **Clarifications:** e.g., theatre and dance, movies, sporting events, video games, commercial advertising, social gatherings, civic and religious ceremonies, plays
MU.68.O.1.1:	Compare performances of a musical work to identify artistic choices made by performers. **Clarifications:** e.g., rhythm, melody, timbre, form, tonality, harmony, expressive elements; choral, orchestral, band, ensemble
MU.68.O.3.1:	Describe how the combination of instrumentation and expressive elements in a musical work can convey a specific thought, idea, mood, and/or image. **Clarifications:** e.g., tempo markings, expression markings, articulation markings, phrasing, scales, modes, harmonic structure, timbre, rhythm, orchestration
MU.68.S.1.1:	Improvise rhythmic and melodic phrases to accompany familiar songs and/or standard harmonic progressions. **Clarifications:** e.g., blues, rock
MU.68.S.1.3:	Arrange a short musical piece by manipulating melody, form, rhythm, and/or voicing.
MU.68.S.1.4:	Sing or play melodies by ear with support from the teacher and/or peers. **Clarifications:** e.g., melodies using traditional classroom instruments and/or voice
MU.68.S.3.1:	Sing and/or play age-appropriate repertoire expressively. **Clarifications:** e.g., technique, phrasing, dynamics, tone quality, blend, balance, intonation, kinesthetic support/response
MU.68.S.3.2:	Demonstrate proper vocal or instrumental technique. **Clarifications:** e.g., posture, breathing, fingering, embouchure, bow technique, tuning, strumming
MU.68.S.3.3:	Sight-read standard exercises and simple repertoire. **Clarifications:** e.g., note and rest values, key signatures, time signatures, expressive markings, special harmonic and/or notation symbols
MU.68.S.3.5:	Notate rhythmic phrases and/or melodies, in varying simple meters, performed by someone else.
MA.K12.MTR.1.1:	Mathematicians who participate in effortful learning both individually and with others: • Analyze the problem in a way that makes sense given the task. • Ask questions that will help with solving the task. • Build perseverance by modifying methods as needed while solving a challenging task. • Stay engaged and maintain a positive mindset when working to solve tasks. • Help and support each other when attempting a new method or approach. **Clarifications:** Teachers who encourage students to participate actively in effortful learning both individually and with others: • Cultivate a community of growth mindset learners. • Foster perseverance in students by choosing tasks that are challenging. • Develop students' ability to analyze and problem solve. • Recognize students' effort when solving challenging problems.
	Demonstrate understanding by representing problems in multiple ways.

Mathematicians who demonstrate understanding by representing problems in multiple ways:

- Build understanding through modeling and using manipulatives.
- Represent solutions to problems in multiple ways using objects, drawings, tables, graphs and equations.
- Progress from modeling problems with objects and drawings to using algorithms and equations.
- Express connections between concepts and representations.

MA.K12.MTR.2.1:

- Choose a representation based on the given context or purpose.

Clarifications:
Teachers who encourage students to demonstrate understanding by representing problems in multiple ways:

- Help students make connections between concepts and representations.
- Provide opportunities for students to use manipulatives when investigating concepts.
- Guide students from concrete to pictorial to abstract representations as understanding progresses.
- Show students that various representations can have different purposes and can be useful in different situations.

Complete tasks with mathematical fluency.
Mathematicians who complete tasks with mathematical fluency:

- Select efficient and appropriate methods for solving problems within the given context.
- Maintain flexibility and accuracy while performing procedures and mental calculations.
- Complete tasks accurately and with confidence.
- Adapt procedures to apply them to a new context.

MA.K12.MTR.3.1:

- Use feedback to improve efficiency when performing calculations.

Clarifications:
Teachers who encourage students to complete tasks with mathematical fluency:

- Provide students with the flexibility to solve problems by selecting a procedure that allows them to solve efficiently and accurately.
- Offer multiple opportunities for students to practice efficient and generalizable methods.
- Provide opportunities for students to reflect on the method they used and determine if a more efficient method could have been used.

Engage in discussions that reflect on the mathematical thinking of self and others.
Mathematicians who engage in discussions that reflect on the mathematical thinking of self and others:

- Communicate mathematical ideas, vocabulary and methods effectively.
- Analyze the mathematical thinking of others.
- Compare the efficiency of a method to those expressed by others.
- Recognize errors and suggest how to correctly solve the task.
- Justify results by explaining methods and processes.

MA.K12.MTR.4.1:

- Construct possible arguments based on evidence.

Clarifications:
Teachers who encourage students to engage in discussions that reflect on the mathematical thinking of self and others:

- Establish a culture in which students ask questions of the teacher and their peers, and error is an opportunity for learning.
- Create opportunities for students to discuss their thinking with peers.
- Select, sequence and present student work to advance and deepen understanding of correct and increasingly efficient methods.
- Develop students' ability to justify methods and compare their responses to the responses of their peers.

Use patterns and structure to help understand and connect mathematical concepts.
Mathematicians who use patterns and structure to help understand and connect mathematical concepts:

- Focus on relevant details within a problem.
- Create plans and procedures to logically order events, steps or ideas to solve problems.
- Decompose a complex problem into manageable parts.
- Relate previously learned concepts to new concepts.
- Look for similarities among problems.

MA.K12.MTR.5.1:

- Connect solutions of problems to more complicated large-scale situations.

Clarifications:
Teachers who encourage students to use patterns and structure to help understand and connect mathematical concepts:

- Help students recognize the patterns in the world around them and connect these patterns to mathematical concepts.
- Support students to develop generalizations based on the similarities found among problems.
- Provide opportunities for students to create plans and procedures to solve problems.
- Develop students' ability to construct relationships between their current understanding and more sophisticated ways of thinking.

Assess the reasonableness of solutions.
Mathematicians who assess the reasonableness of solutions:

- Estimate to discover possible solutions.
- Use benchmark quantities to determine if a solution makes sense.
- Check calculations when solving problems.
- Verify possible solutions by explaining the methods used.

MA.K12.MTR.6.1:

- Evaluate results based on the given context.

Clarifications:
Teachers who encourage students to assess the reasonableness of solutions:

- Have students estimate or predict solutions prior to solving.
- Prompt students to continually ask, "Does this solution make sense? How do you know?"
- Reinforce that students check their work as they progress within and after a task.
- Strengthen students' ability to verify solutions through justifications.

MA.K12.MTR.7.1:	Apply mathematics to real-world contexts. Mathematicians who apply mathematics to real-world contexts: • Connect mathematical concepts to everyday experiences. • Use models and methods to understand, represent and solve problems. • Perform investigations to gather data or determine if a method is appropriate. • Redesign models and methods to improve accuracy or efficiency. **Clarifications:** Teachers who encourage students to apply mathematics to real-world contexts: • Provide opportunities for students to create models, both concrete and abstract, and perform investigations. • Challenge students to question the accuracy of their models and methods. • Support students as they validate conclusions by comparing them to the given situation. • Indicate how various concepts can be applied to other disciplines.
ELA.K12.EE.1.1:	Cite evidence to explain and justify reasoning. **Clarifications:** K-1 Students include textual evidence in their oral communication with guidance and support from adults. The evidence can consist of details from the text without naming the text. During 1st grade, students learn how to incorporate the evidence in their writing. 2-3 Students include relevant textual evidence in their written and oral communication. Students should name the text when they refer to it. In 3rd grade, students should use a combination of direct and indirect citations. 4-5 Students continue with previous skills and reference comments made by speakers and peers. Students cite texts that they've directly quoted, paraphrased, or used for information. When writing, students will use the form of citation dictated by the instructor or the style guide referenced by the instructor. 6-8 Students continue with previous skills and use a style guide to create a proper citation. 9-12 Students continue with previous skills and should be aware of existing style guides and the ways in which they differ.
ELA.K12.EE.2.1:	Read and comprehend grade-level complex texts proficiently. **Clarifications:** See Text Complexity for grade-level complexity bands and a text complexity rubric.
ELA.K12.EE.3.1:	Make inferences to support comprehension. **Clarifications:** Students will make inferences before the words infer or inference are introduced. Kindergarten students will answer questions like "Why is the girl smiling?" or make predictions about what will happen based on the title page. Students will use the terms and apply them in 2nd grade and beyond.
ELA.K12.EE.4.1:	Use appropriate collaborative techniques and active listening skills when engaging in discussions in a variety of situations. **Clarifications:** In kindergarten, students learn to listen to one another respectfully. In grades 1-2, students build upon these skills by justifying what they are thinking. For example: "I think _____ because _____." The collaborative conversations are becoming academic conversations. In grades 3-12, students engage in academic conversations discussing claims and justifying their reasoning, refining and applying skills. Students build on ideas, propel the conversation, and support claims and counterclaims with evidence.
ELA.K12.EE.5.1:	Use the accepted rules governing a specific format to create quality work. **Clarifications:** Students will incorporate skills learned into work products to produce quality work. For students to incorporate these skills appropriately, they must receive instruction. A 3rd grade student creating a poster board display must have instruction in how to effectively present information to do quality work.
ELA.K12.EE.6.1:	Use appropriate voice and tone when speaking or writing. **Clarifications:** In kindergarten and 1st grade, students learn the difference between formal and informal language. For example, the way we talk to our friends differs from the way we speak to adults. In 2nd grade and beyond, students practice appropriate social and academic language to discuss texts.
DA.68.S.2.1:	Sustain focused attention, respect, and discipline during classes and performances.
ELD.K12.ELL.SI.1:	English language learners communicate for social and instructional purposes within the school setting.

General Course Information and Notes

VERSION DESCRIPTION

Students with little or no choral experience develop beginning vocal technique and skills, critical and creative thinking skills, and an appreciation of music from around the world and through time. Public performances may serve as a culmination of specific instructional goals. Students may be required to attend and/or participate in rehearsals and performances outside the school day to support, extend, and assess learning in the classroom.

GENERAL NOTES

Florida's Benchmarks for Excellent Student Thinking (B.E.S.T.) Standards

This course includes Florida's B.E.S.T. ELA Expectations (EE) and Mathematical Thinking and Reasoning Standards (MTRs) for students. Florida educators should intentionally embed these standards within the content and their instruction as applicable. For guidance on the implementation of the EEs and MTRs, please visit cpalms.org/Standards/BEST_Standards.aspx and select the appropriate B.E.S.T. Standards package.

English Language Development ELD Standards Special Notes Section:
Teachers are required to provide listening, speaking, reading and writing instruction that allows English language learners (ELL) to communicate for social and instructional purposes within the school setting. For the given level of English language proficiency and with visual, graphic, or interactive support, students will interact with grade level words, expressions, sentences and discourse to process or produce language necessary for academic success. The ELD standard should specify a relevant content area concept or topic of study chosen by curriculum developers and teachers which maximizes an ELL's need for communication and social skills. To access an ELL supporting document which delineates performance definitions and descriptors, please click on the following link: cpalms.org/uploads/docs/standards/eld/SI.pdf

GENERAL INFORMATION

Course Number: 1303000

Course Path: Section: Grades PreK to 12 Education Courses > **Grade Group:** Grades 6 to 8 Education Courses > **Subject:** Music Education > **SubSubject:** Choral Music >

Abbreviated Title: M/J CHORUS 1

Course Length: Year (Y)

Course Level: 2

Course Status: Draft - Course Pending Approval

Grade Level(s): 6,7,8

Educator Certifications

Instrumental Music (Secondary Grades 7-12)
Instrumental Music (Elementary and Secondary Grades K-12)
Music (Elementary and Secondary Grades K-12)
Vocal Music (Elementary and Secondary Grades K-12)

M/J Chorus 2 (#1303010) 2022 - And Beyond

Course Standards

Name	Description
MU.68.C.1.1:	Develop strategies for listening to unfamiliar musical works. **Clarifications:** e.g., listening maps, active listening, checklists
MU.68.C.1.2:	Compare, using correct music vocabulary, the aesthetic impact of a performance to one's own hypothesis of the composer's intent. **Clarifications:** e.g., quality recordings, peer group and individual performances, composer notes, instrumentation, expressive elements, title
MU.68.C.1.4:	Identify, aurally, a variety of vocal styles and ensembles. **Clarifications:** e.g., chant, spiritual, folk, opera, world, jazz, pop, solo, duet, trio, quartet, small ensembles, choirs
MU.68.C.2.1:	Critique personal performance, experiment with a variety of solutions, and make appropriate adjustments with guidance from teachers and peers. **Clarifications:** e.g., intonation, balance, blend, phrasing, rhythm
MU.68.C.2.2:	Critique, using correct music vocabulary, changes in one's own or others' musical performance resulting from practice or rehearsal. **Clarifications:** e.g., blend, balance, ensemble playing, sonority, technique, tone quality
MU.68.F.2.2:	Describe how concert attendance can financially impact a community. **Clarifications:** e.g., increased revenues at restaurants, hotels, and travel agencies; venue maintenance, parking attendants
MU.68.F.3.2:	Investigate and discuss laws that protect intellectual property, and practice safe, legal, and responsible acquisition and use of musical media.
MU.68.H.1.1:	Describe the functions of music from various cultures and time periods.
MU.68.H.1.5:	Using representative musical works by selected composers, classify compositional characteristics common to a specific time period and/or genre.
MU.68.H.2.1:	Describe the influence of historical events and periods on music composition and performance.
MU.68.H.2.3:	Classify the literature being studied by genre, style, and/or time period.
MU.68.H.3.1:	Identify connections among music and other content areas and/or contexts through interdisciplinary collaboration. **Clarifications:** e.g., school: other music classes, social studies, dance, physical education, science, health, math, world languages; community: cultural connections and traditions, ceremonial music, sales and advertising, communication
MU.68.H.3.2:	Discuss how the absence of music would affect other content areas and contexts. **Clarifications:** e.g., theatre and dance, movies, sporting events, video games, commercial advertising, social gatherings, civic and religious ceremonies, plays
MU.68.O.1.1:	Compare performances of a musical work to identify artistic choices made by performers. **Clarifications:** e.g., rhythm, melody, timbre, form, tonality, harmony, expressive elements; choral, orchestral, band, ensemble
MU.68.O.3.1:	Describe how the combination of instrumentation and expressive elements in a musical work can convey a specific thought, idea, mood, and/or image. **Clarifications:** e.g., tempo markings, expression markings, articulation markings, phrasing, scales, modes, harmonic structure, timbre, rhythm, orchestration
MU.68.O.3.2:	Perform the expressive elements of a musical work indicated by the musical score and/or conductor, and transfer new knowledge and experiences to other musical works.
MU.68.S.1.1:	Improvise rhythmic and melodic phrases to accompany familiar songs and/or standard harmonic progressions. **Clarifications:** e.g., blues, rock
MU.68.S.1.3:	Arrange a short musical piece by manipulating melody, form, rhythm, and/or voicing.
MU.68.S.1.4:	Sing or play melodies by ear with support from the teacher and/or peers. **Clarifications:** e.g., melodies using traditional classroom instruments and/or voice
MU.68.S.2.1:	Perform music from memory to demonstrate knowledge of the musical structure. **Clarifications:** e.g., basic themes, patterns, tonality, melody, harmony
MU.68.S.3.1:	Sing and/or play age-appropriate repertoire expressively. **Clarifications:** e.g., technique, phrasing, dynamics, tone quality, blend, balance, intonation, kinesthetic support/response
MU.68.S.3.2:	Demonstrate proper vocal or instrumental technique. **Clarifications:** e.g., posture, breathing, fingering, embouchure, bow technique, tuning, strumming

	Sight-read standard exercises and simple repertoire.
MU.68.S.3.3:	**Clarifications:** e.g., note and rest values, key signatures, time signatures, expressive markings, special harmonic and/or notation symbols
	Compare written notation to aural examples and analyze for accuracy of rhythm and pitch.
MU.68.S.3.4:	**Clarifications:** e.g., error detection, interval reinforcement
MU.68.S.3.5:	Notate rhythmic phrases and/or melodies, in varying simple meters, performed by someone else.
	Develop and demonstrate efficient rehearsal strategies to apply skills and techniques.
MU.68.S.3.6:	**Clarifications:** e.g., independently, collaboratively
MA.K12.MTR.1.1:	Mathematicians who participate in effortful learning both individually and with others: • Analyze the problem in a way that makes sense given the task. • Ask questions that will help with solving the task. • Build perseverance by modifying methods as needed while solving a challenging task. • Stay engaged and maintain a positive mindset when working to solve tasks. • Help and support each other when attempting a new method or approach. **Clarifications:** Teachers who encourage students to participate actively in effortful learning both individually and with others: • Cultivate a community of growth mindset learners. • Foster perseverance in students by choosing tasks that are challenging. • Develop students' ability to analyze and problem solve. • Recognize students' effort when solving challenging problems.
MA.K12.MTR.2.1:	Demonstrate understanding by representing problems in multiple ways. Mathematicians who demonstrate understanding by representing problems in multiple ways: • Build understanding through modeling and using manipulatives. • Represent solutions to problems in multiple ways using objects, drawings, tables, graphs and equations. • Progress from modeling problems with objects and drawings to using algorithms and equations. • Express connections between concepts and representations. • Choose a representation based on the given context or purpose. **Clarifications:** Teachers who encourage students to demonstrate understanding by representing problems in multiple ways: • Help students make connections between concepts and representations. • Provide opportunities for students to use manipulatives when investigating concepts. • Guide students from concrete to pictorial to abstract representations as understanding progresses. • Show students that various representations can have different purposes and can be useful in different situations.
MA.K12.MTR.3.1:	Complete tasks with mathematical fluency. Mathematicians who complete tasks with mathematical fluency: • Select efficient and appropriate methods for solving problems within the given context. • Maintain flexibility and accuracy while performing procedures and mental calculations. • Complete tasks accurately and with confidence. • Adapt procedures to apply them to a new context. • Use feedback to improve efficiency when performing calculations. **Clarifications:** Teachers who encourage students to complete tasks with mathematical fluency: • Provide students with the flexibility to solve problems by selecting a procedure that allows them to solve efficiently and accurately. • Offer multiple opportunities for students to practice efficient and generalizable methods. • Provide opportunities for students to reflect on the method they used and determine if a more efficient method could have been used.
MA.K12.MTR.4.1:	Engage in discussions that reflect on the mathematical thinking of self and others. Mathematicians who engage in discussions that reflect on the mathematical thinking of self and others: • Communicate mathematical ideas, vocabulary and methods effectively. • Analyze the mathematical thinking of others. • Compare the efficiency of a method to those expressed by others. • Recognize errors and suggest how to correctly solve the task. • Justify results by explaining methods and processes. • Construct possible arguments based on evidence. **Clarifications:** Teachers who encourage students to engage in discussions that reflect on the mathematical thinking of self and others: • Establish a culture in which students ask questions of the teacher and their peers, and error is an opportunity for learning. • Create opportunities for students to discuss their thinking with peers. • Select, sequence and present student work to advance and deepen understanding of correct and increasingly efficient methods. • Develop students' ability to justify methods and compare their responses to the responses of their peers.
	Use patterns and structure to help understand and connect mathematical concepts. Mathematicians who use patterns and structure to help understand and connect mathematical concepts: • Focus on relevant details within a problem. • Create plans and procedures to logically order events, steps or ideas to solve problems.

MA.K12.MTR.5.1:	• Decompose a complex problem into manageable parts. • Relate previously learned concepts to new concepts. • Look for similarities among problems. • Connect solutions of problems to more complicated large-scale situations. **Clarifications:** Teachers who encourage students to use patterns and structure to help understand and connect mathematical concepts: • Help students recognize the patterns in the world around them and connect these patterns to mathematical concepts. • Support students to develop generalizations based on the similarities found among problems. • Provide opportunities for students to create plans and procedures to solve problems. • Develop students' ability to construct relationships between their current understanding and more sophisticated ways of thinking.
MA.K12.MTR.6.1:	Assess the reasonableness of solutions. Mathematicians who assess the reasonableness of solutions: • Estimate to discover possible solutions. • Use benchmark quantities to determine if a solution makes sense. • Check calculations when solving problems. • Verify possible solutions by explaining the methods used. • Evaluate results based on the given context. **Clarifications:** Teachers who encourage students to assess the reasonableness of solutions: • Have students estimate or predict solutions prior to solving. • Prompt students to continually ask, "Does this solution make sense? How do you know?" • Reinforce that students check their work as they progress within and after a task. • Strengthen students' ability to verify solutions through justifications.
MA.K12.MTR.7.1:	Apply mathematics to real-world contexts. Mathematicians who apply mathematics to real-world contexts: • Connect mathematical concepts to everyday experiences. • Use models and methods to understand, represent and solve problems. • Perform investigations to gather data or determine if a method is appropriate. • Redesign models and methods to improve accuracy or efficiency. **Clarifications:** Teachers who encourage students to apply mathematics to real-world contexts: • Provide opportunities for students to create models, both concrete and abstract, and perform investigations. • Challenge students to question the accuracy of their models and methods. • Support students as they validate conclusions by comparing them to the given situation. • Indicate how various concepts can be applied to other disciplines.
ELA.K12.EE.1.1:	Cite evidence to explain and justify reasoning. **Clarifications:** K-1 Students include textual evidence in their oral communication with guidance and support from adults. The evidence can consist of details from the text without naming the text. During 1st grade, students learn how to incorporate the evidence in their writing. 2-3 Students include relevant textual evidence in their written and oral communication. Students should name the text when they refer to it. In 3rd grade, students should use a combination of direct and indirect citations. 4-5 Students continue with previous skills and reference comments made by speakers and peers. Students cite texts that they've directly quoted, paraphrased, or used for information. When writing, students will use the form of citation dictated by the instructor or the style guide referenced by the instructor. 6-8 Students continue with previous skills and use a style guide to create a proper citation. 9-12 Students continue with previous skills and should be aware of existing style guides and the ways in which they differ.
ELA.K12.EE.2.1:	Read and comprehend grade-level complex texts proficiently. **Clarifications:** See Text Complexity for grade-level complexity bands and a text complexity rubric.
ELA.K12.EE.3.1:	Make inferences to support comprehension. **Clarifications:** Students will make inferences before the words infer or inference are introduced. Kindergarten students will answer questions like "Why is the girl smiling?" or make predictions about what will happen based on the title page. Students will use the terms and apply them in 2nd grade and beyond.
ELA.K12.EE.4.1:	Use appropriate collaborative techniques and active listening skills when engaging in discussions in a variety of situations. **Clarifications:** In kindergarten, students learn to listen to one another respectfully. In grades 1-2, students build upon these skills by justifying what they are thinking. For example: "I think _____ because _____." The collaborative conversations are becoming academic conversations. In grades 3-12, students engage in academic conversations discussing claims and justifying their reasoning, refining and applying skills. Students build on ideas, propel the conversation, and support claims and counterclaims with evidence.
ELA.K12.EE.5.1:	Use the accepted rules governing a specific format to create quality work. **Clarifications:** Students will incorporate skills learned into work products to produce quality work. For students to incorporate these skills appropriately, they must receive instruction. A 3rd grade student creating a poster board display must have instruction in how to effectively present information to

	do quality work.
ELA.K12.EE.6.1:	Use appropriate voice and tone when speaking or writing. **Clarifications:** In kindergarten and 1st grade, students learn the difference between formal and informal language. For example, the way we talk to our friends differs from the way we speak to adults. In 2nd grade and beyond, students practice appropriate social and academic language to discuss texts.
DA.68.S.2.1:	Sustain focused attention, respect, and discipline during classes and performances.
ELD.K12.ELL.SI.1:	English language learners communicate for social and instructional purposes within the school setting.

General Course Information and Notes

VERSION DESCRIPTION

Students build on previous choral experience to expand vocal, technical, musical, and ensemble skills through rehearsal, performance, and study of high-quality choral literature. Singers focus on increasing knowledge of music theory, music literacy, and aesthetic response. Public performances may serve as a culmination of specific instructional goals. Students may be required to attend and/or participate in rehearsals and performances outside the school day to support, extend, and assess learning in the classroom.

GENERAL NOTES

Florida's Benchmarks for Excellent Student Thinking (B.E.S.T.) Standards
This course includes Florida's B.E.S.T. ELA Expectations (EE) and Mathematical Thinking and Reasoning Standards (MTRs) for students. Florida educators should intentionally embed these standards within the content and their instruction as applicable. For guidance on the implementation of the EEs and MTRs, please visit cpalms.org/Standards/BEST_Standards.aspx and select the appropriate B.E.S.T. Standards package.

English Language Development ELD Standards Special Notes Section:
Teachers are required to provide listening, speaking, reading and writing instruction that allows English language learners (ELL) to communicate for social and instructional purposes within the school setting. For the given level of English language proficiency and with visual, graphic, or interactive support, students will interact with grade level words, expressions, sentences and discourse to process or produce language necessary for academic success. The ELD standard should specify a relevant content area concept or topic of study chosen by curriculum developers and teachers which maximizes an ELL's need for communication and social skills. To access an ELL supporting document which delineates performance definitions and descriptors, please click on the following link: cpalms.org/uploads/docs/standards/eld/SI.pdf

GENERAL INFORMATION

Course Number: 1303010

Course Path: Section: Grades PreK to 12 Education Courses > **Grade Group:** Grades 6 to 8 Education Courses > **Subject:** Music Education > **SubSubject:** Choral Music >

Abbreviated Title: M/J CHORUS 2

Course Length: Year (Y)

Course Level: 2

Course Status: Draft - Course Pending Approval

Grade Level(s): 6,7,8

Educator Certifications

Instrumental Music (Secondary Grades 7-12)
Instrumental Music (Elementary and Secondary Grades K-12)
Music (Elementary and Secondary Grades K-12)
Vocal Music (Elementary and Secondary Grades K-12)

M/J Chorus 3 (#1303020) 2022 - And Beyond

Course Standards

Name	Description
MU.68.C.1.1:	Develop strategies for listening to unfamiliar musical works. **Clarifications:** e.g., listening maps, active listening, checklists
MU.68.C.1.2:	Compare, using correct music vocabulary, the aesthetic impact of a performance to one's own hypothesis of the composer's intent. **Clarifications:** e.g., quality recordings, peer group and individual performances, composer notes, instrumentation, expressive elements, title
MU.68.C.2.1:	Critique personal performance, experiment with a variety of solutions, and make appropriate adjustments with guidance from teachers and peers. **Clarifications:** e.g., intonation, balance, blend, phrasing, rhythm
MU.68.C.2.2:	Critique, using correct music vocabulary, changes in one's own or others' musical performance resulting from practice or rehearsal. **Clarifications:** e.g., blend, balance, ensemble playing, sonority, technique, tone quality
MU.68.C.3.1:	Apply specific criteria to evaluate why a musical work is an exemplar in a specific style or genre.
MU.68.F.2.1:	Describe several routes a composition or performance could travel from creator to consumer. **Clarifications:** e.g., MIDI and other technology, production, sharing on the Internet, home studios, professional recording studios, sales
MU.68.F.2.2:	Describe how concert attendance can financially impact a community. **Clarifications:** e.g., increased revenues at restaurants, hotels, and travel agencies; venue maintenance, parking attendants
MU.68.F.3.1:	Describe how studying music can enhance citizenship, leadership, and global thinking. **Clarifications:** e.g., dedication to mastering a task, problem-solving, self-discipline, dependability, ability to organize, cultural awareness, mutual respect
MU.68.F.3.2:	Investigate and discuss laws that protect intellectual property, and practice safe, legal, and responsible acquisition and use of musical media.
MU.68.H.1.2:	Identify the works of representative composers within a specific style or time period.
MU.68.H.1.3:	Describe how American music has been influenced by other cultures.
MU.68.H.1.4:	Classify authentic stylistic features in music originating from various cultures. **Clarifications:** e.g., rhythm, layered texture, key patterns, tonality, melodic line, quarter- or semi-tones, national folk melodies, improvisation, instrumentation, aural/oral traditions, drumming patterns
MU.68.H.2.1:	Describe the influence of historical events and periods on music composition and performance.
MU.68.H.2.2:	Analyze how technology has changed the way music is created, performed, acquired, and experienced. **Clarifications:** e.g., from harpsichord to piano; from phonograph to CD
MU.68.H.2.3:	Classify the literature being studied by genre, style, and/or time period.
MU.68.H.3.1:	Identify connections among music and other content areas and/or contexts through interdisciplinary collaboration. **Clarifications:** e.g., school: other music classes, social studies, dance, physical education, science, health, math, world languages; community: cultural connections and traditions, ceremonial music, sales and advertising, communication
MU.68.H.3.2:	Discuss how the absence of music would affect other content areas and contexts. **Clarifications:** e.g., theatre and dance, movies, sporting events, video games, commercial advertising, social gatherings, civic and religious ceremonies, plays
MU.68.O.1.1:	Compare performances of a musical work to identify artistic choices made by performers. **Clarifications:** e.g., rhythm, melody, timbre, form, tonality, harmony, expressive elements; choral, orchestral, band, ensemble
MU.68.O.2.2:	Demonstrate knowledge of major and minor tonalities through performance and composition. **Clarifications:** e.g., scales; key signatures; relative major/minor; parallel major/minor
MU.68.O.3.1:	Describe how the combination of instrumentation and expressive elements in a musical work can convey a specific thought, idea, mood, and/or image. **Clarifications:** e.g., tempo markings, expression markings, articulation markings, phrasing, scales, modes, harmonic structure, timbre, rhythm, orchestration
MU.68.O.3.2:	Perform the expressive elements of a musical work indicated by the musical score and/or conductor, and transfer new knowledge and experiences to other musical works.
MU.68.S.1.1:	Improvise rhythmic and melodic phrases to accompany familiar songs and/or standard harmonic progressions. **Clarifications:**

	e.g., blues, rock
MU.68.S.1.3:	Arrange a short musical piece by manipulating melody, form, rhythm, and/or voicing.
MU.68.S.1.4:	Sing or play melodies by ear with support from the teacher and/or peers. **Clarifications:** e.g., melodies using traditional classroom instruments and/or voice
MU.68.S.2.1:	Perform music from memory to demonstrate knowledge of the musical structure. **Clarifications:** e.g., basic themes, patterns, tonality, melody, harmony
MU.68.S.2.2:	Transfer performance techniques from familiar to unfamiliar pieces.
MU.68.S.3.1:	Sing and/or play age-appropriate repertoire expressively. **Clarifications:** e.g., technique, phrasing, dynamics, tone quality, blend, balance, intonation, kinesthetic support/response
MU.68.S.3.2:	Demonstrate proper vocal or instrumental technique. **Clarifications:** e.g., posture, breathing, fingering, embouchure, bow technique, tuning, strumming
MU.68.S.3.3:	Sight-read standard exercises and simple repertoire. **Clarifications:** e.g., note and rest values, key signatures, time signatures, expressive markings, special harmonic and/or notation symbols
MU.68.S.3.4:	Compare written notation to aural examples and analyze for accuracy of rhythm and pitch. **Clarifications:** e.g., error detection, interval reinforcement
MU.68.S.3.5:	Notate rhythmic phrases and/or melodies, in varying simple meters, performed by someone else.
MU.68.S.3.6:	Develop and demonstrate efficient rehearsal strategies to apply skills and techniques. **Clarifications:** e.g., independently, collaboratively
MA.K12.MTR.1.1:	Mathematicians who participate in effortful learning both individually and with others: • Analyze the problem in a way that makes sense given the task. • Ask questions that will help with solving the task. • Build perseverance by modifying methods as needed while solving a challenging task. • Stay engaged and maintain a positive mindset when working to solve tasks. • Help and support each other when attempting a new method or approach. **Clarifications:** Teachers who encourage students to participate actively in effortful learning both individually and with others: • Cultivate a community of growth mindset learners. • Foster perseverance in students by choosing tasks that are challenging. • Develop students' ability to analyze and problem solve. • Recognize students' effort when solving challenging problems.
MA.K12.MTR.2.1:	Demonstrate understanding by representing problems in multiple ways. Mathematicians who demonstrate understanding by representing problems in multiple ways: • Build understanding through modeling and using manipulatives. • Represent solutions to problems in multiple ways using objects, drawings, tables, graphs and equations. • Progress from modeling problems with objects and drawings to using algorithms and equations. • Express connections between concepts and representations. • Choose a representation based on the given context or purpose. **Clarifications:** Teachers who encourage students to demonstrate understanding by representing problems in multiple ways: • Help students make connections between concepts and representations. • Provide opportunities for students to use manipulatives when investigating concepts. • Guide students from concrete to pictorial to abstract representations as understanding progresses. • Show students that various representations can have different purposes and can be useful in different situations.
MA.K12.MTR.3.1:	Complete tasks with mathematical fluency. Mathematicians who complete tasks with mathematical fluency: • Select efficient and appropriate methods for solving problems within the given context. • Maintain flexibility and accuracy while performing procedures and mental calculations. • Complete tasks accurately and with confidence. • Adapt procedures to apply them to a new context. • Use feedback to improve efficiency when performing calculations. **Clarifications:** Teachers who encourage students to complete tasks with mathematical fluency: • Provide students with the flexibility to solve problems by selecting a procedure that allows them to solve efficiently and accurately. • Offer multiple opportunities for students to practice efficient and generalizable methods. • Provide opportunities for students to reflect on the method they used and determine if a more efficient method could have been used.
	Engage in discussions that reflect on the mathematical thinking of self and others. Mathematicians who engage in discussions that reflect on the mathematical thinking of self and others:

MA.K12.MTR.4.1:	• Communicate mathematical ideas, vocabulary and methods effectively. • Analyze the mathematical thinking of others. • Compare the efficiency of a method to those expressed by others. • Recognize errors and suggest how to correctly solve the task. • Justify results by explaining methods and processes. • Construct possible arguments based on evidence. **Clarifications:** Teachers who encourage students to engage in discussions that reflect on the mathematical thinking of self and others: • Establish a culture in which students ask questions of the teacher and their peers, and error is an opportunity for learning. • Create opportunities for students to discuss their thinking with peers. • Select, sequence and present student work to advance and deepen understanding of correct and increasingly efficient methods. • Develop students' ability to justify methods and compare their responses to the responses of their peers.
MA.K12.MTR.5.1:	Use patterns and structure to help understand and connect mathematical concepts. Mathematicians who use patterns and structure to help understand and connect mathematical concepts: • Focus on relevant details within a problem. • Create plans and procedures to logically order events, steps or ideas to solve problems. • Decompose a complex problem into manageable parts. • Relate previously learned concepts to new concepts. • Look for similarities among problems. • Connect solutions of problems to more complicated large-scale situations. **Clarifications:** Teachers who encourage students to use patterns and structure to help understand and connect mathematical concepts: • Help students recognize the patterns in the world around them and connect these patterns to mathematical concepts. • Support students to develop generalizations based on the similarities found among problems. • Provide opportunities for students to create plans and procedures to solve problems. • Develop students' ability to construct relationships between their current understanding and more sophisticated ways of thinking.
MA.K12.MTR.6.1:	Assess the reasonableness of solutions. Mathematicians who assess the reasonableness of solutions: • Estimate to discover possible solutions. • Use benchmark quantities to determine if a solution makes sense. • Check calculations when solving problems. • Verify possible solutions by explaining the methods used. • Evaluate results based on the given context. **Clarifications:** Teachers who encourage students to assess the reasonableness of solutions: • Have students estimate or predict solutions prior to solving. • Prompt students to continually ask, "Does this solution make sense? How do you know?" • Reinforce that students check their work as they progress within and after a task. • Strengthen students' ability to verify solutions through justifications.
MA.K12.MTR.7.1:	Apply mathematics to real-world contexts. Mathematicians who apply mathematics to real-world contexts: • Connect mathematical concepts to everyday experiences. • Use models and methods to understand, represent and solve problems. • Perform investigations to gather data or determine if a method is appropriate. • Redesign models and methods to improve accuracy or efficiency. **Clarifications:** Teachers who encourage students to apply mathematics to real-world contexts: • Provide opportunities for students to create models, both concrete and abstract, and perform investigations. • Challenge students to question the accuracy of their models and methods. • Support students as they validate conclusions by comparing them to the given situation. • Indicate how various concepts can be applied to other disciplines.
ELA.K12.EE.1.1:	Cite evidence to explain and justify reasoning. **Clarifications:** K-1 Students include textual evidence in their oral communication with guidance and support from adults. The evidence can consist of details from the text without naming the text. During 1st grade, students learn how to incorporate the evidence in their writing. 2-3 Students include relevant textual evidence in their written and oral communication. Students should name the text when they refer to it. In 3rd grade, students should use a combination of direct and indirect citations. 4-5 Students continue with previous skills and reference comments made by speakers and peers. Students cite texts that they've directly quoted, paraphrased, or used for information. When writing, students will use the form of citation dictated by the instructor or the style guide referenced by the instructor. 6-8 Students continue with previous skills and use a style guide to create a proper citation. 9-12 Students continue with previous skills and should be aware of existing style guides and the ways in which they differ.
ELA.K12.EE.2.1:	Read and comprehend grade-level complex texts proficiently. **Clarifications:** See Text Complexity for grade-level complexity bands and a text complexity rubric.
	Make inferences to support comprehension.

ELA.K12.EE.3.1:	**Clarifications:** Students will make inferences before the words infer or inference are introduced. Kindergarten students will answer questions like "Why is the girl smiling?" or make predictions about what will happen based on the title page. Students will use the terms and apply them in 2nd grade and beyond.
ELA.K12.EE.4.1:	Use appropriate collaborative techniques and active listening skills when engaging in discussions in a variety of situations. **Clarifications:** In kindergarten, students learn to listen to one another respectfully. In grades 1-2, students build upon these skills by justifying what they are thinking. For example: "I think _____ because _____." The collaborative conversations are becoming academic conversations. In grades 3-12, students engage in academic conversations discussing claims and justifying their reasoning, refining and applying skills. Students build on ideas, propel the conversation, and support claims and counterclaims with evidence.
ELA.K12.EE.5.1:	Use the accepted rules governing a specific format to create quality work. **Clarifications:** Students will incorporate skills learned into work products to produce quality work. For students to incorporate these skills appropriately, they must receive instruction. A 3rd grade student creating a poster board display must have instruction in how to effectively present information to do quality work.
ELA.K12.EE.6.1:	Use appropriate voice and tone when speaking or writing. **Clarifications:** In kindergarten and 1st grade, students learn the difference between formal and informal language. For example, the way we talk to our friends differs from the way we speak to adults. In 2nd grade and beyond, students practice appropriate social and academic language to discuss texts.
DA.68.S.2.1:	Sustain focused attention, respect, and discipline during classes and performances.
ELD.K12.ELL.SI.1:	English language learners communicate for social and instructional purposes within the school setting.

General Course Information and Notes

VERSION DESCRIPTION

Students with previous choral experience build intermediate-level knowledge of vocal technique, musical literacy, ensemble skills, and related musical knowledge through rehearsal, performance, and study of a variety of high-quality 2-, 3-, and 4-part choral literature. Public performances may serve as a culmination of specific instructional goals. Students may be required to attend and/or participate in rehearsals and performances outside the school day to support, extend, and assess learning in the classroom.

GENERAL NOTES

Florida's Benchmarks for Excellent Student Thinking (B.E.S.T.) Standards
This course includes Florida's B.E.S.T. ELA Expectations (EE) and Mathematical Thinking and Reasoning Standards (MTRs) for students. Florida educators should intentionally embed these standards within the content and their instruction as applicable. For guidance on the implementation of the EEs and MTRs, please visit cpalms.org/Standards/BEST_Standards.aspx and select the appropriate B.E.S.T. Standards package.

English Language Development ELD Standards Special Notes Section:
Teachers are required to provide listening, speaking, reading and writing instruction that allows English language learners (ELL) to communicate for social and instructional purposes within the school setting. For the given level of English language proficiency and with visual, graphic, or interactive support, students will interact with grade level words, expressions, sentences and discourse to process or produce language necessary for academic success. The ELD standard should specify a relevant content area concept or topic of study chosen by curriculum developers and teachers which maximizes an ELL's need for communication and social skills. To access an ELL supporting document which delineates performance definitions and descriptors, please click on the following link: cpalms.org/uploads/docs/standards/eld/SI.pdf

GENERAL INFORMATION

Course Number: 1303020

Course Path: Section: Grades PreK to 12 Education Courses > **Grade Group:** Grades 6 to 8 Education Courses > **Subject:** Music Education > **SubSubject:** Choral Music >
Abbreviated Title: M/J CHORUS 3
Course Length: Year (Y)
Course Level: 2

Course Status: Draft - Course Pending Approval
Grade Level(s): 6,7,8

Educator Certifications

Music (Elementary and Secondary Grades K-12)
Instrumental Music (Secondary Grades 7-12)
Instrumental Music (Elementary and Secondary Grades K-12)
Vocal Music (Elementary and Secondary Grades K-12)

M/J Chorus 4 (#1303030) 2022 - And Beyond

Course Standards

Name	Description
MU.68.C.1.1:	Develop strategies for listening to unfamiliar musical works. **Clarifications:** e.g., listening maps, active listening, checklists
MU.68.C.1.2:	Compare, using correct music vocabulary, the aesthetic impact of a performance to one's own hypothesis of the composer's intent. **Clarifications:** e.g., quality recordings, peer group and individual performances, composer notes, instrumentation, expressive elements, title
MU.68.C.1.4:	Identify, aurally, a variety of vocal styles and ensembles. **Clarifications:** e.g., chant, spiritual, folk, opera, world, jazz, pop, solo, duet, trio, quartet, small ensembles, choirs
MU.68.C.2.1:	Critique personal performance, experiment with a variety of solutions, and make appropriate adjustments with guidance from teachers and peers. **Clarifications:** e.g., intonation, balance, blend, phrasing, rhythm
MU.68.C.2.2:	Critique, using correct music vocabulary, changes in one's own or others' musical performance resulting from practice or rehearsal. **Clarifications:** e.g., blend, balance, ensemble playing, sonority, technique, tone quality
MU.68.C.2.3:	Critique personal composition and/or improvisation, using simple criteria, to generate improvements with guidance from teachers and/or peers.
MU.68.C.3.1:	Apply specific criteria to evaluate why a musical work is an exemplar in a specific style or genre.
MU.68.F.1.1:	Create a composition and/or performance, using visual, kinesthetic, digital, and/or acoustic means to manipulate musical elements.
MU.68.F.2.1:	Describe several routes a composition or performance could travel from creator to consumer. **Clarifications:** e.g., MIDI and other technology, production, sharing on the Internet, home studios, professional recording studios, sales
MU.68.F.2.2:	Describe how concert attendance can financially impact a community. **Clarifications:** e.g., increased revenues at restaurants, hotels, and travel agencies; venue maintenance, parking attendants
MU.68.F.3.1:	Describe how studying music can enhance citizenship, leadership, and global thinking. **Clarifications:** e.g., dedication to mastering a task, problem-solving, self-discipline, dependability, ability to organize, cultural awareness, mutual respect
MU.68.F.3.2:	Investigate and discuss laws that protect intellectual property, and practice safe, legal, and responsible acquisition and use of musical media.
MU.68.F.3.3:	Identify the tasks involved in the compositional process and discuss how the process might be applied in the work place. **Clarifications:** e.g., idea, development, editing, selling, revising, testing, presenting
MU.68.H.1.2:	Identify the works of representative composers within a specific style or time period.
MU.68.H.1.3:	Describe how American music has been influenced by other cultures.
MU.68.H.1.4:	Classify authentic stylistic features in music originating from various cultures. **Clarifications:** e.g., rhythm, layered texture, key patterns, tonality, melodic line, quarter- or semi-tones, national folk melodies, improvisation, instrumentation, aural/oral traditions, drumming patterns
MU.68.H.1.5:	Using representative musical works by selected composers, classify compositional characteristics common to a specific time period and/or genre.
MU.68.H.2.1:	Describe the influence of historical events and periods on music composition and performance.
MU.68.H.2.2:	Analyze how technology has changed the way music is created, performed, acquired, and experienced. **Clarifications:** e.g., from harpsichord to piano; from phonograph to CD
MU.68.H.2.3:	Classify the literature being studied by genre, style, and/or time period.
MU.68.H.3.1:	Identify connections among music and other content areas and/or contexts through interdisciplinary collaboration. **Clarifications:** e.g., school: other music classes, social studies, dance, physical education, science, health, math, world languages; community: cultural connections and traditions, ceremonial music, sales and advertising, communication
MU.68.H.3.2:	Discuss how the absence of music would affect other content areas and contexts. **Clarifications:** e.g., theatre and dance, movies, sporting events, video games, commercial advertising, social gatherings, civic and religious ceremonies, plays
MU.68.O.1.1:	Compare performances of a musical work to identify artistic choices made by performers. **Clarifications:** e.g., rhythm, melody, timbre, form, tonality, harmony, expressive elements; choral, orchestral, band, ensemble
	Create a composition, manipulating musical elements and exploring the effects of those manipulations.

MU.68.O.2.1:	**Clarifications:** e.g., using electronic or paper-and-pencil means to experiment with timbre, melody, rhythm, harmony, form, tonality
MU.68.O.2.2:	Demonstrate knowledge of major and minor tonalities through performance and composition. **Clarifications:** e.g., scales; key signatures; relative major/minor; parallel major/minor
MU.68.O.3.1:	Describe how the combination of instrumentation and expressive elements in a musical work can convey a specific thought, idea, mood, and/or image. **Clarifications:** e.g., tempo markings, expression markings, articulation markings, phrasing, scales, modes, harmonic structure, timbre, rhythm, orchestration
MU.68.O.3.2:	Perform the expressive elements of a musical work indicated by the musical score and/or conductor, and transfer new knowledge and experiences to other musical works.
MU.68.S.1.1:	Improvise rhythmic and melodic phrases to accompany familiar songs and/or standard harmonic progressions. **Clarifications:** e.g., blues, rock
MU.68.S.1.2:	Compose a short musical piece. **Clarifications:** e.g., using traditional, non-traditional, digital, or classroom instruments and/or voice
MU.68.S.1.3:	Arrange a short musical piece by manipulating melody, form, rhythm, and/or voicing.
MU.68.S.1.4:	Sing or play melodies by ear with support from the teacher and/or peers. **Clarifications:** e.g., melodies using traditional classroom instruments and/or voice
MU.68.S.2.1:	Perform music from memory to demonstrate knowledge of the musical structure. **Clarifications:** e.g., basic themes, patterns, tonality, melody, harmony
MU.68.S.2.2:	Transfer performance techniques from familiar to unfamiliar pieces.
MU.68.S.3.1:	Sing and/or play age-appropriate repertoire expressively. **Clarifications:** e.g., technique, phrasing, dynamics, tone quality, blend, balance, intonation, kinesthetic support/response
MU.68.S.3.2:	Demonstrate proper vocal or instrumental technique. **Clarifications:** e.g., posture, breathing, fingering, embouchure, bow technique, tuning, strumming
MU.68.S.3.3:	Sight-read standard exercises and simple repertoire. **Clarifications:** e.g., note and rest values, key signatures, time signatures, expressive markings, special harmonic and/or notation symbols
MU.68.S.3.4:	Compare written notation to aural examples and analyze for accuracy of rhythm and pitch. **Clarifications:** e.g., error detection, interval reinforcement
MU.68.S.3.5:	Notate rhythmic phrases and/or melodies, in varying simple meters, performed by someone else.
MU.68.S.3.6:	Develop and demonstrate efficient rehearsal strategies to apply skills and techniques. **Clarifications:** e.g., independently, collaboratively
MA.K12.MTR.1.1:	Mathematicians who participate in effortful learning both individually and with others: • Analyze the problem in a way that makes sense given the task. • Ask questions that will help with solving the task. • Build perseverance by modifying methods as needed while solving a challenging task. • Stay engaged and maintain a positive mindset when working to solve tasks. • Help and support each other when attempting a new method or approach. **Clarifications:** Teachers who encourage students to participate actively in effortful learning both individually and with others: • Cultivate a community of growth mindset learners. • Foster perseverance in students by choosing tasks that are challenging. • Develop students' ability to analyze and problem solve. • Recognize students' effort when solving challenging problems.
MA.K12.MTR.2.1:	Demonstrate understanding by representing problems in multiple ways. Mathematicians who demonstrate understanding by representing problems in multiple ways: • Build understanding through modeling and using manipulatives. • Represent solutions to problems in multiple ways using objects, drawings, tables, graphs and equations. • Progress from modeling problems with objects and drawings to using algorithms and equations. • Express connections between concepts and representations. • Choose a representation based on the given context or purpose. **Clarifications:** Teachers who encourage students to demonstrate understanding by representing problems in multiple ways: • Help students make connections between concepts and representations. • Provide opportunities for students to use manipulatives when investigating concepts. • Guide students from concrete to pictorial to abstract representations as understanding progresses.

- Show students that various representations can have different purposes and can be useful in different situations.

MA.K12.MTR.3.1:

Complete tasks with mathematical fluency.
Mathematicians who complete tasks with mathematical fluency:

- Select efficient and appropriate methods for solving problems within the given context.
- Maintain flexibility and accuracy while performing procedures and mental calculations.
- Complete tasks accurately and with confidence.
- Adapt procedures to apply them to a new context.
- Use feedback to improve efficiency when performing calculations.

Clarifications:
Teachers who encourage students to complete tasks with mathematical fluency:

- Provide students with the flexibility to solve problems by selecting a procedure that allows them to solve efficiently and accurately.
- Offer multiple opportunities for students to practice efficient and generalizable methods.
- Provide opportunities for students to reflect on the method they used and determine if a more efficient method could have been used.

MA.K12.MTR.4.1:

Engage in discussions that reflect on the mathematical thinking of self and others.
Mathematicians who engage in discussions that reflect on the mathematical thinking of self and others:

- Communicate mathematical ideas, vocabulary and methods effectively.
- Analyze the mathematical thinking of others.
- Compare the efficiency of a method to those expressed by others.
- Recognize errors and suggest how to correctly solve the task.
- Justify results by explaining methods and processes.
- Construct possible arguments based on evidence.

Clarifications:
Teachers who encourage students to engage in discussions that reflect on the mathematical thinking of self and others:

- Establish a culture in which students ask questions of the teacher and their peers, and error is an opportunity for learning.
- Create opportunities for students to discuss their thinking with peers.
- Select, sequence and present student work to advance and deepen understanding of correct and increasingly efficient methods.
- Develop students' ability to justify methods and compare their responses to the responses of their peers.

MA.K12.MTR.5.1:

Use patterns and structure to help understand and connect mathematical concepts.
Mathematicians who use patterns and structure to help understand and connect mathematical concepts:

- Focus on relevant details within a problem.
- Create plans and procedures to logically order events, steps or ideas to solve problems.
- Decompose a complex problem into manageable parts.
- Relate previously learned concepts to new concepts.
- Look for similarities among problems.
- Connect solutions of problems to more complicated large-scale situations.

Clarifications:
Teachers who encourage students to use patterns and structure to help understand and connect mathematical concepts:

- Help students recognize the patterns in the world around them and connect these patterns to mathematical concepts.
- Support students to develop generalizations based on the similarities found among problems.
- Provide opportunities for students to create plans and procedures to solve problems.
- Develop students' ability to construct relationships between their current understanding and more sophisticated ways of thinking.

MA.K12.MTR.6.1:

Assess the reasonableness of solutions.
Mathematicians who assess the reasonableness of solutions:

- Estimate to discover possible solutions.
- Use benchmark quantities to determine if a solution makes sense.
- Check calculations when solving problems.
- Verify possible solutions by explaining the methods used.
- Evaluate results based on the given context.

Clarifications:
Teachers who encourage students to assess the reasonableness of solutions:

- Have students estimate or predict solutions prior to solving.
- Prompt students to continually ask, "Does this solution make sense? How do you know?"
- Reinforce that students check their work as they progress within and after a task.
- Strengthen students' ability to verify solutions through justifications.

MA.K12.MTR.7.1:

Apply mathematics to real-world contexts.
Mathematicians who apply mathematics to real-world contexts:

- Connect mathematical concepts to everyday experiences.
- Use models and methods to understand, represent and solve problems.
- Perform investigations to gather data or determine if a method is appropriate. • Redesign models and methods to improve accuracy or efficiency.

Clarifications:
Teachers who encourage students to apply mathematics to real-world contexts:

- Provide opportunities for students to create models, both concrete and abstract, and perform investigations.
- Challenge students to question the accuracy of their models and methods.
- Support students as they validate conclusions by comparing them to the given situation.
- Indicate how various concepts can be applied to other disciplines.

ELA.K12.EE.1.1:	Cite evidence to explain and justify reasoning. **Clarifications:** K-1 Students include textual evidence in their oral communication with guidance and support from adults. The evidence can consist of details from the text without naming the text. During 1st grade, students learn how to incorporate the evidence in their writing. 2-3 Students include relevant textual evidence in their written and oral communication. Students should name the text when they refer to it. In 3rd grade, students should use a combination of direct and indirect citations. 4-5 Students continue with previous skills and reference comments made by speakers and peers. Students cite texts that they've directly quoted, paraphrased, or used for information. When writing, students will use the form of citation dictated by the instructor or the style guide referenced by the instructor. 6-8 Students continue with previous skills and use a style guide to create a proper citation. 9-12 Students continue with previous skills and should be aware of existing style guides and the ways in which they differ.
ELA.K12.EE.2.1:	Read and comprehend grade-level complex texts proficiently. **Clarifications:** See Text Complexity for grade-level complexity bands and a text complexity rubric.
ELA.K12.EE.3.1:	Make inferences to support comprehension. **Clarifications:** Students will make inferences before the words infer or inference are introduced. Kindergarten students will answer questions like "Why is the girl smiling?" or make predictions about what will happen based on the title page. Students will use the terms and apply them in 2nd grade and beyond.
ELA.K12.EE.4.1:	Use appropriate collaborative techniques and active listening skills when engaging in discussions in a variety of situations. **Clarifications:** In kindergarten, students learn to listen to one another respectfully. In grades 1-2, students build upon these skills by justifying what they are thinking. For example: "I think _____ because _____." The collaborative conversations are becoming academic conversations. In grades 3-12, students engage in academic conversations discussing claims and justifying their reasoning, refining and applying skills. Students build on ideas, propel the conversation, and support claims and counterclaims with evidence.
ELA.K12.EE.5.1:	Use the accepted rules governing a specific format to create quality work. **Clarifications:** Students will incorporate skills learned into work products to produce quality work. For students to incorporate these skills appropriately, they must receive instruction. A 3rd grade student creating a poster board display must have instruction in how to effectively present information to do quality work.
ELA.K12.EE.6.1:	Use appropriate voice and tone when speaking or writing. **Clarifications:** In kindergarten and 1st grade, students learn the difference between formal and informal language. For example, the way we talk to our friends differs from the way we speak to adults. In 2nd grade and beyond, students practice appropriate social and academic language to discuss texts.
DA.68.S.2.1:	Sustain focused attention, respect, and discipline during classes and performances.
ELD.K12.ELL.SI.1:	English language learners communicate for social and instructional purposes within the school setting.

General Course Information and Notes

VERSION DESCRIPTION

Students with significant experience in a choral ensemble develop advanced knowledge of vocal techniques, music literacy, ensemble skills, and related musical knowledge through rehearsal, performance, and study of a variety of high-quality advanced choral literature. Public performances may serve as a culmination of specific instructional goals. Students may be required to attend and/or participate in rehearsals and performances outside the school day to support, extend, and assess learning in the classroom.

GENERAL NOTES

Florida's Benchmarks for Excellent Student Thinking (B.E.S.T.) Standards
This course includes Florida's B.E.S.T. ELA Expectations (EE) and Mathematical Thinking and Reasoning Standards (MTRs) for students. Florida educators should intentionally embed these standards within the content and their instruction as applicable. For guidance on the implementation of the EEs and MTRs, please visit cpalms.org/Standards/BEST_Standards.aspx and select the appropriate B.E.S.T. Standards package.

English Language Development ELD Standards Special Notes Section:
Teachers are required to provide listening, speaking, reading and writing instruction that allows English language learners (ELL) to communicate for social and instructional purposes within the school setting. For the given level of English language proficiency and with visual, graphic, or interactive support, students will interact with grade level words, expressions, sentences and discourse to process or produce language necessary for academic success. The ELD standard should specify a relevant content area concept or topic of study chosen by curriculum developers and teachers which maximizes an ELL's need for communication and social skills. To access an ELL supporting document which delineates performance definitions and descriptors, please click on the following link: cpalms.org/uploads/docs/standards/eld/SI.pdf

GENERAL INFORMATION

Course Number: 1303030

Course Path: Section: Grades PreK to 12 Education Courses > **Grade Group:** Grades 6 to 8 Education Courses > **Subject:** Music Education > **SubSubject:** Choral Music >

Abbreviated Title: M/J CHORUS 4

Course Length: Year (Y)

Course Level: 2

Course Status: Draft - Course Pending Approval

Grade Level(s): 6,7,8

Educator Certifications

Music (Elementary and Secondary Grades K-12)
Instrumental Music (Secondary Grades 7-12)
Instrumental Music (Elementary and Secondary Grades K-12)
Vocal Music (Elementary and Secondary Grades K-12)

M/J Vocal Techniques 1 (#1303070) 2022 - And Beyond

Course Standards

Name	Description
MU.68.C.1.1:	Develop strategies for listening to unfamiliar musical works. **Clarifications:** e.g., listening maps, active listening, checklists
MU.68.C.1.2:	Compare, using correct music vocabulary, the aesthetic impact of a performance to one's own hypothesis of the composer's intent. **Clarifications:** e.g., quality recordings, peer group and individual performances, composer notes, instrumentation, expressive elements, title
MU.68.C.2.1:	Critique personal performance, experiment with a variety of solutions, and make appropriate adjustments with guidance from teachers and peers. **Clarifications:** e.g., intonation, balance, blend, phrasing, rhythm
MU.68.C.2.2:	Critique, using correct music vocabulary, changes in one's own or others' musical performance resulting from practice or rehearsal. **Clarifications:** e.g., blend, balance, ensemble playing, sonority, technique, tone quality
MU.68.H.2.3:	Classify the literature being studied by genre, style, and/or time period.
MU.68.O.1.1:	Compare performances of a musical work to identify artistic choices made by performers. **Clarifications:** e.g., rhythm, melody, timbre, form, tonality, harmony, expressive elements; choral, orchestral, band, ensemble
MU.68.O.3.1:	Describe how the combination of instrumentation and expressive elements in a musical work can convey a specific thought, idea, mood, and/or image. **Clarifications:** e.g., tempo markings, expression markings, articulation markings, phrasing, scales, modes, harmonic structure, timbre, rhythm, orchestration
MU.68.S.1.1:	Improvise rhythmic and melodic phrases to accompany familiar songs and/or standard harmonic progressions. **Clarifications:** e.g., blues, rock
MU.68.S.1.4:	Sing or play melodies by ear with support from the teacher and/or peers. **Clarifications:** e.g., melodies using traditional classroom instruments and/or voice
MU.68.S.2.1:	Perform music from memory to demonstrate knowledge of the musical structure. **Clarifications:** e.g., basic themes, patterns, tonality, melody, harmony
MU.68.S.2.2:	Transfer performance techniques from familiar to unfamiliar pieces.
MU.68.S.3.1:	Sing and/or play age-appropriate repertoire expressively. **Clarifications:** e.g., technique, phrasing, dynamics, tone quality, blend, balance, intonation, kinesthetic support/response
MU.68.S.3.2:	Demonstrate proper vocal or instrumental technique. **Clarifications:** e.g., posture, breathing, fingering, embouchure, bow technique, tuning, strumming
MU.68.S.3.3:	Sight-read standard exercises and simple repertoire. **Clarifications:** e.g., note and rest values, key signatures, time signatures, expressive markings, special harmonic and/or notation symbols
MU.68.S.3.4:	Compare written notation to aural examples and analyze for accuracy of rhythm and pitch. **Clarifications:** e.g., error detection, interval reinforcement
MU.68.S.3.5:	Notate rhythmic phrases and/or melodies, in varying simple meters, performed by someone else.
MU.68.S.3.6:	Develop and demonstrate efficient rehearsal strategies to apply skills and techniques. **Clarifications:** e.g., independently, collaboratively
MA.K12.MTR.1.1:	Mathematicians who participate in effortful learning both individually and with others: • Analyze the problem in a way that makes sense given the task. • Ask questions that will help with solving the task. • Build perseverance by modifying methods as needed while solving a challenging task. • Stay engaged and maintain a positive mindset when working to solve tasks. • Help and support each other when attempting a new method or approach. **Clarifications:** Teachers who encourage students to participate actively in effortful learning both individually and with others: • Cultivate a community of growth mindset learners.

- Foster perseverance in students by choosing tasks that are challenging.
- Develop students' ability to analyze and problem solve.
- Recognize students' effort when solving challenging problems.

MA.K12.MTR.2.1:

Demonstrate understanding by representing problems in multiple ways.
Mathematicians who demonstrate understanding by representing problems in multiple ways:

- Build understanding through modeling and using manipulatives.
- Represent solutions to problems in multiple ways using objects, drawings, tables, graphs and equations.
- Progress from modeling problems with objects and drawings to using algorithms and equations.
- Express connections between concepts and representations.
- Choose a representation based on the given context or purpose.

Clarifications:
Teachers who encourage students to demonstrate understanding by representing problems in multiple ways:

- Help students make connections between concepts and representations.
- Provide opportunities for students to use manipulatives when investigating concepts.
- Guide students from concrete to pictorial to abstract representations as understanding progresses.
- Show students that various representations can have different purposes and can be useful in different situations.

MA.K12.MTR.3.1:

Complete tasks with mathematical fluency.
Mathematicians who complete tasks with mathematical fluency:

- Select efficient and appropriate methods for solving problems within the given context.
- Maintain flexibility and accuracy while performing procedures and mental calculations.
- Complete tasks accurately and with confidence.
- Adapt procedures to apply them to a new context.
- Use feedback to improve efficiency when performing calculations.

Clarifications:
Teachers who encourage students to complete tasks with mathematical fluency:

- Provide students with the flexibility to solve problems by selecting a procedure that allows them to solve efficiently and accurately.
- Offer multiple opportunities for students to practice efficient and generalizable methods.
- Provide opportunities for students to reflect on the method they used and determine if a more efficient method could have been used.

MA.K12.MTR.4.1:

Engage in discussions that reflect on the mathematical thinking of self and others.
Mathematicians who engage in discussions that reflect on the mathematical thinking of self and others:

- Communicate mathematical ideas, vocabulary and methods effectively.
- Analyze the mathematical thinking of others.
- Compare the efficiency of a method to those expressed by others.
- Recognize errors and suggest how to correctly solve the task.
- Justify results by explaining methods and processes.
- Construct possible arguments based on evidence.

Clarifications:
Teachers who encourage students to engage in discussions that reflect on the mathematical thinking of self and others:

- Establish a culture in which students ask questions of the teacher and their peers, and error is an opportunity for learning.
- Create opportunities for students to discuss their thinking with peers.
- Select, sequence and present student work to advance and deepen understanding of correct and increasingly efficient methods.
- Develop students' ability to justify methods and compare their responses to the responses of their peers.

MA.K12.MTR.5.1:

Use patterns and structure to help understand and connect mathematical concepts.
Mathematicians who use patterns and structure to help understand and connect mathematical concepts:

- Focus on relevant details within a problem.
- Create plans and procedures to logically order events, steps or ideas to solve problems.
- Decompose a complex problem into manageable parts.
- Relate previously learned concepts to new concepts.
- Look for similarities among problems.
- Connect solutions of problems to more complicated large-scale situations.

Clarifications:
Teachers who encourage students to use patterns and structure to help understand and connect mathematical concepts:

- Help students recognize the patterns in the world around them and connect these patterns to mathematical concepts.
- Support students to develop generalizations based on the similarities found among problems.
- Provide opportunities for students to create plans and procedures to solve problems.
- Develop students' ability to construct relationships between their current understanding and more sophisticated ways of thinking.

MA.K12.MTR.6.1:

Assess the reasonableness of solutions.
Mathematicians who assess the reasonableness of solutions:

- Estimate to discover possible solutions.
- Use benchmark quantities to determine if a solution makes sense.
- Check calculations when solving problems.
- Verify possible solutions by explaining the methods used.
- Evaluate results based on the given context.

Clarifications:
Teachers who encourage students to assess the reasonableness of solutions:

	• Have students estimate or predict solutions prior to solving. • Prompt students to continually ask, "Does this solution make sense? How do you know?" • Reinforce that students check their work as they progress within and after a task. • Strengthen students' ability to verify solutions through justifications.
MA.K12.MTR.7.1:	Apply mathematics to real-world contexts. Mathematicians who apply mathematics to real-world contexts: • Connect mathematical concepts to everyday experiences. • Use models and methods to understand, represent and solve problems. • Perform investigations to gather data or determine if a method is appropriate. • Redesign models and methods to improve accuracy or efficiency. **Clarifications:** Teachers who encourage students to apply mathematics to real-world contexts: • Provide opportunities for students to create models, both concrete and abstract, and perform investigations. • Challenge students to question the accuracy of their models and methods. • Support students as they validate conclusions by comparing them to the given situation. • Indicate how various concepts can be applied to other disciplines.
ELA.K12.EE.1.1:	Cite evidence to explain and justify reasoning. **Clarifications:** K-1 Students include textual evidence in their oral communication with guidance and support from adults. The evidence can consist of details from the text without naming the text. During 1st grade, students learn how to incorporate the evidence in their writing. 2-3 Students include relevant textual evidence in their written and oral communication. Students should name the text when they refer to it. In 3rd grade, students should use a combination of direct and indirect citations. 4-5 Students continue with previous skills and reference comments made by speakers and peers. Students cite texts that they've directly quoted, paraphrased, or used for information. When writing, students will use the form of citation dictated by the instructor or the style guide referenced by the instructor. 6-8 Students continue with previous skills and use a style guide to create a proper citation. 9-12 Students continue with previous skills and should be aware of existing style guides and the ways in which they differ.
ELA.K12.EE.2.1:	Read and comprehend grade-level complex texts proficiently. **Clarifications:** See Text Complexity for grade-level complexity bands and a text complexity rubric.
ELA.K12.EE.3.1:	Make inferences to support comprehension. **Clarifications:** Students will make inferences before the words infer or inference are introduced. Kindergarten students will answer questions like "Why is the girl smiling?" or make predictions about what will happen based on the title page. Students will use the terms and apply them in 2nd grade and beyond.
ELA.K12.EE.4.1:	Use appropriate collaborative techniques and active listening skills when engaging in discussions in a variety of situations. **Clarifications:** In kindergarten, students learn to listen to one another respectfully. In grades 1-2, students build upon these skills by justifying what they are thinking. For example: "I think _____ because _____." The collaborative conversations are becoming academic conversations. In grades 3-12, students engage in academic conversations discussing claims and justifying their reasoning, refining and applying skills. Students build on ideas, propel the conversation, and support claims and counterclaims with evidence.
ELA.K12.EE.5.1:	Use the accepted rules governing a specific format to create quality work. **Clarifications:** Students will incorporate skills learned into work products to produce quality work. For students to incorporate these skills appropriately, they must receive instruction. A 3rd grade student creating a poster board display must have instruction in how to effectively present information to do quality work.
ELA.K12.EE.6.1:	Use appropriate voice and tone when speaking or writing. **Clarifications:** In kindergarten and 1st grade, students learn the difference between formal and informal language. For example, the way we talk to our friends differs from the way we speak to adults. In 2nd grade and beyond, students practice appropriate social and academic language to discuss texts.
ELD.K12.ELL.SI.1:	English language learners communicate for social and instructional purposes within the school setting.

General Course Information and Notes

VERSION DESCRIPTION

Students with little or no vocal experience develop musicianship, technical proficiency, and performance skills. Beginning musicians focus on development of skills and techniques through scales, etudes, and solo literature. Public performances may serve as a culmination of specific instructional goals. Students may be required to attend and/or participate in rehearsals and performances outside the school day to support, extend, and assess learning in the classroom.

GENERAL NOTES

Florida's Benchmarks for Excellent Student Thinking (B.E.S.T.) Standards
This course includes Florida's B.E.S.T. ELA Expectations (EE) and Mathematical Thinking and Reasoning Standards (MTRs) for students. Florida educators should intentionally embed these standards within the content and their instruction as applicable. For guidance on the implementation of the EEs and MTRs, please visit cpalms.org/Standards/BEST_Standards.aspx and select the appropriate B.E.S.T. Standards package.

English Language Development ELD Standards Special Notes Section:
Teachers are required to provide listening, speaking, reading and writing instruction that allows English language learners (ELL) to communicate for social and instructional purposes within the school setting. For the given level of English language proficiency and with visual, graphic, or interactive support, students will interact with grade level words, expressions, sentences and discourse to process or produce language necessary for academic success. The ELD standard should specify a relevant content area concept or topic of study chosen by curriculum developers and teachers which maximizes an ELL's need for communication and social skills. To access an ELL supporting document which delineates performance definitions and descriptors, please click on the following link: cpalms.org/uploads/docs/standards/eld/SI.pdf

GENERAL INFORMATION

Course Number: 1303070

Course Path: Section: Grades PreK to 12 Education Courses > **Grade Group:** Grades 6 to 8 Education Courses > **Subject:** Music Education > **SubSubject:** Choral Music >

Abbreviated Title: M/J VOCAL TECNQS 1

Course Length: Year (Y)

Course Level: 2

Course Status: Draft - Course Pending Approval

Grade Level(s): 6,7,8

Educator Certifications

Instrumental Music (Secondary Grades 7-12)
Instrumental Music (Elementary and Secondary Grades K-12)
Music (Elementary and Secondary Grades K-12)
Vocal Music (Elementary and Secondary Grades K-12)

M/J Vocal Techniques 2 (#1303080) 2022 - And Beyond

Course Standards

Name	Description
MU.68.C.1.1:	Develop strategies for listening to unfamiliar musical works. **Clarifications:** e.g., listening maps, active listening, checklists
MU.68.C.1.2:	Compare, using correct music vocabulary, the aesthetic impact of a performance to one's own hypothesis of the composer's intent. **Clarifications:** e.g., quality recordings, peer group and individual performances, composer notes, instrumentation, expressive elements, title
MU.68.C.2.1:	Critique personal performance, experiment with a variety of solutions, and make appropriate adjustments with guidance from teachers and peers. **Clarifications:** e.g., intonation, balance, blend, phrasing, rhythm
MU.68.C.2.2:	Critique, using correct music vocabulary, changes in one's own or others' musical performance resulting from practice or rehearsal. **Clarifications:** e.g., blend, balance, ensemble playing, sonority, technique, tone quality
MU.68.F.3.1:	Describe how studying music can enhance citizenship, leadership, and global thinking. **Clarifications:** e.g., dedication to mastering a task, problem-solving, self-discipline, dependability, ability to organize, cultural awareness, mutual respect
MU.68.H.2.2:	Analyze how technology has changed the way music is created, performed, acquired, and experienced. **Clarifications:** e.g., from harpsichord to piano; from phonograph to CD
MU.68.H.2.3:	Classify the literature being studied by genre, style, and/or time period.
MU.68.O.1.1:	Compare performances of a musical work to identify artistic choices made by performers. **Clarifications:** e.g., rhythm, melody, timbre, form, tonality, harmony, expressive elements; choral, orchestral, band, ensemble
MU.68.O.2.2:	Demonstrate knowledge of major and minor tonalities through performance and composition. **Clarifications:** e.g., scales; key signatures; relative major/minor; parallel major/minor
MU.68.O.3.1:	Describe how the combination of instrumentation and expressive elements in a musical work can convey a specific thought, idea, mood, and/or image. **Clarifications:** e.g., tempo markings, expression markings, articulation markings, phrasing, scales, modes, harmonic structure, timbre, rhythm, orchestration
MU.68.O.3.2:	Perform the expressive elements of a musical work indicated by the musical score and/or conductor, and transfer new knowledge and experiences to other musical works.
MU.68.S.1.1:	Improvise rhythmic and melodic phrases to accompany familiar songs and/or standard harmonic progressions. **Clarifications:** e.g., blues, rock
MU.68.S.1.4:	Sing or play melodies by ear with support from the teacher and/or peers. **Clarifications:** e.g., melodies using traditional classroom instruments and/or voice
MU.68.S.2.1:	Perform music from memory to demonstrate knowledge of the musical structure. **Clarifications:** e.g., basic themes, patterns, tonality, melody, harmony
MU.68.S.2.2:	Transfer performance techniques from familiar to unfamiliar pieces.
MU.68.S.3.1:	Sing and/or play age-appropriate repertoire expressively. **Clarifications:** e.g., technique, phrasing, dynamics, tone quality, blend, balance, intonation, kinesthetic support/response
MU.68.S.3.2:	Demonstrate proper vocal or instrumental technique. **Clarifications:** e.g., posture, breathing, fingering, embouchure, bow technique, tuning, strumming
MU.68.S.3.3:	Sight-read standard exercises and simple repertoire. **Clarifications:** e.g., note and rest values, key signatures, time signatures, expressive markings, special harmonic and/or notation symbols
MU.68.S.3.4:	Compare written notation to aural examples and analyze for accuracy of rhythm and pitch. **Clarifications:** e.g., error detection, interval reinforcement
MU.68.S.3.5:	Notate rhythmic phrases and/or melodies, in varying simple meters, performed by someone else.

	Develop and demonstrate efficient rehearsal strategies to apply skills and techniques.
MU.68.S.3.6:	**Clarifications:** e.g., independently, collaboratively
MA.K12.MTR.1.1:	Mathematicians who participate in effortful learning both individually and with others: • Analyze the problem in a way that makes sense given the task. • Ask questions that will help with solving the task. • Build perseverance by modifying methods as needed while solving a challenging task. • Stay engaged and maintain a positive mindset when working to solve tasks. • Help and support each other when attempting a new method or approach. **Clarifications:** Teachers who encourage students to participate actively in effortful learning both individually and with others: • Cultivate a community of growth mindset learners. • Foster perseverance in students by choosing tasks that are challenging. • Develop students' ability to analyze and problem solve. • Recognize students' effort when solving challenging problems.
MA.K12.MTR.2.1:	Demonstrate understanding by representing problems in multiple ways. Mathematicians who demonstrate understanding by representing problems in multiple ways: • Build understanding through modeling and using manipulatives. • Represent solutions to problems in multiple ways using objects, drawings, tables, graphs and equations. • Progress from modeling problems with objects and drawings to using algorithms and equations. • Express connections between concepts and representations. • Choose a representation based on the given context or purpose. **Clarifications:** Teachers who encourage students to demonstrate understanding by representing problems in multiple ways: • Help students make connections between concepts and representations. • Provide opportunities for students to use manipulatives when investigating concepts. • Guide students from concrete to pictorial to abstract representations as understanding progresses. • Show students that various representations can have different purposes and can be useful in different situations.
MA.K12.MTR.3.1:	Complete tasks with mathematical fluency. Mathematicians who complete tasks with mathematical fluency: • Select efficient and appropriate methods for solving problems within the given context. • Maintain flexibility and accuracy while performing procedures and mental calculations. • Complete tasks accurately and with confidence. • Adapt procedures to apply them to a new context. • Use feedback to improve efficiency when performing calculations. **Clarifications:** Teachers who encourage students to complete tasks with mathematical fluency: • Provide students with the flexibility to solve problems by selecting a procedure that allows them to solve efficiently and accurately. • Offer multiple opportunities for students to practice efficient and generalizable methods. • Provide opportunities for students to reflect on the method they used and determine if a more efficient method could have been used.
MA.K12.MTR.4.1:	Engage in discussions that reflect on the mathematical thinking of self and others. Mathematicians who engage in discussions that reflect on the mathematical thinking of self and others: • Communicate mathematical ideas, vocabulary and methods effectively. • Analyze the mathematical thinking of others. • Compare the efficiency of a method to those expressed by others. • Recognize errors and suggest how to correctly solve the task. • Justify results by explaining methods and processes. • Construct possible arguments based on evidence. **Clarifications:** Teachers who encourage students to engage in discussions that reflect on the mathematical thinking of self and others: • Establish a culture in which students ask questions of the teacher and their peers, and error is an opportunity for learning. • Create opportunities for students to discuss their thinking with peers. • Select, sequence and present student work to advance and deepen understanding of correct and increasingly efficient methods. • Develop students' ability to justify methods and compare their responses to the responses of their peers.
MA.K12.MTR.5.1:	Use patterns and structure to help understand and connect mathematical concepts. Mathematicians who use patterns and structure to help understand and connect mathematical concepts: • Focus on relevant details within a problem. • Create plans and procedures to logically order events, steps or ideas to solve problems. • Decompose a complex problem into manageable parts. • Relate previously learned concepts to new concepts. • Look for similarities among problems. • Connect solutions of problems to more complicated large-scale situations. **Clarifications:** Teachers who encourage students to use patterns and structure to help understand and connect mathematical concepts: • Help students recognize the patterns in the world around them and connect these patterns to mathematical concepts. • Support students to develop generalizations based on the similarities found among problems.

	• Provide opportunities for students to create plans and procedures to solve problems. • Develop students' ability to construct relationships between their current understanding and more sophisticated ways of thinking.
MA.K12.MTR.6.1:	Assess the reasonableness of solutions. Mathematicians who assess the reasonableness of solutions: • Estimate to discover possible solutions. • Use benchmark quantities to determine if a solution makes sense. • Check calculations when solving problems. • Verify possible solutions by explaining the methods used. • Evaluate results based on the given context. **Clarifications:** Teachers who encourage students to assess the reasonableness of solutions: • Have students estimate or predict solutions prior to solving. • Prompt students to continually ask, "Does this solution make sense? How do you know?" • Reinforce that students check their work as they progress within and after a task. • Strengthen students' ability to verify solutions through justifications.
MA.K12.MTR.7.1:	Apply mathematics to real-world contexts. Mathematicians who apply mathematics to real-world contexts: • Connect mathematical concepts to everyday experiences. • Use models and methods to understand, represent and solve problems. • Perform investigations to gather data or determine if a method is appropriate. • Redesign models and methods to improve accuracy or efficiency. **Clarifications:** Teachers who encourage students to apply mathematics to real-world contexts: • Provide opportunities for students to create models, both concrete and abstract, and perform investigations. • Challenge students to question the accuracy of their models and methods. • Support students as they validate conclusions by comparing them to the given situation. • Indicate how various concepts can be applied to other disciplines.
ELA.K12.EE.1.1:	Cite evidence to explain and justify reasoning. **Clarifications:** K-1 Students include textual evidence in their oral communication with guidance and support from adults. The evidence can consist of details from the text without naming the text. During 1st grade, students learn how to incorporate the evidence in their writing. 2-3 Students include relevant textual evidence in their written and oral communication. Students should name the text when they refer to it. In 3rd grade, students should use a combination of direct and indirect citations. 4-5 Students continue with previous skills and reference comments made by speakers and peers. Students cite texts that they've directly quoted, paraphrased, or used for information. When writing, students will use the form of citation dictated by the instructor or the style guide referenced by the instructor. 6-8 Students continue with previous skills and use a style guide to create a proper citation. 9-12 Students continue with previous skills and should be aware of existing style guides and the ways in which they differ.
ELA.K12.EE.2.1:	Read and comprehend grade-level complex texts proficiently. **Clarifications:** See Text Complexity for grade-level complexity bands and a text complexity rubric.
ELA.K12.EE.3.1:	Make inferences to support comprehension. **Clarifications:** Students will make inferences before the words infer or inference are introduced. Kindergarten students will answer questions like "Why is the girl smiling?" or make predictions about what will happen based on the title page. Students will use the terms and apply them in 2nd grade and beyond.
ELA.K12.EE.4.1:	Use appropriate collaborative techniques and active listening skills when engaging in discussions in a variety of situations. **Clarifications:** In kindergarten, students learn to listen to one another respectfully. In grades 1-2, students build upon these skills by justifying what they are thinking. For example: "I think _____ because _____." The collaborative conversations are becoming academic conversations. In grades 3-12, students engage in academic conversations discussing claims and justifying their reasoning, refining and applying skills. Students build on ideas, propel the conversation, and support claims and counterclaims with evidence.
ELA.K12.EE.5.1:	Use the accepted rules governing a specific format to create quality work. **Clarifications:** Students will incorporate skills learned into work products to produce quality work. For students to incorporate these skills appropriately, they must receive instruction. A 3rd grade student creating a poster board display must have instruction in how to effectively present information to do quality work.
ELA.K12.EE.6.1:	Use appropriate voice and tone when speaking or writing. **Clarifications:** In kindergarten and 1st grade, students learn the difference between formal and informal language. For example, the way we talk to our friends differs from the way we speak to adults. In 2nd grade and beyond, students practice appropriate social and academic language to discuss texts.
ELD.K12.ELL.SI.1:	English language learners communicate for social and instructional purposes within the school setting.

General Course Information and Notes

VERSION DESCRIPTION

Students build on previous instruction to strengthen their musicianship, technique, and performance skills through preparation of scales, etudes, and solo literature. Through problem-solving, critical thinking, and reflection, students develop the physical and cognitive skills necessary to be more disciplined performers. Public performances may serve as a culmination of specific instructional goals. Students may be required to attend and/or participate in rehearsals and performances outside the school day to support, extend, and assess learning in the classroom.

GENERAL NOTES

Florida's Benchmarks for Excellent Student Thinking (B.E.S.T.) Standards
This course includes Florida's B.E.S.T. ELA Expectations (EE) and Mathematical Thinking and Reasoning Standards (MTRs) for students. Florida educators should intentionally embed these standards within the content and their instruction as applicable. For guidance on the implementation of the EEs and MTRs, please visit cpalms.org/Standards/BEST_Standards.aspx and select the appropriate B.E.S.T. Standards package.

English Language Development ELD Standards Special Notes Section:
Teachers are required to provide listening, speaking, reading and writing instruction that allows English language learners (ELL) to communicate for social and instructional purposes within the school setting. For the given level of English language proficiency and with visual, graphic, or interactive support, students will interact with grade level words, expressions, sentences and discourse to process or produce language necessary for academic success. The ELD standard should specify a relevant content area concept or topic of study chosen by curriculum developers and teachers which maximizes an ELL's need for communication and social skills. To access an ELL supporting document which delineates performance definitions and descriptors, please click on the following link: cpalms.org/uploads/docs/standards/eld/SI.pdf

GENERAL INFORMATION

Course Number: 1303080

Course Path: Section: Grades PreK to 12 Education Courses > **Grade Group:** Grades 6 to 8 Education Courses > **Subject:** Music Education > **SubSubject:** Choral Music >

Abbreviated Title: M/J VOCAL TECNQS 2

Course Length: Year (Y)

Course Level: 2

Course Status: Draft - Course Pending Approval

Grade Level(s): 6,7,8

Educator Certifications

Instrumental Music (Secondary Grades 7-12)
Instrumental Music (Elementary and Secondary Grades K-12)
Music (Elementary and Secondary Grades K-12)
Vocal Music (Elementary and Secondary Grades K-12)

M/J Vocal Ensemble 1 (#1303100) 2022 - And Beyond

Course Standards

Name	Description
MU.68.C.1.1:	Develop strategies for listening to unfamiliar musical works. **Clarifications:** e.g., listening maps, active listening, checklists
MU.68.C.1.2:	Compare, using correct music vocabulary, the aesthetic impact of a performance to one's own hypothesis of the composer's intent. **Clarifications:** e.g., quality recordings, peer group and individual performances, composer notes, instrumentation, expressive elements, title
MU.68.C.2.1:	Critique personal performance, experiment with a variety of solutions, and make appropriate adjustments with guidance from teachers and peers. **Clarifications:** e.g., intonation, balance, blend, phrasing, rhythm
MU.68.C.2.2:	Critique, using correct music vocabulary, changes in one's own or others' musical performance resulting from practice or rehearsal. **Clarifications:** e.g., blend, balance, ensemble playing, sonority, technique, tone quality
MU.68.F.3.2:	Investigate and discuss laws that protect intellectual property, and practice safe, legal, and responsible acquisition and use of musical media.
MU.68.H.1.4:	Classify authentic stylistic features in music originating from various cultures. **Clarifications:** e.g., rhythm, layered texture, key patterns, tonality, melodic line, quarter- or semi-tones, national folk melodies, improvisation, instrumentation, aural/oral traditions, drumming patterns
MU.68.H.2.3:	Classify the literature being studied by genre, style, and/or time period.
MU.68.H.3.1:	Identify connections among music and other content areas and/or contexts through interdisciplinary collaboration. **Clarifications:** e.g., school: other music classes, social studies, dance, physical education, science, health, math, world languages; community: cultural connections and traditions, ceremonial music, sales and advertising, communication
MU.68.O.3.1:	Describe how the combination of instrumentation and expressive elements in a musical work can convey a specific thought, idea, mood, and/or image. **Clarifications:** e.g., tempo markings, expression markings, articulation markings, phrasing, scales, modes, harmonic structure, timbre, rhythm, orchestration
MU.68.O.3.2:	Perform the expressive elements of a musical work indicated by the musical score and/or conductor, and transfer new knowledge and experiences to other musical works.
MU.68.S.1.3:	Arrange a short musical piece by manipulating melody, form, rhythm, and/or voicing.
MU.68.S.1.4:	Sing or play melodies by ear with support from the teacher and/or peers. **Clarifications:** e.g., melodies using traditional classroom instruments and/or voice
MU.68.S.2.2:	Transfer performance techniques from familiar to unfamiliar pieces.
MU.68.S.3.1:	Sing and/or play age-appropriate repertoire expressively. **Clarifications:** e.g., technique, phrasing, dynamics, tone quality, blend, balance, intonation, kinesthetic support/response
MU.68.S.3.2:	Demonstrate proper vocal or instrumental technique. **Clarifications:** e.g., posture, breathing, fingering, embouchure, bow technique, tuning, strumming
MU.68.S.3.3:	Sight-read standard exercises and simple repertoire. **Clarifications:** e.g., note and rest values, key signatures, time signatures, expressive markings, special harmonic and/or notation symbols
MU.68.S.3.4:	Compare written notation to aural examples and analyze for accuracy of rhythm and pitch. **Clarifications:** e.g., error detection, interval reinforcement
MU.68.S.3.6:	Develop and demonstrate efficient rehearsal strategies to apply skills and techniques. **Clarifications:** e.g., independently, collaboratively
MA.K12.MTR.1.1:	Mathematicians who participate in effortful learning both individually and with others: • Analyze the problem in a way that makes sense given the task. • Ask questions that will help with solving the task. • Build perseverance by modifying methods as needed while solving a challenging task. • Stay engaged and maintain a positive mindset when working to solve tasks. • Help and support each other when attempting a new method or approach. **Clarifications:** Teachers who encourage students to participate actively in effortful learning both individually and with others:

- Cultivate a community of growth mindset learners.
- Foster perseverance in students by choosing tasks that are challenging.
- Develop students' ability to analyze and problem solve.
- Recognize students' effort when solving challenging problems.

MA.K12.MTR.2.1:

Demonstrate understanding by representing problems in multiple ways.
Mathematicians who demonstrate understanding by representing problems in multiple ways:

- Build understanding through modeling and using manipulatives.
- Represent solutions to problems in multiple ways using objects, drawings, tables, graphs and equations.
- Progress from modeling problems with objects and drawings to using algorithms and equations.
- Express connections between concepts and representations.
- Choose a representation based on the given context or purpose.

Clarifications:
Teachers who encourage students to demonstrate understanding by representing problems in multiple ways:

- Help students make connections between concepts and representations.
- Provide opportunities for students to use manipulatives when investigating concepts.
- Guide students from concrete to pictorial to abstract representations as understanding progresses.
- Show students that various representations can have different purposes and can be useful in different situations.

MA.K12.MTR.3.1:

Complete tasks with mathematical fluency.
Mathematicians who complete tasks with mathematical fluency:

- Select efficient and appropriate methods for solving problems within the given context.
- Maintain flexibility and accuracy while performing procedures and mental calculations.
- Complete tasks accurately and with confidence.
- Adapt procedures to apply them to a new context.
- Use feedback to improve efficiency when performing calculations.

Clarifications:
Teachers who encourage students to complete tasks with mathematical fluency:

- Provide students with the flexibility to solve problems by selecting a procedure that allows them to solve efficiently and accurately.
- Offer multiple opportunities for students to practice efficient and generalizable methods.
- Provide opportunities for students to reflect on the method they used and determine if a more efficient method could have been used.

MA.K12.MTR.4.1:

Engage in discussions that reflect on the mathematical thinking of self and others.
Mathematicians who engage in discussions that reflect on the mathematical thinking of self and others:

- Communicate mathematical ideas, vocabulary and methods effectively.
- Analyze the mathematical thinking of others.
- Compare the efficiency of a method to those expressed by others.
- Recognize errors and suggest how to correctly solve the task.
- Justify results by explaining methods and processes.
- Construct possible arguments based on evidence.

Clarifications:
Teachers who encourage students to engage in discussions that reflect on the mathematical thinking of self and others:

- Establish a culture in which students ask questions of the teacher and their peers, and error is an opportunity for learning.
- Create opportunities for students to discuss their thinking with peers.
- Select, sequence and present student work to advance and deepen understanding of correct and increasingly efficient methods.
- Develop students' ability to justify methods and compare their responses to the responses of their peers.

MA.K12.MTR.5.1:

Use patterns and structure to help understand and connect mathematical concepts.
Mathematicians who use patterns and structure to help understand and connect mathematical concepts:

- Focus on relevant details within a problem.
- Create plans and procedures to logically order events, steps or ideas to solve problems.
- Decompose a complex problem into manageable parts.
- Relate previously learned concepts to new concepts.
- Look for similarities among problems.
- Connect solutions of problems to more complicated large-scale situations.

Clarifications:
Teachers who encourage students to use patterns and structure to help understand and connect mathematical concepts:

- Help students recognize the patterns in the world around them and connect these patterns to mathematical concepts.
- Support students to develop generalizations based on the similarities found among problems.
- Provide opportunities for students to create plans and procedures to solve problems.
- Develop students' ability to construct relationships between their current understanding and more sophisticated ways of thinking.

MA.K12.MTR.6.1:

Assess the reasonableness of solutions.
Mathematicians who assess the reasonableness of solutions:

- Estimate to discover possible solutions.
- Use benchmark quantities to determine if a solution makes sense.
- Check calculations when solving problems.
- Verify possible solutions by explaining the methods used.
- Evaluate results based on the given context.

Clarifications:

	Teachers who encourage students to assess the reasonableness of solutions: • Have students estimate or predict solutions prior to solving. • Prompt students to continually ask, "Does this solution make sense? How do you know?" • Reinforce that students check their work as they progress within and after a task. • Strengthen students' ability to verify solutions through justifications.
MA.K12.MTR.7.1:	Apply mathematics to real-world contexts. Mathematicians who apply mathematics to real-world contexts: • Connect mathematical concepts to everyday experiences. • Use models and methods to understand, represent and solve problems. • Perform investigations to gather data or determine if a method is appropriate. • Redesign models and methods to improve accuracy or efficiency. **Clarifications:** Teachers who encourage students to apply mathematics to real-world contexts: • Provide opportunities for students to create models, both concrete and abstract, and perform investigations. • Challenge students to question the accuracy of their models and methods. • Support students as they validate conclusions by comparing them to the given situation. • Indicate how various concepts can be applied to other disciplines.
ELA.K12.EE.1.1:	Cite evidence to explain and justify reasoning. **Clarifications:** K-1 Students include textual evidence in their oral communication with guidance and support from adults. The evidence can consist of details from the text without naming the text. During 1st grade, students learn how to incorporate the evidence in their writing. 2-3 Students include relevant textual evidence in their written and oral communication. Students should name the text when they refer to it. In 3rd grade, students should use a combination of direct and indirect citations. 4-5 Students continue with previous skills and reference comments made by speakers and peers. Students cite texts that they've directly quoted, paraphrased, or used for information. When writing, students will use the form of citation dictated by the instructor or the style guide referenced by the instructor. 6-8 Students continue with previous skills and use a style guide to create a proper citation. 9-12 Students continue with previous skills and should be aware of existing style guides and the ways in which they differ.
ELA.K12.EE.2.1:	Read and comprehend grade-level complex texts proficiently. **Clarifications:** See Text Complexity for grade-level complexity bands and a text complexity rubric.
ELA.K12.EE.3.1:	Make inferences to support comprehension. **Clarifications:** Students will make inferences before the words infer or inference are introduced. Kindergarten students will answer questions like "Why is the girl smiling?" or make predictions about what will happen based on the title page. Students will use the terms and apply them in 2nd grade and beyond.
ELA.K12.EE.4.1:	Use appropriate collaborative techniques and active listening skills when engaging in discussions in a variety of situations. **Clarifications:** In kindergarten, students learn to listen to one another respectfully. In grades 1-2, students build upon these skills by justifying what they are thinking. For example: "I think _____ because _____." The collaborative conversations are becoming academic conversations. In grades 3-12, students engage in academic conversations discussing claims and justifying their reasoning, refining and applying skills. Students build on ideas, propel the conversation, and support claims and counterclaims with evidence.
ELA.K12.EE.5.1:	Use the accepted rules governing a specific format to create quality work. **Clarifications:** Students will incorporate skills learned into work products to produce quality work. For students to incorporate these skills appropriately, they must receive instruction. A 3rd grade student creating a poster board display must have instruction in how to effectively present information to do quality work.
ELA.K12.EE.6.1:	Use appropriate voice and tone when speaking or writing. **Clarifications:** In kindergarten and 1st grade, students learn the difference between formal and informal language. For example, the way we talk to our friends differs from the way we speak to adults. In 2nd grade and beyond, students practice appropriate social and academic language to discuss texts.
ELD.K12.ELL.SI.1:	English language learners communicate for social and instructional purposes within the school setting.

General Course Information and Notes

VERSION DESCRIPTION

Students with little or no small vocal ensemble experience develop musicianship and performance skills as they study, rehearse, and perform high-quality ensemble literature in diverse styles. Public performances may serve as a culmination of specific instructional goals. Students may be required to attend and/or participate in rehearsals and performances outside the school day to support, extend, and assess learning in the classroom.

GENERAL NOTES

Florida's Benchmarks for Excellent Student Thinking (B.E.S.T.) Standards
This course includes Florida's B.E.S.T. ELA Expectations (EE) and Mathematical Thinking and Reasoning Standards (MTRs) for students. Florida educators should intentionally embed these standards within the content and their instruction as applicable. For guidance on the implementation of the EEs and MTRs, please visit cpalms.org/Standards/BEST_Standards.aspx and select the appropriate B.E.S.T. Standards package.

English Language Development ELD Standards Special Notes Section:
Teachers are required to provide listening, speaking, reading and writing instruction that allows English language learners (ELL) to communicate for social and instructional purposes within the school setting. For the given level of English language proficiency and with visual, graphic, or interactive support, students will interact with grade level words, expressions, sentences and discourse to process or produce language necessary for academic success. The ELD standard should specify a relevant content area concept or topic of study chosen by curriculum developers and teachers which maximizes an ELL's need for communication and social skills. To access an ELL supporting document which delineates performance definitions and descriptors, please click on the following link: cpalms.org/uploads/docs/standards/eld/SI.pdf

GENERAL INFORMATION

Course Number: 1303100

Course Path: Section: Grades PreK to 12 Education Courses > **Grade Group:** Grades 6 to 8 Education Courses > **Subject:** Music Education > **SubSubject:** Choral Music >

Abbreviated Title: M/J VOCAL ENS 1

Course Length: Year (Y)

Course Level: 2

Course Status: Draft - Course Pending Approval

Grade Level(s): 6,7,8

Educator Certifications

Instrumental Music (Secondary Grades 7-12)
Instrumental Music (Elementary and Secondary Grades K-12)
Vocal Music (Elementary and Secondary Grades K-12)
Music (Elementary and Secondary Grades K-12)

M/J Vocal Ensemble 2 (#1303110) 2022 - And Beyond

Course Standards

Name	Description
MU.68.C.1.1:	Develop strategies for listening to unfamiliar musical works. **Clarifications:** e.g., listening maps, active listening, checklists
MU.68.C.1.2:	Compare, using correct music vocabulary, the aesthetic impact of a performance to one's own hypothesis of the composer's intent. **Clarifications:** e.g., quality recordings, peer group and individual performances, composer notes, instrumentation, expressive elements, title
MU.68.C.2.1:	Critique personal performance, experiment with a variety of solutions, and make appropriate adjustments with guidance from teachers and peers. **Clarifications:** e.g., intonation, balance, blend, phrasing, rhythm
MU.68.C.2.2:	Critique, using correct music vocabulary, changes in one's own or others' musical performance resulting from practice or rehearsal. **Clarifications:** e.g., blend, balance, ensemble playing, sonority, technique, tone quality
MU.68.F.2.1:	Describe several routes a composition or performance could travel from creator to consumer. **Clarifications:** e.g., MIDI and other technology, production, sharing on the Internet, home studios, professional recording studios, sales
MU.68.F.3.1:	Describe how studying music can enhance citizenship, leadership, and global thinking. **Clarifications:** e.g., dedication to mastering a task, problem-solving, self-discipline, dependability, ability to organize, cultural awareness, mutual respect
MU.68.F.3.2:	Investigate and discuss laws that protect intellectual property, and practice safe, legal, and responsible acquisition and use of musical media.
MU.68.H.1.4:	Classify authentic stylistic features in music originating from various cultures. **Clarifications:** e.g., rhythm, layered texture, key patterns, tonality, melodic line, quarter- or semi-tones, national folk melodies, improvisation, instrumentation, aural/oral traditions, drumming patterns
MU.68.H.2.3:	Classify the literature being studied by genre, style, and/or time period.
MU.68.H.3.1:	Identify connections among music and other content areas and/or contexts through interdisciplinary collaboration. **Clarifications:** e.g., school: other music classes, social studies, dance, physical education, science, health, math, world languages; community: cultural connections and traditions, ceremonial music, sales and advertising, communication
MU.68.H.3.2:	Discuss how the absence of music would affect other content areas and contexts. **Clarifications:** e.g., theatre and dance, movies, sporting events, video games, commercial advertising, social gatherings, civic and religious ceremonies, plays
MU.68.O.1.1:	Compare performances of a musical work to identify artistic choices made by performers. **Clarifications:** e.g., rhythm, melody, timbre, form, tonality, harmony, expressive elements; choral, orchestral, band, ensemble
MU.68.O.3.1:	Describe how the combination of instrumentation and expressive elements in a musical work can convey a specific thought, idea, mood, and/or image. **Clarifications:** e.g., tempo markings, expression markings, articulation markings, phrasing, scales, modes, harmonic structure, timbre, rhythm, orchestration
MU.68.O.3.2:	Perform the expressive elements of a musical work indicated by the musical score and/or conductor, and transfer new knowledge and experiences to other musical works.
MU.68.S.1.3:	Arrange a short musical piece by manipulating melody, form, rhythm, and/or voicing.
MU.68.S.1.4:	Sing or play melodies by ear with support from the teacher and/or peers. **Clarifications:** e.g., melodies using traditional classroom instruments and/or voice
MU.68.S.2.1:	Perform music from memory to demonstrate knowledge of the musical structure. **Clarifications:** e.g., basic themes, patterns, tonality, melody, harmony
MU.68.S.2.2:	Transfer performance techniques from familiar to unfamiliar pieces.
MU.68.S.3.1:	Sing and/or play age-appropriate repertoire expressively. **Clarifications:** e.g., technique, phrasing, dynamics, tone quality, blend, balance, intonation, kinesthetic support/response
MU.68.S.3.2:	Demonstrate proper vocal or instrumental technique. **Clarifications:** e.g., posture, breathing, fingering, embouchure, bow technique, tuning, strumming
	Sight-read standard exercises and simple repertoire.

MU.68.S.3.3:	**Clarifications:** e.g., note and rest values, key signatures, time signatures, expressive markings, special harmonic and/or notation symbols
MU.68.S.3.4:	Compare written notation to aural examples and analyze for accuracy of rhythm and pitch. **Clarifications:** e.g., error detection, interval reinforcement
MU.68.S.3.6:	Develop and demonstrate efficient rehearsal strategies to apply skills and techniques. **Clarifications:** e.g., independently, collaboratively
MA.K12.MTR.1.1:	Mathematicians who participate in effortful learning both individually and with others: • Analyze the problem in a way that makes sense given the task. • Ask questions that will help with solving the task. • Build perseverance by modifying methods as needed while solving a challenging task. • Stay engaged and maintain a positive mindset when working to solve tasks. • Help and support each other when attempting a new method or approach. **Clarifications:** Teachers who encourage students to participate actively in effortful learning both individually and with others: • Cultivate a community of growth mindset learners. • Foster perseverance in students by choosing tasks that are challenging. • Develop students' ability to analyze and problem solve. • Recognize students' effort when solving challenging problems.
MA.K12.MTR.2.1:	Demonstrate understanding by representing problems in multiple ways. Mathematicians who demonstrate understanding by representing problems in multiple ways: • Build understanding through modeling and using manipulatives. • Represent solutions to problems in multiple ways using objects, drawings, tables, graphs and equations. • Progress from modeling problems with objects and drawings to using algorithms and equations. • Express connections between concepts and representations. • Choose a representation based on the given context or purpose. **Clarifications:** Teachers who encourage students to demonstrate understanding by representing problems in multiple ways: • Help students make connections between concepts and representations. • Provide opportunities for students to use manipulatives when investigating concepts. • Guide students from concrete to pictorial to abstract representations as understanding progresses. • Show students that various representations can have different purposes and can be useful in different situations.
MA.K12.MTR.3.1:	Complete tasks with mathematical fluency. Mathematicians who complete tasks with mathematical fluency: • Select efficient and appropriate methods for solving problems within the given context. • Maintain flexibility and accuracy while performing procedures and mental calculations. • Complete tasks accurately and with confidence. • Adapt procedures to apply them to a new context. • Use feedback to improve efficiency when performing calculations. **Clarifications:** Teachers who encourage students to complete tasks with mathematical fluency: • Provide students with the flexibility to solve problems by selecting a procedure that allows them to solve efficiently and accurately. • Offer multiple opportunities for students to practice efficient and generalizable methods. • Provide opportunities for students to reflect on the method they used and determine if a more efficient method could have been used.
MA.K12.MTR.4.1:	Engage in discussions that reflect on the mathematical thinking of self and others. Mathematicians who engage in discussions that reflect on the mathematical thinking of self and others: • Communicate mathematical ideas, vocabulary and methods effectively. • Analyze the mathematical thinking of others. • Compare the efficiency of a method to those expressed by others. • Recognize errors and suggest how to correctly solve the task. • Justify results by explaining methods and processes. • Construct possible arguments based on evidence. **Clarifications:** Teachers who encourage students to engage in discussions that reflect on the mathematical thinking of self and others: • Establish a culture in which students ask questions of the teacher and their peers, and error is an opportunity for learning. • Create opportunities for students to discuss their thinking with peers. • Select, sequence and present student work to advance and deepen understanding of correct and increasingly efficient methods. • Develop students' ability to justify methods and compare their responses to the responses of their peers.
	Use patterns and structure to help understand and connect mathematical concepts. Mathematicians who use patterns and structure to help understand and connect mathematical concepts: • Focus on relevant details within a problem. • Create plans and procedures to logically order events, steps or ideas to solve problems. • Decompose a complex problem into manageable parts. • Relate previously learned concepts to new concepts.

MA.K12.MTR.5.1:	• Look for similarities among problems. • Connect solutions of problems to more complicated large-scale situations. **Clarifications:** Teachers who encourage students to use patterns and structure to help understand and connect mathematical concepts: • Help students recognize the patterns in the world around them and connect these patterns to mathematical concepts. • Support students to develop generalizations based on the similarities found among problems. • Provide opportunities for students to create plans and procedures to solve problems. • Develop students' ability to construct relationships between their current understanding and more sophisticated ways of thinking.
MA.K12.MTR.6.1:	Assess the reasonableness of solutions. Mathematicians who assess the reasonableness of solutions: • Estimate to discover possible solutions. • Use benchmark quantities to determine if a solution makes sense. • Check calculations when solving problems. • Verify possible solutions by explaining the methods used. • Evaluate results based on the given context. **Clarifications:** Teachers who encourage students to assess the reasonableness of solutions: • Have students estimate or predict solutions prior to solving. • Prompt students to continually ask, "Does this solution make sense? How do you know?" • Reinforce that students check their work as they progress within and after a task. • Strengthen students' ability to verify solutions through justifications.
MA.K12.MTR.7.1:	Apply mathematics to real-world contexts. Mathematicians who apply mathematics to real-world contexts: • Connect mathematical concepts to everyday experiences. • Use models and methods to understand, represent and solve problems. • Perform investigations to gather data or determine if a method is appropriate. • Redesign models and methods to improve accuracy or efficiency. **Clarifications:** Teachers who encourage students to apply mathematics to real-world contexts: • Provide opportunities for students to create models, both concrete and abstract, and perform investigations. • Challenge students to question the accuracy of their models and methods. • Support students as they validate conclusions by comparing them to the given situation. • Indicate how various concepts can be applied to other disciplines.
ELA.K12.EE.1.1:	Cite evidence to explain and justify reasoning. **Clarifications:** K-1 Students include textual evidence in their oral communication with guidance and support from adults. The evidence can consist of details from the text without naming the text. During 1st grade, students learn how to incorporate the evidence in their writing. 2-3 Students include relevant textual evidence in their written and oral communication. Students should name the text when they refer to it. In 3rd grade, students should use a combination of direct and indirect citations. 4-5 Students continue with previous skills and reference comments made by speakers and peers. Students cite texts that they've directly quoted, paraphrased, or used for information. When writing, students will use the form of citation dictated by the instructor or the style guide referenced by the instructor. 6-8 Students continue with previous skills and use a style guide to create a proper citation. 9-12 Students continue with previous skills and should be aware of existing style guides and the ways in which they differ.
ELA.K12.EE.2.1:	Read and comprehend grade-level complex texts proficiently. **Clarifications:** See Text Complexity for grade-level complexity bands and a text complexity rubric.
ELA.K12.EE.3.1:	Make inferences to support comprehension. **Clarifications:** Students will make inferences before the words infer or inference are introduced. Kindergarten students will answer questions like "Why is the girl smiling?" or make predictions about what will happen based on the title page. Students will use the terms and apply them in 2nd grade and beyond.
ELA.K12.EE.4.1:	Use appropriate collaborative techniques and active listening skills when engaging in discussions in a variety of situations. **Clarifications:** In kindergarten, students learn to listen to one another respectfully. In grades 1-2, students build upon these skills by justifying what they are thinking. For example: "I think _____ because _____." The collaborative conversations are becoming academic conversations. In grades 3-12, students engage in academic conversations discussing claims and justifying their reasoning, refining and applying skills. Students build on ideas, propel the conversation, and support claims and counterclaims with evidence.
ELA.K12.EE.5.1:	Use the accepted rules governing a specific format to create quality work. **Clarifications:** Students will incorporate skills learned into work products to produce quality work. For students to incorporate these skills appropriately, they must receive instruction. A 3rd grade student creating a poster board display must have instruction in how to effectively present information to do quality work.
	Use appropriate voice and tone when speaking or writing.

ELA.K12.EE.6.1:	**Clarifications:** In kindergarten and 1st grade, students learn the difference between formal and informal language. For example, the way we talk to our friends differs from the way we speak to adults. In 2nd grade and beyond, students practice appropriate social and academic language to discuss texts.
ELD.K12.ELL.SI.1:	English language learners communicate for social and instructional purposes within the school setting.

General Course Information and Notes

VERSION DESCRIPTION

Students with previous vocal ensemble experience continue to build musicianship and performance skills through the study, rehearsal, and performance of high-quality ensemble literature in a variety of styles. Student musicians learn to self-assess and collaborate as they study relevant musical styles and time periods. Public performances may serve as a culmination of specific instructional goals. Students may be required to attend and/or participate in rehearsals and performances outside the school day to support, extend, and assess learning in the classroom.

GENERAL NOTES

Florida's Benchmarks for Excellent Student Thinking (B.E.S.T.) Standards
This course includes Florida's B.E.S.T. ELA Expectations (EE) and Mathematical Thinking and Reasoning Standards (MTRs) for students. Florida educators should intentionally embed these standards within the content and their instruction as applicable. For guidance on the implementation of the EEs and MTRs, please visit cpalms.org/Standards/BEST_Standards.aspx and select the appropriate B.E.S.T. Standards package.

English Language Development ELD Standards Special Notes Section:
Teachers are required to provide listening, speaking, reading and writing instruction that allows English language learners (ELL) to communicate for social and instructional purposes within the school setting. For the given level of English language proficiency and with visual, graphic, or interactive support, students will interact with grade level words, expressions, sentences and discourse to process or produce language necessary for academic success. The ELD standard should specify a relevant content area concept or topic of study chosen by curriculum developers and teachers which maximizes an ELL's need for communication and social skills. To access an ELL supporting document which delineates performance definitions and descriptors, please click on the following link: cpalms.org/uploads/docs/standards/eld/SI.pdf

GENERAL INFORMATION

Course Number: 1303110

Course Path: Section: Grades PreK to 12 Education Courses > **Grade Group:** Grades 6 to 8 Education Courses > **Subject:** Music Education > **SubSubject:** Choral Music >
Abbreviated Title: M/J VOCAL ENS 2
Course Length: Year (Y)
Course Level: 2

Course Status: Draft - Course Pending Approval

Grade Level(s): 6,7,8

Educator Certifications

Instrumental Music (Secondary Grades 7-12)
Instrumental Music (Elementary and Secondary Grades K-12)
Music (Elementary and Secondary Grades K-12)
Vocal Music (Elementary and Secondary Grades K-12)

M/J Vocal Ensemble 3 (#1303120) 2022 - And Beyond

Course Standards

Name	Description
MU.68.C.1.1:	Develop strategies for listening to unfamiliar musical works. **Clarifications:** e.g., listening maps, active listening, checklists
MU.68.C.1.2:	Compare, using correct music vocabulary, the aesthetic impact of a performance to one's own hypothesis of the composer's intent. **Clarifications:** e.g., quality recordings, peer group and individual performances, composer notes, instrumentation, expressive elements, title
MU.68.C.2.1:	Critique personal performance, experiment with a variety of solutions, and make appropriate adjustments with guidance from teachers and peers. **Clarifications:** e.g., intonation, balance, blend, phrasing, rhythm
MU.68.C.2.2:	Critique, using correct music vocabulary, changes in one's own or others' musical performance resulting from practice or rehearsal. **Clarifications:** e.g., blend, balance, ensemble playing, sonority, technique, tone quality
MU.68.C.3.1:	Apply specific criteria to evaluate why a musical work is an exemplar in a specific style or genre.
MU.68.F.2.2:	Describe how concert attendance can financially impact a community. **Clarifications:** e.g., increased revenues at restaurants, hotels, and travel agencies; venue maintenance, parking attendants
MU.68.F.3.1:	Describe how studying music can enhance citizenship, leadership, and global thinking. **Clarifications:** e.g., dedication to mastering a task, problem-solving, self-discipline, dependability, ability to organize, cultural awareness, mutual respect
MU.68.F.3.2:	Investigate and discuss laws that protect intellectual property, and practice safe, legal, and responsible acquisition and use of musical media.
MU.68.H.1.1:	Describe the functions of music from various cultures and time periods.
MU.68.H.1.2:	Identify the works of representative composers within a specific style or time period.
MU.68.H.1.4:	Classify authentic stylistic features in music originating from various cultures. **Clarifications:** e.g., rhythm, layered texture, key patterns, tonality, melodic line, quarter- or semi-tones, national folk melodies, improvisation, instrumentation, aural/oral traditions, drumming patterns
MU.68.H.2.1:	Describe the influence of historical events and periods on music composition and performance.
MU.68.H.2.3:	Classify the literature being studied by genre, style, and/or time period.
MU.68.H.3.1:	Identify connections among music and other content areas and/or contexts through interdisciplinary collaboration. **Clarifications:** e.g., school: other music classes, social studies, dance, physical education, science, health, math, world languages; community: cultural connections and traditions, ceremonial music, sales and advertising, communication
MU.68.H.3.2:	Discuss how the absence of music would affect other content areas and contexts. **Clarifications:** e.g., theatre and dance, movies, sporting events, video games, commercial advertising, social gatherings, civic and religious ceremonies, plays
MU.68.O.1.1:	Compare performances of a musical work to identify artistic choices made by performers. **Clarifications:** e.g., rhythm, melody, timbre, form, tonality, harmony, expressive elements; choral, orchestral, band, ensemble
MU.68.O.2.2:	Demonstrate knowledge of major and minor tonalities through performance and composition. **Clarifications:** e.g., scales; key signatures; relative major/minor; parallel major/minor
MU.68.O.3.1:	Describe how the combination of instrumentation and expressive elements in a musical work can convey a specific thought, idea, mood, and/or image. **Clarifications:** e.g., tempo markings, expression markings, articulation markings, phrasing, scales, modes, harmonic structure, timbre, rhythm, orchestration
MU.68.O.3.2:	Perform the expressive elements of a musical work indicated by the musical score and/or conductor, and transfer new knowledge and experiences to other musical works.
MU.68.S.1.3:	Arrange a short musical piece by manipulating melody, form, rhythm, and/or voicing.
MU.68.S.1.4:	Sing or play melodies by ear with support from the teacher and/or peers. **Clarifications:** e.g., melodies using traditional classroom instruments and/or voice
MU.68.S.2.1:	Perform music from memory to demonstrate knowledge of the musical structure. **Clarifications:** e.g., basic themes, patterns, tonality, melody, harmony
MU.68.S.2.2:	Transfer performance techniques from familiar to unfamiliar pieces.

MU.68.S.3.1:	Sing and/or play age-appropriate repertoire expressively. **Clarifications:** e.g., technique, phrasing, dynamics, tone quality, blend, balance, intonation, kinesthetic support/response
MU.68.S.3.2:	Demonstrate proper vocal or instrumental technique. **Clarifications:** e.g., posture, breathing, fingering, embouchure, bow technique, tuning, strumming
MU.68.S.3.3:	Sight-read standard exercises and simple repertoire. **Clarifications:** e.g., note and rest values, key signatures, time signatures, expressive markings, special harmonic and/or notation symbols
MU.68.S.3.4:	Compare written notation to aural examples and analyze for accuracy of rhythm and pitch. **Clarifications:** e.g., error detection, interval reinforcement
MU.68.S.3.6:	Develop and demonstrate efficient rehearsal strategies to apply skills and techniques. **Clarifications:** e.g., independently, collaboratively
MA.K12.MTR.1.1:	Mathematicians who participate in effortful learning both individually and with others: • Analyze the problem in a way that makes sense given the task. • Ask questions that will help with solving the task. • Build perseverance by modifying methods as needed while solving a challenging task. • Stay engaged and maintain a positive mindset when working to solve tasks. • Help and support each other when attempting a new method or approach. **Clarifications:** Teachers who encourage students to participate actively in effortful learning both individually and with others: • Cultivate a community of growth mindset learners. • Foster perseverance in students by choosing tasks that are challenging. • Develop students' ability to analyze and problem solve. • Recognize students' effort when solving challenging problems.
MA.K12.MTR.2.1:	Demonstrate understanding by representing problems in multiple ways. Mathematicians who demonstrate understanding by representing problems in multiple ways: • Build understanding through modeling and using manipulatives. • Represent solutions to problems in multiple ways using objects, drawings, tables, graphs and equations. • Progress from modeling problems with objects and drawings to using algorithms and equations. • Express connections between concepts and representations. • Choose a representation based on the given context or purpose. **Clarifications:** Teachers who encourage students to demonstrate understanding by representing problems in multiple ways: • Help students make connections between concepts and representations. • Provide opportunities for students to use manipulatives when investigating concepts. • Guide students from concrete to pictorial to abstract representations as understanding progresses. • Show students that various representations can have different purposes and can be useful in different situations.
MA.K12.MTR.3.1:	Complete tasks with mathematical fluency. Mathematicians who complete tasks with mathematical fluency: • Select efficient and appropriate methods for solving problems within the given context. • Maintain flexibility and accuracy while performing procedures and mental calculations. • Complete tasks accurately and with confidence. • Adapt procedures to apply them to a new context. • Use feedback to improve efficiency when performing calculations. **Clarifications:** Teachers who encourage students to complete tasks with mathematical fluency: • Provide students with the flexibility to solve problems by selecting a procedure that allows them to solve efficiently and accurately. • Offer multiple opportunities for students to practice efficient and generalizable methods. • Provide opportunities for students to reflect on the method they used and determine if a more efficient method could have been used.
MA.K12.MTR.4.1:	Engage in discussions that reflect on the mathematical thinking of self and others. Mathematicians who engage in discussions that reflect on the mathematical thinking of self and others: • Communicate mathematical ideas, vocabulary and methods effectively. • Analyze the mathematical thinking of others. • Compare the efficiency of a method to those expressed by others. • Recognize errors and suggest how to correctly solve the task. • Justify results by explaining methods and processes. • Construct possible arguments based on evidence. **Clarifications:** Teachers who encourage students to engage in discussions that reflect on the mathematical thinking of self and others: • Establish a culture in which students ask questions of the teacher and their peers, and error is an opportunity for learning. • Create opportunities for students to discuss their thinking with peers. • Select, sequence and present student work to advance and deepen understanding of correct and increasingly efficient methods.

	• Develop students' ability to justify methods and compare their responses to the responses of their peers.
MA.K12.MTR.5.1:	Use patterns and structure to help understand and connect mathematical concepts. Mathematicians who use patterns and structure to help understand and connect mathematical concepts: • Focus on relevant details within a problem. • Create plans and procedures to logically order events, steps or ideas to solve problems. • Decompose a complex problem into manageable parts. • Relate previously learned concepts to new concepts. • Look for similarities among problems. • Connect solutions of problems to more complicated large-scale situations. **Clarifications:** Teachers who encourage students to use patterns and structure to help understand and connect mathematical concepts: • Help students recognize the patterns in the world around them and connect these patterns to mathematical concepts. • Support students to develop generalizations based on the similarities found among problems. • Provide opportunities for students to create plans and procedures to solve problems. • Develop students' ability to construct relationships between their current understanding and more sophisticated ways of thinking.
MA.K12.MTR.6.1:	Assess the reasonableness of solutions. Mathematicians who assess the reasonableness of solutions: • Estimate to discover possible solutions. • Use benchmark quantities to determine if a solution makes sense. • Check calculations when solving problems. • Verify possible solutions by explaining the methods used. • Evaluate results based on the given context. **Clarifications:** Teachers who encourage students to assess the reasonableness of solutions: • Have students estimate or predict solutions prior to solving. • Prompt students to continually ask, "Does this solution make sense? How do you know?" • Reinforce that students check their work as they progress within and after a task. • Strengthen students' ability to verify solutions through justifications.
MA.K12.MTR.7.1:	Apply mathematics to real-world contexts. Mathematicians who apply mathematics to real-world contexts: • Connect mathematical concepts to everyday experiences. • Use models and methods to understand, represent and solve problems. • Perform investigations to gather data or determine if a method is appropriate. • Redesign models and methods to improve accuracy or efficiency. **Clarifications:** Teachers who encourage students to apply mathematics to real-world contexts: • Provide opportunities for students to create models, both concrete and abstract, and perform investigations. • Challenge students to question the accuracy of their models and methods. • Support students as they validate conclusions by comparing them to the given situation. • Indicate how various concepts can be applied to other disciplines.
ELA.K12.EE.1.1:	Cite evidence to explain and justify reasoning. **Clarifications:** K-1 Students include textual evidence in their oral communication with guidance and support from adults. The evidence can consist of details from the text without naming the text. During 1st grade, students learn how to incorporate the evidence in their writing. 2-3 Students include relevant textual evidence in their written and oral communication. Students should name the text when they refer to it. In 3rd grade, students should use a combination of direct and indirect citations. 4-5 Students continue with previous skills and reference comments made by speakers and peers. Students cite texts that they've directly quoted, paraphrased, or used for information. When writing, students will use the form of citation dictated by the instructor or the style guide referenced by the instructor. 6-8 Students continue with previous skills and use a style guide to create a proper citation. 9-12 Students continue with previous skills and should be aware of existing style guides and the ways in which they differ.
ELA.K12.EE.2.1:	Read and comprehend grade-level complex texts proficiently. **Clarifications:** See Text Complexity for grade-level complexity bands and a text complexity rubric.
ELA.K12.EE.3.1:	Make inferences to support comprehension. **Clarifications:** Students will make inferences before the words infer or inference are introduced. Kindergarten students will answer questions like "Why is the girl smiling?" or make predictions about what will happen based on the title page. Students will use the terms and apply them in 2nd grade and beyond.
ELA.K12.EE.4.1:	Use appropriate collaborative techniques and active listening skills when engaging in discussions in a variety of situations. **Clarifications:** In kindergarten, students learn to listen to one another respectfully. In grades 1-2, students build upon these skills by justifying what they are thinking. For example: "I think _____ because _____." The collaborative conversations are becoming academic conversations. In grades 3-12, students engage in academic conversations discussing claims and justifying their reasoning, refining and applying skills. Students

	build on ideas, propel the conversation, and support claims and counterclaims with evidence.
ELA.K12.EE.5.1:	Use the accepted rules governing a specific format to create quality work. **Clarifications:** Students will incorporate skills learned into work products to produce quality work. For students to incorporate these skills appropriately, they must receive instruction. A 3rd grade student creating a poster board display must have instruction in how to effectively present information to do quality work.
ELA.K12.EE.6.1:	Use appropriate voice and tone when speaking or writing. **Clarifications:** In kindergarten and 1st grade, students learn the difference between formal and informal language. For example, the way we talk to our friends differs from the way we speak to adults. In 2nd grade and beyond, students practice appropriate social and academic language to discuss texts.
ELD.K12.ELL.SI.1:	English language learners communicate for social and instructional purposes within the school setting.

General Course Information and Notes

VERSION DESCRIPTION

Students continue to build musicianship and performance skills through the study, rehearsal, and performance of increasingly challenging, high-quality vocal ensemble literature. Student musicians strengthen their techniques, ensemble skills, music literacy, and analytical skills as they study relevant history, cultures, and music genres. Public performances may serve as a culmination of specific instructional goals. Students may be required to attend and/or participate in rehearsals and performances outside the school day to support, extend, and assess learning in the classroom.

GENERAL NOTES

Florida's Benchmarks for Excellent Student Thinking (B.E.S.T.) Standards
This course includes Florida's B.E.S.T. ELA Expectations (EE) and Mathematical Thinking and Reasoning Standards (MTRs) for students. Florida educators should intentionally embed these standards within the content and their instruction as applicable. For guidance on the implementation of the EEs and MTRs, please visit cpalms.org/Standards/BEST_Standards.aspx and select the appropriate B.E.S.T. Standards package.

English Language Development ELD Standards Special Notes Section:
Teachers are required to provide listening, speaking, reading and writing instruction that allows English language learners (ELL) to communicate for social and instructional purposes within the school setting. For the given level of English language proficiency and with visual, graphic, or interactive support, students will interact with grade level words, expressions, sentences and discourse to process or produce language necessary for academic success. The ELD standard should specify a relevant content area concept or topic of study chosen by curriculum developers and teachers which maximizes an ELL's need for communication and social skills. To access an ELL supporting document which delineates performance definitions and descriptors, please click on the following link: cpalms.org/uploads/docs/standards/eld/SI.pdf

GENERAL INFORMATION

Course Number: 1303120

Course Path: Section: Grades PreK to 12 Education Courses > **Grade Group:** Grades 6 to 8 Education Courses > **Subject:** Music Education > **SubSubject:** Choral Music >

Abbreviated Title: M/J VOCAL ENS 3

Course Length: Year (Y)

Course Level: 2

Course Status: Draft - Course Pending Approval

Grade Level(s): 6,7,8

Educator Certifications

Instrumental Music (Secondary Grades 7-12)
Instrumental Music (Elementary and Secondary Grades K-12)
Music (Elementary and Secondary Grades K-12)
Vocal Music (Elementary and Secondary Grades K-12)

M/J Music Technology (#1303150) 2022 - And Beyond

Course Standards

Name	Description
MU.68.C.2.1:	Critique personal performance, experiment with a variety of solutions, and make appropriate adjustments with guidance from teachers and peers. **Clarifications:** e.g., intonation, balance, blend, phrasing, rhythm
MU.68.C.2.3:	Critique personal composition and/or improvisation, using simple criteria, to generate improvements with guidance from teachers and/or peers.
MU.68.F.1.1:	Create a composition and/or performance, using visual, kinesthetic, digital, and/or acoustic means to manipulate musical elements.
MU.68.F.1.2:	Create an original composition that reflects various performances that use "traditional" and contemporary technologies. **Clarifications:** e.g., MIDI, Internet video resources, personal digital assistants, MP3 players, cell phones, digital recording, music software
MU.68.F.2.1:	Describe several routes a composition or performance could travel from creator to consumer. **Clarifications:** e.g., MIDI and other technology, production, sharing on the Internet, home studios, professional recording studios, sales
MU.68.F.3.2:	Investigate and discuss laws that protect intellectual property, and practice safe, legal, and responsible acquisition and use of musical media.
MU.68.F.3.3:	Identify the tasks involved in the compositional process and discuss how the process might be applied in the work place. **Clarifications:** e.g., idea, development, editing, selling, revising, testing, presenting
MU.68.H.2.2:	Analyze how technology has changed the way music is created, performed, acquired, and experienced. **Clarifications:** e.g., from harpsichord to piano; from phonograph to CD
MU.68.H.3.1:	Identify connections among music and other content areas and/or contexts through interdisciplinary collaboration. **Clarifications:** e.g., school: other music classes, social studies, dance, physical education, science, health, math, world languages; community: cultural connections and traditions, ceremonial music, sales and advertising, communication
MU.68.O.2.1:	Create a composition, manipulating musical elements and exploring the effects of those manipulations. **Clarifications:** e.g., using electronic or paper-and-pencil means to experiment with timbre, melody, rhythm, harmony, form, tonality
MU.68.O.3.1:	Describe how the combination of instrumentation and expressive elements in a musical work can convey a specific thought, idea, mood, and/or image. **Clarifications:** e.g., tempo markings, expression markings, articulation markings, phrasing, scales, modes, harmonic structure, timbre, rhythm, orchestration
MU.68.S.1.2:	Compose a short musical piece. **Clarifications:** e.g., using traditional, non-traditional, digital, or classroom instruments and/or voice
MU.68.S.1.3:	Arrange a short musical piece by manipulating melody, form, rhythm, and/or voicing.
MU.68.S.1.8:	Demonstrate specified mixing and editing techniques using selected software and hardware.
MA.K12.MTR.1.1:	Mathematicians who participate in effortful learning both individually and with others: • Analyze the problem in a way that makes sense given the task. • Ask questions that will help with solving the task. • Build perseverance by modifying methods as needed while solving a challenging task. • Stay engaged and maintain a positive mindset when working to solve tasks. • Help and support each other when attempting a new method or approach. **Clarifications:** Teachers who encourage students to participate actively in effortful learning both individually and with others: • Cultivate a community of growth mindset learners. • Foster perseverance in students by choosing tasks that are challenging. • Develop students' ability to analyze and problem solve. • Recognize students' effort when solving challenging problems.
MA.K12.MTR.2.1:	Demonstrate understanding by representing problems in multiple ways. Mathematicians who demonstrate understanding by representing problems in multiple ways: • Build understanding through modeling and using manipulatives. • Represent solutions to problems in multiple ways using objects, drawings, tables, graphs and equations. • Progress from modeling problems with objects and drawings to using algorithms and equations. • Express connections between concepts and representations. • Choose a representation based on the given context or purpose. **Clarifications:** Teachers who encourage students to demonstrate understanding by representing problems in multiple ways: • Help students make connections between concepts and representations.

- Provide opportunities for students to use manipulatives when investigating concepts.
- Guide students from concrete to pictorial to abstract representations as understanding progresses.
- Show students that various representations can have different purposes and can be useful in different situations.

MA.K12.MTR.3.1:

Complete tasks with mathematical fluency.
Mathematicians who complete tasks with mathematical fluency:

- Select efficient and appropriate methods for solving problems within the given context.
- Maintain flexibility and accuracy while performing procedures and mental calculations.
- Complete tasks accurately and with confidence.
- Adapt procedures to apply them to a new context.
- Use feedback to improve efficiency when performing calculations.

Clarifications:
Teachers who encourage students to complete tasks with mathematical fluency:

- Provide students with the flexibility to solve problems by selecting a procedure that allows them to solve efficiently and accurately.
- Offer multiple opportunities for students to practice efficient and generalizable methods.
- Provide opportunities for students to reflect on the method they used and determine if a more efficient method could have been used.

MA.K12.MTR.4.1:

Engage in discussions that reflect on the mathematical thinking of self and others.
Mathematicians who engage in discussions that reflect on the mathematical thinking of self and others:

- Communicate mathematical ideas, vocabulary and methods effectively.
- Analyze the mathematical thinking of others.
- Compare the efficiency of a method to those expressed by others.
- Recognize errors and suggest how to correctly solve the task.
- Justify results by explaining methods and processes.
- Construct possible arguments based on evidence.

Clarifications:
Teachers who encourage students to engage in discussions that reflect on the mathematical thinking of self and others:

- Establish a culture in which students ask questions of the teacher and their peers, and error is an opportunity for learning.
- Create opportunities for students to discuss their thinking with peers.
- Select, sequence and present student work to advance and deepen understanding of correct and increasingly efficient methods.
- Develop students' ability to justify methods and compare their responses to the responses of their peers.

MA.K12.MTR.5.1:

Use patterns and structure to help understand and connect mathematical concepts.
Mathematicians who use patterns and structure to help understand and connect mathematical concepts:

- Focus on relevant details within a problem.
- Create plans and procedures to logically order events, steps or ideas to solve problems.
- Decompose a complex problem into manageable parts.
- Relate previously learned concepts to new concepts.
- Look for similarities among problems.
- Connect solutions of problems to more complicated large-scale situations.

Clarifications:
Teachers who encourage students to use patterns and structure to help understand and connect mathematical concepts:

- Help students recognize the patterns in the world around them and connect these patterns to mathematical concepts.
- Support students to develop generalizations based on the similarities found among problems.
- Provide opportunities for students to create plans and procedures to solve problems.
- Develop students' ability to construct relationships between their current understanding and more sophisticated ways of thinking.

MA.K12.MTR.6.1:

Assess the reasonableness of solutions.
Mathematicians who assess the reasonableness of solutions:

- Estimate to discover possible solutions.
- Use benchmark quantities to determine if a solution makes sense.
- Check calculations when solving problems.
- Verify possible solutions by explaining the methods used.
- Evaluate results based on the given context.

Clarifications:
Teachers who encourage students to assess the reasonableness of solutions:

- Have students estimate or predict solutions prior to solving.
- Prompt students to continually ask, "Does this solution make sense? How do you know?"
- Reinforce that students check their work as they progress within and after a task.
- Strengthen students' ability to verify solutions through justifications.

MA.K12.MTR.7.1:

Apply mathematics to real-world contexts.
Mathematicians who apply mathematics to real-world contexts:

- Connect mathematical concepts to everyday experiences.
- Use models and methods to understand, represent and solve problems.
- Perform investigations to gather data or determine if a method is appropriate. • Redesign models and methods to improve accuracy or efficiency.

Clarifications:
Teachers who encourage students to apply mathematics to real-world contexts:

- Provide opportunities for students to create models, both concrete and abstract, and perform investigations.
- Challenge students to question the accuracy of their models and methods.

	• Support students as they validate conclusions by comparing them to the given situation. • Indicate how various concepts can be applied to other disciplines.
ELA.K12.EE.1.1:	Cite evidence to explain and justify reasoning. **Clarifications:** K-1 Students include textual evidence in their oral communication with guidance and support from adults. The evidence can consist of details from the text without naming the text. During 1st grade, students learn how to incorporate the evidence in their writing. 2-3 Students include relevant textual evidence in their written and oral communication. Students should name the text when they refer to it. In 3rd grade, students should use a combination of direct and indirect citations. 4-5 Students continue with previous skills and reference comments made by speakers and peers. Students cite texts that they've directly quoted, paraphrased, or used for information. When writing, students will use the form of citation dictated by the instructor or the style guide referenced by the instructor. 6-8 Students continue with previous skills and use a style guide to create a proper citation. 9-12 Students continue with previous skills and should be aware of existing style guides and the ways in which they differ.
ELA.K12.EE.2.1:	Read and comprehend grade-level complex texts proficiently. **Clarifications:** See Text Complexity for grade-level complexity bands and a text complexity rubric.
ELA.K12.EE.3.1:	Make inferences to support comprehension. **Clarifications:** Students will make inferences before the words infer or inference are introduced. Kindergarten students will answer questions like "Why is the girl smiling?" or make predictions about what will happen based on the title page. Students will use the terms and apply them in 2nd grade and beyond.
ELA.K12.EE.4.1:	Use appropriate collaborative techniques and active listening skills when engaging in discussions in a variety of situations. **Clarifications:** In kindergarten, students learn to listen to one another respectfully. In grades 1-2, students build upon these skills by justifying what they are thinking. For example: "I think _____ because _____." The collaborative conversations are becoming academic conversations. In grades 3-12, students engage in academic conversations discussing claims and justifying their reasoning, refining and applying skills. Students build on ideas, propel the conversation, and support claims and counterclaims with evidence.
ELA.K12.EE.5.1:	Use the accepted rules governing a specific format to create quality work. **Clarifications:** Students will incorporate skills learned into work products to produce quality work. For students to incorporate these skills appropriately, they must receive instruction. A 3rd grade student creating a poster board display must have instruction in how to effectively present information to do quality work.
ELA.K12.EE.6.1:	Use appropriate voice and tone when speaking or writing. **Clarifications:** In kindergarten and 1st grade, students learn the difference between formal and informal language. For example, the way we talk to our friends differs from the way we speak to adults. In 2nd grade and beyond, students practice appropriate social and academic language to discuss texts.
DA.68.S.2.1:	Sustain focused attention, respect, and discipline during classes and performances.
ELD.K12.ELL.SI.1:	English language learners communicate for social and instructional purposes within the school setting.

General Course Information and Notes

VERSION DESCRIPTION

Students investigate the fundamental applications, tools, history, and aesthetics of music technology. Student musicians explore traditional, current, and emerging technologies, including personal devices; and use them to explore, capture, create, arrange, manipulate, reproduce, and distribute music. Public performances may serve as a resource for specific instructional goals. Students may be expected to attend one or more performances outside the school day to support, extend, and assess learning in the classroom.

GENERAL NOTES

Florida's Benchmarks for Excellent Student Thinking (B.E.S.T.) Standards
This course includes Florida's B.E.S.T. ELA Expectations (EE) and Mathematical Thinking and Reasoning Standards (MTRs) for students. Florida educators should intentionally embed these standards within the content and their instruction as applicable. For guidance on the implementation of the EEs and MTRs, please visit cpalms.org/Standards/BEST_Standards.aspx and select the appropriate B.E.S.T. Standards package.

English Language Development ELD Standards Special Notes Section:
Teachers are required to provide listening, speaking, reading and writing instruction that allows English language learners (ELL) to communicate for social and instructional purposes within the school setting. For the given level of English language proficiency and with visual, graphic, or interactive support, students will interact with grade level words, expressions, sentences and discourse to process or produce language necessary for academic success. The ELD standard should specify a relevant content area concept or topic of study chosen by curriculum developers and teachers which maximizes an ELL's need for communication and social skills. To access an ELL supporting document which delineates performance definitions and descriptors, please click on the following link: cpalms.org/uploads/docs/standards/eld/SI.pdf

GENERAL INFORMATION

Course Number: 1303150

Course Path: Section: Grades PreK to 12 Education Courses > **Grade Group:** Grades 6 to 8 Education Courses > **Subject:** Music Education > **SubSubject:** Music Technology >

Abbreviated Title: M/J MUSIC TECH

Course Length: Year (Y)

Course Level: 2

Course Status: Draft - Course Pending Approval

Grade Level(s): 6,7,8

Educator Certifications

Instrumental Music (Secondary Grades 7-12)
Instrumental Music (Elementary and Secondary Grades K-12)
Music (Elementary and Secondary Grades K-12)
Vocal Music (Elementary and Secondary Grades K-12)

M/J Music Ensemble 1 (#1303200) 2022 - And Beyond

Course Standards

Name	Description
MU.68.C.1.1:	Develop strategies for listening to unfamiliar musical works. **Clarifications:** e.g., listening maps, active listening, checklists
MU.68.C.1.2:	Compare, using correct music vocabulary, the aesthetic impact of a performance to one's own hypothesis of the composer's intent. **Clarifications:** e.g., quality recordings, peer group and individual performances, composer notes, instrumentation, expressive elements, title
MU.68.C.2.1:	Critique personal performance, experiment with a variety of solutions, and make appropriate adjustments with guidance from teachers and peers. **Clarifications:** e.g., intonation, balance, blend, phrasing, rhythm
MU.68.C.2.2:	Critique, using correct music vocabulary, changes in one's own or others' musical performance resulting from practice or rehearsal. **Clarifications:** e.g., blend, balance, ensemble playing, sonority, technique, tone quality
MU.68.F.3.2:	Investigate and discuss laws that protect intellectual property, and practice safe, legal, and responsible acquisition and use of musical media.
MU.68.H.1.4:	Classify authentic stylistic features in music originating from various cultures. **Clarifications:** e.g., rhythm, layered texture, key patterns, tonality, melodic line, quarter- or semi-tones, national folk melodies, improvisation, instrumentation, aural/oral traditions, drumming patterns
MU.68.H.2.3:	Classify the literature being studied by genre, style, and/or time period.
MU.68.H.3.1:	Identify connections among music and other content areas and/or contexts through interdisciplinary collaboration. **Clarifications:** e.g., school: other music classes, social studies, dance, physical education, science, health, math, world languages; community: cultural connections and traditions, ceremonial music, sales and advertising, communication
MU.68.O.3.1:	Describe how the combination of instrumentation and expressive elements in a musical work can convey a specific thought, idea, mood, and/or image. **Clarifications:** e.g., tempo markings, expression markings, articulation markings, phrasing, scales, modes, harmonic structure, timbre, rhythm, orchestration
MU.68.O.3.2:	Perform the expressive elements of a musical work indicated by the musical score and/or conductor, and transfer new knowledge and experiences to other musical works.
MU.68.S.1.3:	Arrange a short musical piece by manipulating melody, form, rhythm, and/or voicing.
MU.68.S.1.4:	Sing or play melodies by ear with support from the teacher and/or peers. **Clarifications:** e.g., melodies using traditional classroom instruments and/or voice
MU.68.S.2.2:	Transfer performance techniques from familiar to unfamiliar pieces.
MU.68.S.3.1:	Sing and/or play age-appropriate repertoire expressively. **Clarifications:** e.g., technique, phrasing, dynamics, tone quality, blend, balance, intonation, kinesthetic support/response
MU.68.S.3.2:	Demonstrate proper vocal or instrumental technique. **Clarifications:** e.g., posture, breathing, fingering, embouchure, bow technique, tuning, strumming
MU.68.S.3.3:	Sight-read standard exercises and simple repertoire. **Clarifications:** e.g., note and rest values, key signatures, time signatures, expressive markings, special harmonic and/or notation symbols
MU.68.S.3.4:	Compare written notation to aural examples and analyze for accuracy of rhythm and pitch. **Clarifications:** e.g., error detection, interval reinforcement
MU.68.S.3.6:	Develop and demonstrate efficient rehearsal strategies to apply skills and techniques. **Clarifications:** e.g., independently, collaboratively
MA.K12.MTR.1.1:	Mathematicians who participate in effortful learning both individually and with others: • Analyze the problem in a way that makes sense given the task. • Ask questions that will help with solving the task. • Build perseverance by modifying methods as needed while solving a challenging task. • Stay engaged and maintain a positive mindset when working to solve tasks. • Help and support each other when attempting a new method or approach. **Clarifications:** Teachers who encourage students to participate actively in effortful learning both individually and with others:

- Cultivate a community of growth mindset learners.
- Foster perseverance in students by choosing tasks that are challenging.
- Develop students' ability to analyze and problem solve.
- Recognize students' effort when solving challenging problems.

MA.K12.MTR.2.1:

Demonstrate understanding by representing problems in multiple ways.
Mathematicians who demonstrate understanding by representing problems in multiple ways:

- Build understanding through modeling and using manipulatives.
- Represent solutions to problems in multiple ways using objects, drawings, tables, graphs and equations.
- Progress from modeling problems with objects and drawings to using algorithms and equations.
- Express connections between concepts and representations.
- Choose a representation based on the given context or purpose.

Clarifications:
Teachers who encourage students to demonstrate understanding by representing problems in multiple ways:

- Help students make connections between concepts and representations.
- Provide opportunities for students to use manipulatives when investigating concepts.
- Guide students from concrete to pictorial to abstract representations as understanding progresses.
- Show students that various representations can have different purposes and can be useful in different situations.

MA.K12.MTR.3.1:

Complete tasks with mathematical fluency.
Mathematicians who complete tasks with mathematical fluency:

- Select efficient and appropriate methods for solving problems within the given context.
- Maintain flexibility and accuracy while performing procedures and mental calculations.
- Complete tasks accurately and with confidence.
- Adapt procedures to apply them to a new context.
- Use feedback to improve efficiency when performing calculations.

Clarifications:
Teachers who encourage students to complete tasks with mathematical fluency:

- Provide students with the flexibility to solve problems by selecting a procedure that allows them to solve efficiently and accurately.
- Offer multiple opportunities for students to practice efficient and generalizable methods.
- Provide opportunities for students to reflect on the method they used and determine if a more efficient method could have been used.

MA.K12.MTR.4.1:

Engage in discussions that reflect on the mathematical thinking of self and others.
Mathematicians who engage in discussions that reflect on the mathematical thinking of self and others:

- Communicate mathematical ideas, vocabulary and methods effectively.
- Analyze the mathematical thinking of others.
- Compare the efficiency of a method to those expressed by others.
- Recognize errors and suggest how to correctly solve the task.
- Justify results by explaining methods and processes.
- Construct possible arguments based on evidence.

Clarifications:
Teachers who encourage students to engage in discussions that reflect on the mathematical thinking of self and others:

- Establish a culture in which students ask questions of the teacher and their peers, and error is an opportunity for learning.
- Create opportunities for students to discuss their thinking with peers.
- Select, sequence and present student work to advance and deepen understanding of correct and increasingly efficient methods.
- Develop students' ability to justify methods and compare their responses to the responses of their peers.

MA.K12.MTR.5.1:

Use patterns and structure to help understand and connect mathematical concepts.
Mathematicians who use patterns and structure to help understand and connect mathematical concepts:

- Focus on relevant details within a problem.
- Create plans and procedures to logically order events, steps or ideas to solve problems.
- Decompose a complex problem into manageable parts.
- Relate previously learned concepts to new concepts.
- Look for similarities among problems.
- Connect solutions of problems to more complicated large-scale situations.

Clarifications:
Teachers who encourage students to use patterns and structure to help understand and connect mathematical concepts:

- Help students recognize the patterns in the world around them and connect these patterns to mathematical concepts.
- Support students to develop generalizations based on the similarities found among problems.
- Provide opportunities for students to create plans and procedures to solve problems.
- Develop students' ability to construct relationships between their current understanding and more sophisticated ways of thinking.

MA.K12.MTR.6.1:

Assess the reasonableness of solutions.
Mathematicians who assess the reasonableness of solutions:

- Estimate to discover possible solutions.
- Use benchmark quantities to determine if a solution makes sense.
- Check calculations when solving problems.
- Verify possible solutions by explaining the methods used.
- Evaluate results based on the given context.

Clarifications:

	Teachers who encourage students to assess the reasonableness of solutions: • Have students estimate or predict solutions prior to solving. • Prompt students to continually ask, "Does this solution make sense? How do you know?" • Reinforce that students check their work as they progress within and after a task. • Strengthen students' ability to verify solutions through justifications.
MA.K12.MTR.7.1:	Apply mathematics to real-world contexts. Mathematicians who apply mathematics to real-world contexts: • Connect mathematical concepts to everyday experiences. • Use models and methods to understand, represent and solve problems. • Perform investigations to gather data or determine if a method is appropriate. • Redesign models and methods to improve accuracy or efficiency. **Clarifications:** Teachers who encourage students to apply mathematics to real-world contexts: • Provide opportunities for students to create models, both concrete and abstract, and perform investigations. • Challenge students to question the accuracy of their models and methods. • Support students as they validate conclusions by comparing them to the given situation. • Indicate how various concepts can be applied to other disciplines.
ELA.K12.EE.1.1:	Cite evidence to explain and justify reasoning. **Clarifications:** K-1 Students include textual evidence in their oral communication with guidance and support from adults. The evidence can consist of details from the text without naming the text. During 1st grade, students learn how to incorporate the evidence in their writing. 2-3 Students include relevant textual evidence in their written and oral communication. Students should name the text when they refer to it. In 3rd grade, students should use a combination of direct and indirect citations. 4-5 Students continue with previous skills and reference comments made by speakers and peers. Students cite texts that they've directly quoted, paraphrased, or used for information. When writing, students will use the form of citation dictated by the instructor or the style guide referenced by the instructor. 6-8 Students continue with previous skills and use a style guide to create a proper citation. 9-12 Students continue with previous skills and should be aware of existing style guides and the ways in which they differ.
ELA.K12.EE.2.1:	Read and comprehend grade-level complex texts proficiently. **Clarifications:** See Text Complexity for grade-level complexity bands and a text complexity rubric.
ELA.K12.EE.3.1:	Make inferences to support comprehension. **Clarifications:** Students will make inferences before the words infer or inference are introduced. Kindergarten students will answer questions like "Why is the girl smiling?" or make predictions about what will happen based on the title page. Students will use the terms and apply them in 2nd grade and beyond.
ELA.K12.EE.4.1:	Use appropriate collaborative techniques and active listening skills when engaging in discussions in a variety of situations. **Clarifications:** In kindergarten, students learn to listen to one another respectfully. In grades 1-2, students build upon these skills by justifying what they are thinking. For example: "I think _____ because _____." The collaborative conversations are becoming academic conversations. In grades 3-12, students engage in academic conversations discussing claims and justifying their reasoning, refining and applying skills. Students build on ideas, propel the conversation, and support claims and counterclaims with evidence.
ELA.K12.EE.5.1:	Use the accepted rules governing a specific format to create quality work. **Clarifications:** Students will incorporate skills learned into work products to produce quality work. For students to incorporate these skills appropriately, they must receive instruction. A 3rd grade student creating a poster board display must have instruction in how to effectively present information to do quality work.
ELA.K12.EE.6.1:	Use appropriate voice and tone when speaking or writing. **Clarifications:** In kindergarten and 1st grade, students learn the difference between formal and informal language. For example, the way we talk to our friends differs from the way we speak to adults. In 2nd grade and beyond, students practice appropriate social and academic language to discuss texts.
ELD.K12.ELL.SI.1:	English language learners communicate for social and instructional purposes within the school setting.

General Course Information and Notes

VERSION DESCRIPTION

Students with little or no small vocal or instrumental ensemble experience develop musicianship and performance skills as they study, rehearse, and perform high-quality ensemble literature in diverse styles. Public performances may serve as a culmination of specific instructional goals. Students may be required to attend and/or participate in rehearsals and performances outside the school day to support, extend, and assess learning in the classroom. This course, if used for an instrumental ensemble, may also require students to obtain a musical instrument (e.g., borrow, rent, purchase) from an outside source.

GENERAL NOTES

Florida's Benchmarks for Excellent Student Thinking (B.E.S.T.) Standards
This course includes Florida's B.E.S.T. ELA Expectations (EE) and Mathematical Thinking and Reasoning Standards (MTRs) for students. Florida educators should intentionally embed these standards within the content and their instruction as applicable. For guidance on the implementation of the EEs and MTRs, please visit cpalms.org/Standards/BEST_Standards.aspx and select the appropriate B.E.S.T. Standards package.

English Language Development ELD Standards Special Notes Section:
Teachers are required to provide listening, speaking, reading and writing instruction that allows English language learners (ELL) to communicate for social and instructional purposes within the school setting. For the given level of English language proficiency and with visual, graphic, or interactive support, students will interact with grade level words, expressions, sentences and discourse to process or produce language necessary for academic success. The ELD standard should specify a relevant content area concept or topic of study chosen by curriculum developers and teachers which maximizes an ELL's need for communication and social skills. To access an ELL supporting document which delineates performance definitions and descriptors, please click on the following link: cpalms.org/uploads/docs/standards/eld/SI.pdf

GENERAL INFORMATION

Course Number: 1303200

Course Path: Section: Grades PreK to 12 Education Courses > **Grade Group:** Grades 6 to 8 Education Courses > **Subject:** Music Education > **SubSubject:** General Music >
Abbreviated Title: M/J MUSIC ENS 1
Course Length: Year (Y)
Course Level: 2

Course Status: Draft - Course Pending Approval

Grade Level(s): 6,7,8

Educator Certifications

Music (Elementary and Secondary Grades K-12)
Instrumental Music (Secondary Grades 7-12)
Instrumental Music (Elementary and Secondary Grades K-12)
Vocal Music (Elementary and Secondary Grades K-12)

M/J Music Ensemble 2 (#1303210) 2022 - And Beyond

Course Standards

Name	Description
MU.68.C.1.1:	Develop strategies for listening to unfamiliar musical works. **Clarifications:** e.g., listening maps, active listening, checklists
MU.68.C.1.2:	Compare, using correct music vocabulary, the aesthetic impact of a performance to one's own hypothesis of the composer's intent. **Clarifications:** e.g., quality recordings, peer group and individual performances, composer notes, instrumentation, expressive elements, title
MU.68.C.2.1:	Critique personal performance, experiment with a variety of solutions, and make appropriate adjustments with guidance from teachers and peers. **Clarifications:** e.g., intonation, balance, blend, phrasing, rhythm
MU.68.C.2.2:	Critique, using correct music vocabulary, changes in one's own or others' musical performance resulting from practice or rehearsal. **Clarifications:** e.g., blend, balance, ensemble playing, sonority, technique, tone quality
MU.68.F.2.1:	Describe several routes a composition or performance could travel from creator to consumer. **Clarifications:** e.g., MIDI and other technology, production, sharing on the Internet, home studios, professional recording studios, sales
MU.68.F.3.1:	Describe how studying music can enhance citizenship, leadership, and global thinking. **Clarifications:** e.g., dedication to mastering a task, problem-solving, self-discipline, dependability, ability to organize, cultural awareness, mutual respect
MU.68.F.3.2:	Investigate and discuss laws that protect intellectual property, and practice safe, legal, and responsible acquisition and use of musical media.
MU.68.H.1.4:	Classify authentic stylistic features in music originating from various cultures. **Clarifications:** e.g., rhythm, layered texture, key patterns, tonality, melodic line, quarter- or semi-tones, national folk melodies, improvisation, instrumentation, aural/oral traditions, drumming patterns
MU.68.H.2.3:	Classify the literature being studied by genre, style, and/or time period.
MU.68.H.3.1:	Identify connections among music and other content areas and/or contexts through interdisciplinary collaboration. **Clarifications:** e.g., school: other music classes, social studies, dance, physical education, science, health, math, world languages; community: cultural connections and traditions, ceremonial music, sales and advertising, communication
MU.68.H.3.2:	Discuss how the absence of music would affect other content areas and contexts. **Clarifications:** e.g., theatre and dance, movies, sporting events, video games, commercial advertising, social gatherings, civic and religious ceremonies, plays
MU.68.O.1.1:	Compare performances of a musical work to identify artistic choices made by performers. **Clarifications:** e.g., rhythm, melody, timbre, form, tonality, harmony, expressive elements; choral, orchestral, band, ensemble
MU.68.O.3.1:	Describe how the combination of instrumentation and expressive elements in a musical work can convey a specific thought, idea, mood, and/or image. **Clarifications:** e.g., tempo markings, expression markings, articulation markings, phrasing, scales, modes, harmonic structure, timbre, rhythm, orchestration
MU.68.O.3.2:	Perform the expressive elements of a musical work indicated by the musical score and/or conductor, and transfer new knowledge and experiences to other musical works.
MU.68.S.1.3:	Arrange a short musical piece by manipulating melody, form, rhythm, and/or voicing.
MU.68.S.1.4:	Sing or play melodies by ear with support from the teacher and/or peers. **Clarifications:** e.g., melodies using traditional classroom instruments and/or voice
MU.68.S.2.1:	Perform music from memory to demonstrate knowledge of the musical structure. **Clarifications:** e.g., basic themes, patterns, tonality, melody, harmony
MU.68.S.2.2:	Transfer performance techniques from familiar to unfamiliar pieces.
MU.68.S.3.1:	Sing and/or play age-appropriate repertoire expressively. **Clarifications:** e.g., technique, phrasing, dynamics, tone quality, blend, balance, intonation, kinesthetic support/response
MU.68.S.3.2:	Demonstrate proper vocal or instrumental technique. **Clarifications:** e.g., posture, breathing, fingering, embouchure, bow technique, tuning, strumming
	Sight-read standard exercises and simple repertoire.

MU.68.S.3.3:	**Clarifications:** e.g., note and rest values, key signatures, time signatures, expressive markings, special harmonic and/or notation symbols
MU.68.S.3.4:	Compare written notation to aural examples and analyze for accuracy of rhythm and pitch. **Clarifications:** e.g., error detection, interval reinforcement
MU.68.S.3.6:	Develop and demonstrate efficient rehearsal strategies to apply skills and techniques. **Clarifications:** e.g., independently, collaboratively
MA.K12.MTR.1.1:	Mathematicians who participate in effortful learning both individually and with others: • Analyze the problem in a way that makes sense given the task. • Ask questions that will help with solving the task. • Build perseverance by modifying methods as needed while solving a challenging task. • Stay engaged and maintain a positive mindset when working to solve tasks. • Help and support each other when attempting a new method or approach. **Clarifications:** Teachers who encourage students to participate actively in effortful learning both individually and with others: • Cultivate a community of growth mindset learners. • Foster perseverance in students by choosing tasks that are challenging. • Develop students' ability to analyze and problem solve. • Recognize students' effort when solving challenging problems.
MA.K12.MTR.2.1:	Demonstrate understanding by representing problems in multiple ways. Mathematicians who demonstrate understanding by representing problems in multiple ways: • Build understanding through modeling and using manipulatives. • Represent solutions to problems in multiple ways using objects, drawings, tables, graphs and equations. • Progress from modeling problems with objects and drawings to using algorithms and equations. • Express connections between concepts and representations. • Choose a representation based on the given context or purpose. **Clarifications:** Teachers who encourage students to demonstrate understanding by representing problems in multiple ways: • Help students make connections between concepts and representations. • Provide opportunities for students to use manipulatives when investigating concepts. • Guide students from concrete to pictorial to abstract representations as understanding progresses. • Show students that various representations can have different purposes and can be useful in different situations.
MA.K12.MTR.3.1:	Complete tasks with mathematical fluency. Mathematicians who complete tasks with mathematical fluency: • Select efficient and appropriate methods for solving problems within the given context. • Maintain flexibility and accuracy while performing procedures and mental calculations. • Complete tasks accurately and with confidence. • Adapt procedures to apply them to a new context. • Use feedback to improve efficiency when performing calculations. **Clarifications:** Teachers who encourage students to complete tasks with mathematical fluency: • Provide students with the flexibility to solve problems by selecting a procedure that allows them to solve efficiently and accurately. • Offer multiple opportunities for students to practice efficient and generalizable methods. • Provide opportunities for students to reflect on the method they used and determine if a more efficient method could have been used.
MA.K12.MTR.4.1:	Engage in discussions that reflect on the mathematical thinking of self and others. Mathematicians who engage in discussions that reflect on the mathematical thinking of self and others: • Communicate mathematical ideas, vocabulary and methods effectively. • Analyze the mathematical thinking of others. • Compare the efficiency of a method to those expressed by others. • Recognize errors and suggest how to correctly solve the task. • Justify results by explaining methods and processes. • Construct possible arguments based on evidence. **Clarifications:** Teachers who encourage students to engage in discussions that reflect on the mathematical thinking of self and others: • Establish a culture in which students ask questions of the teacher and their peers, and error is an opportunity for learning. • Create opportunities for students to discuss their thinking with peers. • Select, sequence and present student work to advance and deepen understanding of correct and increasingly efficient methods. • Develop students' ability to justify methods and compare their responses to the responses of their peers.
	Use patterns and structure to help understand and connect mathematical concepts. Mathematicians who use patterns and structure to help understand and connect mathematical concepts: • Focus on relevant details within a problem. • Create plans and procedures to logically order events, steps or ideas to solve problems. • Decompose a complex problem into manageable parts. • Relate previously learned concepts to new concepts.

MA.K12.MTR.5.1:	• Look for similarities among problems. • Connect solutions of problems to more complicated large-scale situations. **Clarifications:** Teachers who encourage students to use patterns and structure to help understand and connect mathematical concepts: • Help students recognize the patterns in the world around them and connect these patterns to mathematical concepts. • Support students to develop generalizations based on the similarities found among problems. • Provide opportunities for students to create plans and procedures to solve problems. • Develop students' ability to construct relationships between their current understanding and more sophisticated ways of thinking.
MA.K12.MTR.6.1:	Assess the reasonableness of solutions. Mathematicians who assess the reasonableness of solutions: • Estimate to discover possible solutions. • Use benchmark quantities to determine if a solution makes sense. • Check calculations when solving problems. • Verify possible solutions by explaining the methods used. • Evaluate results based on the given context. **Clarifications:** Teachers who encourage students to assess the reasonableness of solutions: • Have students estimate or predict solutions prior to solving. • Prompt students to continually ask, "Does this solution make sense? How do you know?" • Reinforce that students check their work as they progress within and after a task. • Strengthen students' ability to verify solutions through justifications.
MA.K12.MTR.7.1:	Apply mathematics to real-world contexts. Mathematicians who apply mathematics to real-world contexts: • Connect mathematical concepts to everyday experiences. • Use models and methods to understand, represent and solve problems. • Perform investigations to gather data or determine if a method is appropriate. • Redesign models and methods to improve accuracy or efficiency. **Clarifications:** Teachers who encourage students to apply mathematics to real-world contexts: • Provide opportunities for students to create models, both concrete and abstract, and perform investigations. • Challenge students to question the accuracy of their models and methods. • Support students as they validate conclusions by comparing them to the given situation. • Indicate how various concepts can be applied to other disciplines.
ELA.K12.EE.1.1:	Cite evidence to explain and justify reasoning. **Clarifications:** K-1 Students include textual evidence in their oral communication with guidance and support from adults. The evidence can consist of details from the text without naming the text. During 1st grade, students learn how to incorporate the evidence in their writing. 2-3 Students include relevant textual evidence in their written and oral communication. Students should name the text when they refer to it. In 3rd grade, students should use a combination of direct and indirect citations. 4-5 Students continue with previous skills and reference comments made by speakers and peers. Students cite texts that they've directly quoted, paraphrased, or used for information. When writing, students will use the form of citation dictated by the instructor or the style guide referenced by the instructor. 6-8 Students continue with previous skills and use a style guide to create a proper citation. 9-12 Students continue with previous skills and should be aware of existing style guides and the ways in which they differ.
ELA.K12.EE.2.1:	Read and comprehend grade-level complex texts proficiently. **Clarifications:** See Text Complexity for grade-level complexity bands and a text complexity rubric.
ELA.K12.EE.3.1:	Make inferences to support comprehension. **Clarifications:** Students will make inferences before the words infer or inference are introduced. Kindergarten students will answer questions like "Why is the girl smiling?" or make predictions about what will happen based on the title page. Students will use the terms and apply them in 2nd grade and beyond.
ELA.K12.EE.4.1:	Use appropriate collaborative techniques and active listening skills when engaging in discussions in a variety of situations. **Clarifications:** In kindergarten, students learn to listen to one another respectfully. In grades 1-2, students build upon these skills by justifying what they are thinking. For example: "I think _____ because _____." The collaborative conversations are becoming academic conversations. In grades 3-12, students engage in academic conversations discussing claims and justifying their reasoning, refining and applying skills. Students build on ideas, propel the conversation, and support claims and counterclaims with evidence.
ELA.K12.EE.5.1:	Use the accepted rules governing a specific format to create quality work. **Clarifications:** Students will incorporate skills learned into work products to produce quality work. For students to incorporate these skills appropriately, they must receive instruction. A 3rd grade student creating a poster board display must have instruction in how to effectively present information to do quality work.
	Use appropriate voice and tone when speaking or writing.

ELA.K12.EE.6.1:	**Clarifications:** In kindergarten and 1st grade, students learn the difference between formal and informal language. For example, the way we talk to our friends differs from the way we speak to adults. In 2nd grade and beyond, students practice appropriate social and academic language to discuss texts.
ELD.K12.ELL.SI.1:	English language learners communicate for social and instructional purposes within the school setting.

General Course Information and Notes

VERSION DESCRIPTION

Students with previous vocal or instrumental ensemble experience continue to build musicianship and performance skills through the study, rehearsal, and performance of high-quality ensemble literature in a variety of styles. Student musicians learn to self-assess and collaborate as they study relevant musical styles and time periods. Public performances may serve as a culmination of specific instructional goals. Students may be required to attend and/or participate in rehearsals and performances outside the school day to support, extend, and assess learning in the classroom. This course, if used for an instrumental ensemble, may also require students to obtain a musical instrument (e.g., borrow, rent, purchase) from an outside source.

GENERAL NOTES

Florida's Benchmarks for Excellent Student Thinking (B.E.S.T.) Standards
This course includes Florida's B.E.S.T. ELA Expectations (EE) and Mathematical Thinking and Reasoning Standards (MTRs) for students. Florida educators should intentionally embed these standards within the content and their instruction as applicable. For guidance on the implementation of the EEs and MTRs, please visit cpalms.org/Standards/BEST_Standards.aspx and select the appropriate B.E.S.T. Standards package.

English Language Development ELD Standards Special Notes Section:
Teachers are required to provide listening, speaking, reading and writing instruction that allows English language learners (ELL) to communicate for social and instructional purposes within the school setting. For the given level of English language proficiency and with visual, graphic, or interactive support, students will interact with grade level words, expressions, sentences and discourse to process or produce language necessary for academic success. The ELD standard should specify a relevant content area concept or topic of study chosen by curriculum developers and teachers which maximizes an ELL's need for communication and social skills. To access an ELL supporting document which delineates performance definitions and descriptors, please click on the following link: cpalms.org/uploads/docs/standards/eld/SI.pdf

GENERAL INFORMATION

Course Number: 1303210

Course Path: Section: Grades PreK to 12 Education Courses > **Grade Group:** Grades 6 to 8 Education Courses > **Subject:** Music Education > **SubSubject:** General Music >
Abbreviated Title: M/J MUSIC ENS 2
Course Length: Year (Y)
Course Level: 2

Course Status: Draft - Course Pending Approval
Grade Level(s): 6,7,8

Educator Certifications

Instrumental Music (Secondary Grades 7-12)
Instrumental Music (Elementary and Secondary Grades K-12)
Music (Elementary and Secondary Grades K-12)
Vocal Music (Elementary and Secondary Grades K-12)

M/J Music Ensemble 3 (#1303220) 2022 - And Beyond

Course Standards

Name	Description
MU.68.C.1.1:	Develop strategies for listening to unfamiliar musical works. **Clarifications:** e.g., listening maps, active listening, checklists
MU.68.C.1.2:	Compare, using correct music vocabulary, the aesthetic impact of a performance to one's own hypothesis of the composer's intent. **Clarifications:** e.g., quality recordings, peer group and individual performances, composer notes, instrumentation, expressive elements, title
MU.68.C.2.1:	Critique personal performance, experiment with a variety of solutions, and make appropriate adjustments with guidance from teachers and peers. **Clarifications:** e.g., intonation, balance, blend, phrasing, rhythm
MU.68.C.2.2:	Critique, using correct music vocabulary, changes in one's own or others' musical performance resulting from practice or rehearsal. **Clarifications:** e.g., blend, balance, ensemble playing, sonority, technique, tone quality
MU.68.C.3.1:	Apply specific criteria to evaluate why a musical work is an exemplar in a specific style or genre.
MU.68.F.2.2:	Describe how concert attendance can financially impact a community. **Clarifications:** e.g., increased revenues at restaurants, hotels, and travel agencies; venue maintenance, parking attendants
MU.68.F.3.1:	Describe how studying music can enhance citizenship, leadership, and global thinking. **Clarifications:** e.g., dedication to mastering a task, problem-solving, self-discipline, dependability, ability to organize, cultural awareness, mutual respect
MU.68.F.3.2:	Investigate and discuss laws that protect intellectual property, and practice safe, legal, and responsible acquisition and use of musical media.
MU.68.H.1.1:	Describe the functions of music from various cultures and time periods.
MU.68.H.1.2:	Identify the works of representative composers within a specific style or time period.
MU.68.H.1.4:	Classify authentic stylistic features in music originating from various cultures. **Clarifications:** e.g., rhythm, layered texture, key patterns, tonality, melodic line, quarter- or semi-tones, national folk melodies, improvisation, instrumentation, aural/oral traditions, drumming patterns
MU.68.H.2.1:	Describe the influence of historical events and periods on music composition and performance.
MU.68.H.2.3:	Classify the literature being studied by genre, style, and/or time period.
MU.68.H.3.1:	Identify connections among music and other content areas and/or contexts through interdisciplinary collaboration. **Clarifications:** e.g., school: other music classes, social studies, dance, physical education, science, health, math, world languages; community: cultural connections and traditions, ceremonial music, sales and advertising, communication
MU.68.H.3.2:	Discuss how the absence of music would affect other content areas and contexts. **Clarifications:** e.g., theatre and dance, movies, sporting events, video games, commercial advertising, social gatherings, civic and religious ceremonies, plays
MU.68.O.1.1:	Compare performances of a musical work to identify artistic choices made by performers. **Clarifications:** e.g., rhythm, melody, timbre, form, tonality, harmony, expressive elements; choral, orchestral, band, ensemble
MU.68.O.2.2:	Demonstrate knowledge of major and minor tonalities through performance and composition. **Clarifications:** e.g., scales; key signatures; relative major/minor; parallel major/minor
MU.68.O.3.1:	Describe how the combination of instrumentation and expressive elements in a musical work can convey a specific thought, idea, mood, and/or image. **Clarifications:** e.g., tempo markings, expression markings, articulation markings, phrasing, scales, modes, harmonic structure, timbre, rhythm, orchestration
MU.68.O.3.2:	Perform the expressive elements of a musical work indicated by the musical score and/or conductor, and transfer new knowledge and experiences to other musical works.
MU.68.S.1.3:	Arrange a short musical piece by manipulating melody, form, rhythm, and/or voicing.
MU.68.S.1.4:	Sing or play melodies by ear with support from the teacher and/or peers. **Clarifications:** e.g., melodies using traditional classroom instruments and/or voice
MU.68.S.2.1:	Perform music from memory to demonstrate knowledge of the musical structure. **Clarifications:** e.g., basic themes, patterns, tonality, melody, harmony
MU.68.S.2.2:	Transfer performance techniques from familiar to unfamiliar pieces.

MU.68.S.3.1:	Sing and/or play age-appropriate repertoire expressively. **Clarifications:** e.g., technique, phrasing, dynamics, tone quality, blend, balance, intonation, kinesthetic support/response
MU.68.S.3.2:	Demonstrate proper vocal or instrumental technique. **Clarifications:** e.g., posture, breathing, fingering, embouchure, bow technique, tuning, strumming
MU.68.S.3.3:	Sight-read standard exercises and simple repertoire. **Clarifications:** e.g., note and rest values, key signatures, time signatures, expressive markings, special harmonic and/or notation symbols
MU.68.S.3.4:	Compare written notation to aural examples and analyze for accuracy of rhythm and pitch. **Clarifications:** e.g., error detection, interval reinforcement
MU.68.S.3.6:	Develop and demonstrate efficient rehearsal strategies to apply skills and techniques. **Clarifications:** e.g., independently, collaboratively
MA.K12.MTR.1.1:	Mathematicians who participate in effortful learning both individually and with others: • Analyze the problem in a way that makes sense given the task. • Ask questions that will help with solving the task. • Build perseverance by modifying methods as needed while solving a challenging task. • Stay engaged and maintain a positive mindset when working to solve tasks. • Help and support each other when attempting a new method or approach. **Clarifications:** Teachers who encourage students to participate actively in effortful learning both individually and with others: • Cultivate a community of growth mindset learners. • Foster perseverance in students by choosing tasks that are challenging. • Develop students' ability to analyze and problem solve. • Recognize students' effort when solving challenging problems.
MA.K12.MTR.2.1:	Demonstrate understanding by representing problems in multiple ways. Mathematicians who demonstrate understanding by representing problems in multiple ways: • Build understanding through modeling and using manipulatives. • Represent solutions to problems in multiple ways using objects, drawings, tables, graphs and equations. • Progress from modeling problems with objects and drawings to using algorithms and equations. • Express connections between concepts and representations. • Choose a representation based on the given context or purpose. **Clarifications:** Teachers who encourage students to demonstrate understanding by representing problems in multiple ways: • Help students make connections between concepts and representations. • Provide opportunities for students to use manipulatives when investigating concepts. • Guide students from concrete to pictorial to abstract representations as understanding progresses. • Show students that various representations can have different purposes and can be useful in different situations.
MA.K12.MTR.3.1:	Complete tasks with mathematical fluency. Mathematicians who complete tasks with mathematical fluency: • Select efficient and appropriate methods for solving problems within the given context. • Maintain flexibility and accuracy while performing procedures and mental calculations. • Complete tasks accurately and with confidence. • Adapt procedures to apply them to a new context. • Use feedback to improve efficiency when performing calculations. **Clarifications:** Teachers who encourage students to complete tasks with mathematical fluency: • Provide students with the flexibility to solve problems by selecting a procedure that allows them to solve efficiently and accurately. • Offer multiple opportunities for students to practice efficient and generalizable methods. • Provide opportunities for students to reflect on the method they used and determine if a more efficient method could have been used.
MA.K12.MTR.4.1:	Engage in discussions that reflect on the mathematical thinking of self and others. Mathematicians who engage in discussions that reflect on the mathematical thinking of self and others: • Communicate mathematical ideas, vocabulary and methods effectively. • Analyze the mathematical thinking of others. • Compare the efficiency of a method to those expressed by others. • Recognize errors and suggest how to correctly solve the task. • Justify results by explaining methods and processes. • Construct possible arguments based on evidence. **Clarifications:** Teachers who encourage students to engage in discussions that reflect on the mathematical thinking of self and others: • Establish a culture in which students ask questions of the teacher and their peers, and error is an opportunity for learning. • Create opportunities for students to discuss their thinking with peers. • Select, sequence and present student work to advance and deepen understanding of correct and increasingly efficient methods.

	• Develop students' ability to justify methods and compare their responses to the responses of their peers.
MA.K12.MTR.5.1:	Use patterns and structure to help understand and connect mathematical concepts. Mathematicians who use patterns and structure to help understand and connect mathematical concepts: • Focus on relevant details within a problem. • Create plans and procedures to logically order events, steps or ideas to solve problems. • Decompose a complex problem into manageable parts. • Relate previously learned concepts to new concepts. • Look for similarities among problems. • Connect solutions of problems to more complicated large-scale situations. **Clarifications:** Teachers who encourage students to use patterns and structure to help understand and connect mathematical concepts: • Help students recognize the patterns in the world around them and connect these patterns to mathematical concepts. • Support students to develop generalizations based on the similarities found among problems. • Provide opportunities for students to create plans and procedures to solve problems. • Develop students' ability to construct relationships between their current understanding and more sophisticated ways of thinking.
MA.K12.MTR.6.1:	Assess the reasonableness of solutions. Mathematicians who assess the reasonableness of solutions: • Estimate to discover possible solutions. • Use benchmark quantities to determine if a solution makes sense. • Check calculations when solving problems. • Verify possible solutions by explaining the methods used. • Evaluate results based on the given context. **Clarifications:** Teachers who encourage students to assess the reasonableness of solutions: • Have students estimate or predict solutions prior to solving. • Prompt students to continually ask, "Does this solution make sense? How do you know?" • Reinforce that students check their work as they progress within and after a task. • Strengthen students' ability to verify solutions through justifications.
MA.K12.MTR.7.1:	Apply mathematics to real-world contexts. Mathematicians who apply mathematics to real-world contexts: • Connect mathematical concepts to everyday experiences. • Use models and methods to understand, represent and solve problems. • Perform investigations to gather data or determine if a method is appropriate. • Redesign models and methods to improve accuracy or efficiency. **Clarifications:** Teachers who encourage students to apply mathematics to real-world contexts: • Provide opportunities for students to create models, both concrete and abstract, and perform investigations. • Challenge students to question the accuracy of their models and methods. • Support students as they validate conclusions by comparing them to the given situation. • Indicate how various concepts can be applied to other disciplines.
ELA.K12.EE.1.1:	Cite evidence to explain and justify reasoning. **Clarifications:** K-1 Students include textual evidence in their oral communication with guidance and support from adults. The evidence can consist of details from the text without naming the text. During 1st grade, students learn how to incorporate the evidence in their writing. 2-3 Students include relevant textual evidence in their written and oral communication. Students should name the text when they refer to it. In 3rd grade, students should use a combination of direct and indirect citations. 4-5 Students continue with previous skills and reference comments made by speakers and peers. Students cite texts that they've directly quoted, paraphrased, or used for information. When writing, students will use the form of citation dictated by the instructor or the style guide referenced by the instructor. 6-8 Students continue with previous skills and use a style guide to create a proper citation. 9-12 Students continue with previous skills and should be aware of existing style guides and the ways in which they differ.
ELA.K12.EE.2.1:	Read and comprehend grade-level complex texts proficiently. **Clarifications:** See Text Complexity for grade-level complexity bands and a text complexity rubric.
ELA.K12.EE.3.1:	Make inferences to support comprehension. **Clarifications:** Students will make inferences before the words infer or inference are introduced. Kindergarten students will answer questions like "Why is the girl smiling?" or make predictions about what will happen based on the title page. Students will use the terms and apply them in 2nd grade and beyond.
ELA.K12.EE.4.1:	Use appropriate collaborative techniques and active listening skills when engaging in discussions in a variety of situations. **Clarifications:** In kindergarten, students learn to listen to one another respectfully. In grades 1-2, students build upon these skills by justifying what they are thinking. For example: "I think _____ because _____." The collaborative conversations are becoming academic conversations. In grades 3-12, students engage in academic conversations discussing claims and justifying their reasoning, refining and applying skills. Students

	build on ideas, propel the conversation, and support claims and counterclaims with evidence.
ELA.K12.EE.5.1:	Use the accepted rules governing a specific format to create quality work. **Clarifications:** Students will incorporate skills learned into work products to produce quality work. For students to incorporate these skills appropriately, they must receive instruction. A 3rd grade student creating a poster board display must have instruction in how to effectively present information to do quality work.
ELA.K12.EE.6.1:	Use appropriate voice and tone when speaking or writing. **Clarifications:** In kindergarten and 1st grade, students learn the difference between formal and informal language. For example, the way we talk to our friends differs from the way we speak to adults. In 2nd grade and beyond, students practice appropriate social and academic language to discuss texts.
ELD.K12.ELL.SI.1:	English language learners communicate for social and instructional purposes within the school setting.

General Course Information and Notes

VERSION DESCRIPTION

Students continue to build musicianship and performance skills through the study, rehearsal, and performance of increasingly challenging, high-quality vocal or instrumental ensemble literature. Student musicians strengthen their techniques, ensemble skills, music literacy, and analytical skills as they study relevant history, cultures, and music genres. Public performances may serve as a culmination of specific instructional goals. Students may be required to attend and/or participate in rehearsals and performances outside the school day to support, extend, and assess learning in the classroom. This course, if used for an instrumental ensemble, may also require students to obtain a musical instrument (e.g., borrow, rent, purchase) from an outside source.

GENERAL NOTES

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This course includes Florida's B.E.S.T. ELA Expectations (EE) and Mathematical Thinking and Reasoning Standards (MTRs) for students. Florida educators should intentionally embed these standards within the content and their instruction as applicable. For guidance on the implementation of the EEs and MTRs, please visit cpalms.org/Standards/BEST_Standards.aspx and select the appropriate B.E.S.T. Standards package.

English Language Development ELD Standards Special Notes Section:
Teachers are required to provide listening, speaking, reading and writing instruction that allows English language learners (ELL) to communicate for social and instructional purposes within the school setting. For the given level of English language proficiency and with visual, graphic, or interactive support, students will interact with grade level words, expressions, sentences and discourse to process or produce language necessary for academic success. The ELD standard should specify a relevant content area concept or topic of study chosen by curriculum developers and teachers which maximizes an ELL's need for communication and social skills. To access an ELL supporting document which delineates performance definitions and descriptors, please click on the following link: cpalms.org/uploads/docs/standards/eld/SI.pdf

GENERAL INFORMATION

Course Number: 1303220

Course Path: Section: Grades PreK to 12 Education Courses > **Grade Group:** Grades 6 to 8 Education Courses > **Subject:** Music Education > **SubSubject:** General Music >
Abbreviated Title: M/J MUSIC ENS 3
Course Length: Year (Y)
Course Level: 2

Course Status: Draft - Course Pending Approval
Grade Level(s): 6,7,8

Educator Certifications

Instrumental Music (Secondary Grades 7-12)
Instrumental Music (Elementary and Secondary Grades K-12)
Music (Elementary and Secondary Grades K-12)
Vocal Music (Elementary and Secondary Grades K-12)

M/J Music Techniques 1 (#1303230) 2022 - And Beyond

Course Standards

Name	Description
MU.68.C.1.1:	Develop strategies for listening to unfamiliar musical works. **Clarifications:** e.g., listening maps, active listening, checklists
MU.68.C.1.2:	Compare, using correct music vocabulary, the aesthetic impact of a performance to one's own hypothesis of the composer's intent. **Clarifications:** e.g., quality recordings, peer group and individual performances, composer notes, instrumentation, expressive elements, title
MU.68.C.2.1:	Critique personal performance, experiment with a variety of solutions, and make appropriate adjustments with guidance from teachers and peers. **Clarifications:** e.g., intonation, balance, blend, phrasing, rhythm
MU.68.C.2.2:	Critique, using correct music vocabulary, changes in one's own or others' musical performance resulting from practice or rehearsal. **Clarifications:** e.g., blend, balance, ensemble playing, sonority, technique, tone quality
MU.68.H.2.3:	Classify the literature being studied by genre, style, and/or time period.
MU.68.O.1.1:	Compare performances of a musical work to identify artistic choices made by performers. **Clarifications:** e.g., rhythm, melody, timbre, form, tonality, harmony, expressive elements; choral, orchestral, band, ensemble
MU.68.O.3.1:	Describe how the combination of instrumentation and expressive elements in a musical work can convey a specific thought, idea, mood, and/or image. **Clarifications:** e.g., tempo markings, expression markings, articulation markings, phrasing, scales, modes, harmonic structure, timbre, rhythm, orchestration
MU.68.S.1.1:	Improvise rhythmic and melodic phrases to accompany familiar songs and/or standard harmonic progressions. **Clarifications:** e.g., blues, rock
MU.68.S.1.4:	Sing or play melodies by ear with support from the teacher and/or peers. **Clarifications:** e.g., melodies using traditional classroom instruments and/or voice
MU.68.S.2.1:	Perform music from memory to demonstrate knowledge of the musical structure. **Clarifications:** e.g., basic themes, patterns, tonality, melody, harmony
MU.68.S.2.2:	Transfer performance techniques from familiar to unfamiliar pieces.
MU.68.S.3.1:	Sing and/or play age-appropriate repertoire expressively. **Clarifications:** e.g., technique, phrasing, dynamics, tone quality, blend, balance, intonation, kinesthetic support/response
MU.68.S.3.2:	Demonstrate proper vocal or instrumental technique. **Clarifications:** e.g., posture, breathing, fingering, embouchure, bow technique, tuning, strumming
MU.68.S.3.3:	Sight-read standard exercises and simple repertoire. **Clarifications:** e.g., note and rest values, key signatures, time signatures, expressive markings, special harmonic and/or notation symbols
MU.68.S.3.4:	Compare written notation to aural examples and analyze for accuracy of rhythm and pitch. **Clarifications:** e.g., error detection, interval reinforcement
MU.68.S.3.5:	Notate rhythmic phrases and/or melodies, in varying simple meters, performed by someone else.
MU.68.S.3.6:	Develop and demonstrate efficient rehearsal strategies to apply skills and techniques. **Clarifications:** e.g., independently, collaboratively
MA.K12.MTR.1.1:	Mathematicians who participate in effortful learning both individually and with others: • Analyze the problem in a way that makes sense given the task. • Ask questions that will help with solving the task. • Build perseverance by modifying methods as needed while solving a challenging task. • Stay engaged and maintain a positive mindset when working to solve tasks. • Help and support each other when attempting a new method or approach. **Clarifications:** Teachers who encourage students to participate actively in effortful learning both individually and with others: • Cultivate a community of growth mindset learners.

- Foster perseverance in students by choosing tasks that are challenging.
- Develop students' ability to analyze and problem solve.
- Recognize students' effort when solving challenging problems.

MA.K12.MTR.2.1:

Demonstrate understanding by representing problems in multiple ways.
Mathematicians who demonstrate understanding by representing problems in multiple ways:

- Build understanding through modeling and using manipulatives.
- Represent solutions to problems in multiple ways using objects, drawings, tables, graphs and equations.
- Progress from modeling problems with objects and drawings to using algorithms and equations.
- Express connections between concepts and representations.
- Choose a representation based on the given context or purpose.

Clarifications:
Teachers who encourage students to demonstrate understanding by representing problems in multiple ways:

- Help students make connections between concepts and representations.
- Provide opportunities for students to use manipulatives when investigating concepts.
- Guide students from concrete to pictorial to abstract representations as understanding progresses.
- Show students that various representations can have different purposes and can be useful in different situations.

MA.K12.MTR.3.1:

Complete tasks with mathematical fluency.
Mathematicians who complete tasks with mathematical fluency:

- Select efficient and appropriate methods for solving problems within the given context.
- Maintain flexibility and accuracy while performing procedures and mental calculations.
- Complete tasks accurately and with confidence.
- Adapt procedures to apply them to a new context.
- Use feedback to improve efficiency when performing calculations.

Clarifications:
Teachers who encourage students to complete tasks with mathematical fluency:

- Provide students with the flexibility to solve problems by selecting a procedure that allows them to solve efficiently and accurately.
- Offer multiple opportunities for students to practice efficient and generalizable methods.
- Provide opportunities for students to reflect on the method they used and determine if a more efficient method could have been used.

MA.K12.MTR.4.1:

Engage in discussions that reflect on the mathematical thinking of self and others.
Mathematicians who engage in discussions that reflect on the mathematical thinking of self and others:

- Communicate mathematical ideas, vocabulary and methods effectively.
- Analyze the mathematical thinking of others.
- Compare the efficiency of a method to those expressed by others.
- Recognize errors and suggest how to correctly solve the task.
- Justify results by explaining methods and processes.
- Construct possible arguments based on evidence.

Clarifications:
Teachers who encourage students to engage in discussions that reflect on the mathematical thinking of self and others:

- Establish a culture in which students ask questions of the teacher and their peers, and error is an opportunity for learning.
- Create opportunities for students to discuss their thinking with peers.
- Select, sequence and present student work to advance and deepen understanding of correct and increasingly efficient methods.
- Develop students' ability to justify methods and compare their responses to the responses of their peers.

MA.K12.MTR.5.1:

Use patterns and structure to help understand and connect mathematical concepts.
Mathematicians who use patterns and structure to help understand and connect mathematical concepts:

- Focus on relevant details within a problem.
- Create plans and procedures to logically order events, steps or ideas to solve problems.
- Decompose a complex problem into manageable parts.
- Relate previously learned concepts to new concepts.
- Look for similarities among problems.
- Connect solutions of problems to more complicated large-scale situations.

Clarifications:
Teachers who encourage students to use patterns and structure to help understand and connect mathematical concepts:

- Help students recognize the patterns in the world around them and connect these patterns to mathematical concepts.
- Support students to develop generalizations based on the similarities found among problems.
- Provide opportunities for students to create plans and procedures to solve problems.
- Develop students' ability to construct relationships between their current understanding and more sophisticated ways of thinking.

MA.K12.MTR.6.1:

Assess the reasonableness of solutions.
Mathematicians who assess the reasonableness of solutions:

- Estimate to discover possible solutions.
- Use benchmark quantities to determine if a solution makes sense.
- Check calculations when solving problems.
- Verify possible solutions by explaining the methods used.
- Evaluate results based on the given context.

Clarifications:
Teachers who encourage students to assess the reasonableness of solutions:

	• Have students estimate or predict solutions prior to solving. • Prompt students to continually ask, "Does this solution make sense? How do you know?" • Reinforce that students check their work as they progress within and after a task. • Strengthen students' ability to verify solutions through justifications.
MA.K12.MTR.7.1:	Apply mathematics to real-world contexts. Mathematicians who apply mathematics to real-world contexts: • Connect mathematical concepts to everyday experiences. • Use models and methods to understand, represent and solve problems. • Perform investigations to gather data or determine if a method is appropriate. • Redesign models and methods to improve accuracy or efficiency. **Clarifications:** Teachers who encourage students to apply mathematics to real-world contexts: • Provide opportunities for students to create models, both concrete and abstract, and perform investigations. • Challenge students to question the accuracy of their models and methods. • Support students as they validate conclusions by comparing them to the given situation. • Indicate how various concepts can be applied to other disciplines.
ELA.K12.EE.1.1:	Cite evidence to explain and justify reasoning. **Clarifications:** K-1 Students include textual evidence in their oral communication with guidance and support from adults. The evidence can consist of details from the text without naming the text. During 1st grade, students learn how to incorporate the evidence in their writing. 2-3 Students include relevant textual evidence in their written and oral communication. Students should name the text when they refer to it. In 3rd grade, students should use a combination of direct and indirect citations. 4-5 Students continue with previous skills and reference comments made by speakers and peers. Students cite texts that they've directly quoted, paraphrased, or used for information. When writing, students will use the form of citation dictated by the instructor or the style guide referenced by the instructor. 6-8 Students continue with previous skills and use a style guide to create a proper citation. 9-12 Students continue with previous skills and should be aware of existing style guides and the ways in which they differ.
ELA.K12.EE.2.1:	Read and comprehend grade-level complex texts proficiently. **Clarifications:** See Text Complexity for grade-level complexity bands and a text complexity rubric.
ELA.K12.EE.3.1:	Make inferences to support comprehension. **Clarifications:** Students will make inferences before the words infer or inference are introduced. Kindergarten students will answer questions like "Why is the girl smiling?" or make predictions about what will happen based on the title page. Students will use the terms and apply them in 2nd grade and beyond.
ELA.K12.EE.4.1:	Use appropriate collaborative techniques and active listening skills when engaging in discussions in a variety of situations. **Clarifications:** In kindergarten, students learn to listen to one another respectfully. In grades 1-2, students build upon these skills by justifying what they are thinking. For example: "I think _____ because _____." The collaborative conversations are becoming academic conversations. In grades 3-12, students engage in academic conversations discussing claims and justifying their reasoning, refining and applying skills. Students build on ideas, propel the conversation, and support claims and counterclaims with evidence.
ELA.K12.EE.5.1:	Use the accepted rules governing a specific format to create quality work. **Clarifications:** Students will incorporate skills learned into work products to produce quality work. For students to incorporate these skills appropriately, they must receive instruction. A 3rd grade student creating a poster board display must have instruction in how to effectively present information to do quality work.
ELA.K12.EE.6.1:	Use appropriate voice and tone when speaking or writing. **Clarifications:** In kindergarten and 1st grade, students learn the difference between formal and informal language. For example, the way we talk to our friends differs from the way we speak to adults. In 2nd grade and beyond, students practice appropriate social and academic language to discuss texts.
ELD.K12.ELL.SI.1:	English language learners communicate for social and instructional purposes within the school setting.

General Course Information and Notes

VERSION DESCRIPTION

Students with little or no instrumental or vocal experience develop musicianship, technical proficiency, and performance skills. Beginning musicians focus on development of skills and techniques through scales, etudes, and solo literature. Public performances may serve as a culmination of specific instructional goals. Students may be required to attend and/or participate in rehearsals and performances outside the school day to support, extend, and assess learning in the classroom. This course, if used for an instrumental class, may also require students to obtain a musical instrument (e.g., borrow, rent, purchase) from an outside source.

GENERAL NOTES

Florida's Benchmarks for Excellent Student Thinking (B.E.S.T.) Standards
This course includes Florida's B.E.S.T. ELA Expectations (EE) and Mathematical Thinking and Reasoning Standards (MTRs) for students. Florida educators should intentionally embed these standards within the content and their instruction as applicable. For guidance on the implementation of the EEs and MTRs, please visit cpalms.org/Standards/BEST_Standards.aspx and select the appropriate B.E.S.T. Standards package.

English Language Development ELD Standards Special Notes Section:
Teachers are required to provide listening, speaking, reading and writing instruction that allows English language learners (ELL) to communicate for social and instructional purposes within the school setting. For the given level of English language proficiency and with visual, graphic, or interactive support, students will interact with grade level words, expressions, sentences and discourse to process or produce language necessary for academic success. The ELD standard should specify a relevant content area concept or topic of study chosen by curriculum developers and teachers which maximizes an ELL's need for communication and social skills. To access an ELL supporting document which delineates performance definitions and descriptors, please click on the following link: cpalms.org/uploads/docs/standards/eld/SI.pdf

GENERAL INFORMATION

Course Number: 1303230

Course Path: Section: Grades PreK to 12 Education Courses > **Grade Group:** Grades 6 to 8 Education Courses > **Subject:** Music Education > **SubSubject:** General Music >
Abbreviated Title: M/J MUSIC TECNQS 1
Course Length: Year (Y)
Course Level: 2

Course Status: Draft - Course Pending Approval

Grade Level(s): 6,7,8

Educator Certifications

Instrumental Music (Secondary Grades 7-12)
Instrumental Music (Elementary and Secondary Grades K-12)
Music (Elementary and Secondary Grades K-12)
Vocal Music (Elementary and Secondary Grades K-12)

Chorus 1 (#1303300) 2022 - And Beyond

Course Standards

Name	Description
MU.912.C.1.1:	Apply listening strategies to promote appreciation and understanding of unfamiliar musical works. **Clarifications:** e.g., listening maps, active listening, checklists
MU.912.C.1.2:	Compare, using correct music vocabulary, the aesthetic impact of two or more performances of a musical work to one's own hypothesis of the composer's intent. **Clarifications:** e.g., quality recordings, individual and peer-group performances, composer notes, instrumentation, expressive elements, title
MU.912.C.1.4:	Compare and perform a variety of vocal styles and ensembles.
MU.912.C.2.1:	Evaluate and make appropriate adjustments to personal performance in solo and ensembles.
MU.912.C.2.2:	Evaluate performance quality in recorded and/or live performances.
MU.912.C.2.3:	Evaluate one's own or other's compositions and/or improvisations and generate improvements independently or cooperatively.
MU.912.C.3.1:	Make critical evaluations, based on exemplary models, of the quality and effectiveness of performances and apply the criteria to personal development in music.
MU.912.F.3.1:	Analyze and describe how meeting one's responsibilities in music offers opportunities to develop leadership skills, and identify personal examples of leadership in school and/or non-school settings.
MU.912.F.3.2:	Summarize copyright laws that govern printed, recorded, and on-line music to promote legal and responsible use of intellectual property and technology.
MU.912.F.3.3:	Define, prioritize, monitor, and successfully complete tasks related to individual musical performance or project presentation, without direct oversight, demonstrating skills for use in the workplace.
MU.912.H.1.1:	Investigate and discuss how a culture's traditions are reflected through its music. **Clarifications:** e.g., patriotic, folk, celebration, entertainment, spiritual
MU.912.H.2.1:	Evaluate the social impact of music on specific historical periods.
MU.912.H.3.1:	Apply knowledge of science, math, and music to demonstrate, through an acoustic or digital performance medium, how sound production affects musical performance. **Clarifications:** e.g., acoustics, sound amplification, materials, mechanics
MU.912.O.1.1:	Evaluate the organizational principles and conventions in musical works and discuss their effect on structure. **Clarifications:** e.g., rhythm, melody, timbre, form, tonality, harmony, texture; solo, chamber ensemble, large ensemble
MU.912.O.2.1:	Transfer accepted composition conventions and performance practices of a specific style to a contrasting style of music.
MU.912.O.3.1:	Analyze expressive elements in a musical work and describe how the choices and manipulations of the elements support, for the listener, the implied meaning of the composer/performer. **Clarifications:** e.g., tempo markings, expression markings, articulation markings, phrasing, scales, modes, harmonic structure, timbre choice, rhythm, orchestration
MU.912.O.3.2:	Interpret and perform expressive elements indicated by the musical score and/or conductor.
MU.912.S.1.1:	Improvise rhythmic and melodic phrases over harmonic progressions. **Clarifications:** e.g., using text or scat syllables
MU.912.S.1.4:	Perform and notate, independently and accurately, melodies by ear. **Clarifications:** e.g., singing, playing, writing
MU.912.S.2.1:	Apply the ability to memorize and internalize musical structure, accurate and expressive details, and processing skills to the creation or performance of music literature. **Clarifications:** e.g., memorization, sequential process
MU.912.S.2.2:	Transfer expressive elements and performance techniques from one piece of music to another.
MU.912.S.3.1:	Synthesize a broad range of musical skills by performing a varied repertoire with expression, appropriate stylistic interpretation, technical accuracy, and kinesthetic energy.
MU.912.S.3.2:	Sight-read music accurately and expressively to show synthesis of skills. **Clarifications:** e.g., musical elements, expressive qualities, performance technique
MU.912.S.3.3:	Transcribe aurally presented songs into melodic and/or rhythmic notation to show synthesis of aural and notational skills.
MU.912.S.3.4:	Analyze and describe the effect of rehearsal sessions and/or strategies on refinement of skills and techniques.
MU.912.S.3.5:	Develop and demonstrate proper vocal or instrumental technique. **Clarifications:**

	e.g., posture, breathing, fingering, embouchure, bow technique, tuning, strumming
MA.K12.MTR.1.1:	Mathematicians who participate in effortful learning both individually and with others: • Analyze the problem in a way that makes sense given the task. • Ask questions that will help with solving the task. • Build perseverance by modifying methods as needed while solving a challenging task. • Stay engaged and maintain a positive mindset when working to solve tasks. • Help and support each other when attempting a new method or approach. **Clarifications:** Teachers who encourage students to participate actively in effortful learning both individually and with others: • Cultivate a community of growth mindset learners. • Foster perseverance in students by choosing tasks that are challenging. • Develop students' ability to analyze and problem solve. • Recognize students' effort when solving challenging problems.
MA.K12.MTR.2.1:	Demonstrate understanding by representing problems in multiple ways. Mathematicians who demonstrate understanding by representing problems in multiple ways: • Build understanding through modeling and using manipulatives. • Represent solutions to problems in multiple ways using objects, drawings, tables, graphs and equations. • Progress from modeling problems with objects and drawings to using algorithms and equations. • Express connections between concepts and representations. • Choose a representation based on the given context or purpose. **Clarifications:** Teachers who encourage students to demonstrate understanding by representing problems in multiple ways: • Help students make connections between concepts and representations. • Provide opportunities for students to use manipulatives when investigating concepts. • Guide students from concrete to pictorial to abstract representations as understanding progresses. • Show students that various representations can have different purposes and can be useful in different situations.
MA.K12.MTR.3.1:	Complete tasks with mathematical fluency. Mathematicians who complete tasks with mathematical fluency: • Select efficient and appropriate methods for solving problems within the given context. • Maintain flexibility and accuracy while performing procedures and mental calculations. • Complete tasks accurately and with confidence. • Adapt procedures to apply them to a new context. • Use feedback to improve efficiency when performing calculations. **Clarifications:** Teachers who encourage students to complete tasks with mathematical fluency: • Provide students with the flexibility to solve problems by selecting a procedure that allows them to solve efficiently and accurately. • Offer multiple opportunities for students to practice efficient and generalizable methods. • Provide opportunities for students to reflect on the method they used and determine if a more efficient method could have been used.
MA.K12.MTR.4.1:	Engage in discussions that reflect on the mathematical thinking of self and others. Mathematicians who engage in discussions that reflect on the mathematical thinking of self and others: • Communicate mathematical ideas, vocabulary and methods effectively. • Analyze the mathematical thinking of others. • Compare the efficiency of a method to those expressed by others. • Recognize errors and suggest how to correctly solve the task. • Justify results by explaining methods and processes. • Construct possible arguments based on evidence. **Clarifications:** Teachers who encourage students to engage in discussions that reflect on the mathematical thinking of self and others: • Establish a culture in which students ask questions of the teacher and their peers, and error is an opportunity for learning. • Create opportunities for students to discuss their thinking with peers. • Select, sequence and present student work to advance and deepen understanding of correct and increasingly efficient methods. • Develop students' ability to justify methods and compare their responses to the responses of their peers.
MA.K12.MTR.5.1:	Use patterns and structure to help understand and connect mathematical concepts. Mathematicians who use patterns and structure to help understand and connect mathematical concepts: • Focus on relevant details within a problem. • Create plans and procedures to logically order events, steps or ideas to solve problems. • Decompose a complex problem into manageable parts. • Relate previously learned concepts to new concepts. • Look for similarities among problems. • Connect solutions of problems to more complicated large-scale situations. **Clarifications:** Teachers who encourage students to use patterns and structure to help understand and connect mathematical concepts: • Help students recognize the patterns in the world around them and connect these patterns to mathematical concepts. • Support students to develop generalizations based on the similarities found among problems. • Provide opportunities for students to create plans and procedures to solve problems. • Develop students' ability to construct relationships between their current understanding and more sophisticated ways of thinking.

MA.K12.MTR.6.1:	Assess the reasonableness of solutions. Mathematicians who assess the reasonableness of solutions: • Estimate to discover possible solutions. • Use benchmark quantities to determine if a solution makes sense. • Check calculations when solving problems. • Verify possible solutions by explaining the methods used. • Evaluate results based on the given context. **Clarifications:** Teachers who encourage students to assess the reasonableness of solutions: • Have students estimate or predict solutions prior to solving. • Prompt students to continually ask, "Does this solution make sense? How do you know?" • Reinforce that students check their work as they progress within and after a task. • Strengthen students' ability to verify solutions through justifications.
MA.K12.MTR.7.1:	Apply mathematics to real-world contexts. Mathematicians who apply mathematics to real-world contexts: • Connect mathematical concepts to everyday experiences. • Use models and methods to understand, represent and solve problems. • Perform investigations to gather data or determine if a method is appropriate. • Redesign models and methods to improve accuracy or efficiency. **Clarifications:** Teachers who encourage students to apply mathematics to real-world contexts: • Provide opportunities for students to create models, both concrete and abstract, and perform investigations. • Challenge students to question the accuracy of their models and methods. • Support students as they validate conclusions by comparing them to the given situation. • Indicate how various concepts can be applied to other disciplines.
ELA.K12.EE.1.1:	Cite evidence to explain and justify reasoning. **Clarifications:** K-1 Students include textual evidence in their oral communication with guidance and support from adults. The evidence can consist of details from the text without naming the text. During 1st grade, students learn how to incorporate the evidence in their writing. 2-3 Students include relevant textual evidence in their written and oral communication. Students should name the text when they refer to it. In 3rd grade, students should use a combination of direct and indirect citations. 4-5 Students continue with previous skills and reference comments made by speakers and peers. Students cite texts that they've directly quoted, paraphrased, or used for information. When writing, students will use the form of citation dictated by the instructor or the style guide referenced by the instructor. 6-8 Students continue with previous skills and use a style guide to create a proper citation. 9-12 Students continue with previous skills and should be aware of existing style guides and the ways in which they differ.
ELA.K12.EE.2.1:	Read and comprehend grade-level complex texts proficiently. **Clarifications:** See Text Complexity for grade-level complexity bands and a text complexity rubric.
ELA.K12.EE.3.1:	Make inferences to support comprehension. **Clarifications:** Students will make inferences before the words infer or inference are introduced. Kindergarten students will answer questions like "Why is the girl smiling?" or make predictions about what will happen based on the title page. Students will use the terms and apply them in 2nd grade and beyond.
ELA.K12.EE.4.1:	Use appropriate collaborative techniques and active listening skills when engaging in discussions in a variety of situations. **Clarifications:** In kindergarten, students learn to listen to one another respectfully. In grades 1-2, students build upon these skills by justifying what they are thinking. For example: "I think _____ because _____." The collaborative conversations are becoming academic conversations. In grades 3-12, students engage in academic conversations discussing claims and justifying their reasoning, refining and applying skills. Students build on ideas, propel the conversation, and support claims and counterclaims with evidence.
ELA.K12.EE.5.1:	Use the accepted rules governing a specific format to create quality work. **Clarifications:** Students will incorporate skills learned into work products to produce quality work. For students to incorporate these skills appropriately, they must receive instruction. A 3rd grade student creating a poster board display must have instruction in how to effectively present information to do quality work.
ELA.K12.EE.6.1:	Use appropriate voice and tone when speaking or writing. **Clarifications:** In kindergarten and 1st grade, students learn the difference between formal and informal language. For example, the way we talk to our friends differs from the way we speak to adults. In 2nd grade and beyond, students practice appropriate social and academic language to discuss texts.
DA.912.S.2.1:	Sustain focused attention, respect, and discipline during class, rehearsal, and performance.
ELD.K12.ELL.SI.1:	English language learners communicate for social and instructional purposes within the school setting.

General Course Information and Notes

VERSION DESCRIPTION

This year-long, entry-level class, designed for students with little or no choral experience, promotes the enjoyment and appreciation of music through performance of beginning choral repertoire from a variety of times and places. Rehearsals focus on the development of critical listening skills; foundational instrumental technique and skills, music literacy, and ensemble skills; and aesthetic musical awareness culminating in periodic public performances.

GENERAL NOTES

All instruction related to Music benchmarks should be framed by the Big Ideas and Enduring Understandings. Non-Music benchmarks listed in this course are also required and should be fully integrated in support of arts instruction.

Special Note: This course may require students to participate in extra rehearsals and performances beyond the school day.

Florida's Benchmarks for Excellent Student Thinking (B.E.S.T.) Standards
This course includes Florida's B.E.S.T. ELA Expectations (EE) and Mathematical Thinking and Reasoning Standards (MTRs) for students. Florida educators should intentionally embed these standards within the content and their instruction as applicable. For guidance on the implementation of the EEs and MTRs, please visit cpalms.org/Standards/BEST_Standards.aspx and select the appropriate B.E.S.T. Standards package.

English Language Development ELD Standards Special Notes Section:
Teachers are required to provide listening, speaking, reading and writing instruction that allows English language learners (ELL) to communicate for social and instructional purposes within the school setting. For the given level of English language proficiency and with visual, graphic, or interactive support, students will interact with grade level words, expressions, sentences and discourse to process or produce language necessary for academic success. The ELD standard should specify a relevant content area concept or topic of study chosen by curriculum developers and teachers which maximizes an ELL's need for communication and social skills. To access an ELL supporting document which delineates performance definitions and descriptors, please click on the following link: cpalms.org/uploads/docs/standards/eld/SI.pdf

GENERAL INFORMATION

Course Number: 1303300

Course Path: Section: Grades PreK to 12 Education Courses > **Grade Group:** Grades 9 to 12 and Adult Education Courses > **Subject:** Music Education > **SubSubject:** Choral Music > **Abbreviated Title:** CHORUS 1

Number of Credits: One (1) credit

Course Length: Year (Y)

Course Type: Core Academic Course

Course Level: 2

Course Status: Draft - Course Pending Approval

Grade Level(s): 9,10,11,12

Graduation Requirement: Performing/Fine Arts

Educator Certifications

Vocal Music (Elementary and Secondary Grades K-12)
Music (Elementary and Secondary Grades K-12)

Chorus 2 (#1303310) 2022 - And Beyond

Course Standards

Name	Description
MU.912.C.1.1:	Apply listening strategies to promote appreciation and understanding of unfamiliar musical works. **Clarifications:** e.g., listening maps, active listening, checklists
MU.912.C.1.2:	Compare, using correct music vocabulary, the aesthetic impact of two or more performances of a musical work to one's own hypothesis of the composer's intent. **Clarifications:** e.g., quality recordings, individual and peer-group performances, composer notes, instrumentation, expressive elements, title
MU.912.C.1.4:	Compare and perform a variety of vocal styles and ensembles.
MU.912.C.2.1:	Evaluate and make appropriate adjustments to personal performance in solo and ensembles.
MU.912.C.2.2:	Evaluate performance quality in recorded and/or live performances.
MU.912.C.2.3:	Evaluate one's own or other's compositions and/or improvisations and generate improvements independently or cooperatively.
MU.912.C.3.1:	Make critical evaluations, based on exemplary models, of the quality and effectiveness of performances and apply the criteria to personal development in music.
MU.912.F.3.1:	Analyze and describe how meeting one's responsibilities in music offers opportunities to develop leadership skills, and identify personal examples of leadership in school and/or non-school settings.
MU.912.F.3.2:	Summarize copyright laws that govern printed, recorded, and on-line music to promote legal and responsible use of intellectual property and technology.
MU.912.F.3.3:	Define, prioritize, monitor, and successfully complete tasks related to individual musical performance or project presentation, without direct oversight, demonstrating skills for use in the workplace.
MU.912.H.1.1:	Investigate and discuss how a culture's traditions are reflected through its music. **Clarifications:** e.g., patriotic, folk, celebration, entertainment, spiritual
MU.912.H.1.2:	Compare the work of, and influences on, two or more exemplary composers in the performance medium studied in class. **Clarifications:** e.g., vocal, instrumental, guitar, keyboard, electronic, handbells
MU.912.H.1.4:	Analyze how Western music has been influenced by historical and current world cultures.
MU.912.H.1.5:	Analyze music within cultures to gain understanding of authentic performance practices.
MU.912.H.2.1:	Evaluate the social impact of music on specific historical periods.
MU.912.H.2.4:	Examine the effects of developing technology on composition, performance, and acquisition of music.
MU.912.H.3.1:	Apply knowledge of science, math, and music to demonstrate, through an acoustic or digital performance medium, how sound production affects musical performance. **Clarifications:** e.g., acoustics, sound amplification, materials, mechanics
MU.912.H.3.2:	Combine personal interest with skills and knowledge from a non-music class to explore, design, and present a music-based or music-enhanced topic of interest to demonstrate the ability to make transfers across contexts. **Clarifications:** e.g., music and health, Holocaust, tolerance, African American history, world languages, scientific research, data analysis, problem-solving, public speaking
MU.912.O.1.1:	Evaluate the organizational principles and conventions in musical works and discuss their effect on structure. **Clarifications:** e.g., rhythm, melody, timbre, form, tonality, harmony, texture; solo, chamber ensemble, large ensemble
MU.912.O.2.1:	Transfer accepted composition conventions and performance practices of a specific style to a contrasting style of music.
MU.912.O.3.1:	Analyze expressive elements in a musical work and describe how the choices and manipulations of the elements support, for the listener, the implied meaning of the composer/performer. **Clarifications:** e.g., tempo markings, expression markings, articulation markings, phrasing, scales, modes, harmonic structure, timbre choice, rhythm, orchestration
MU.912.O.3.2:	Interpret and perform expressive elements indicated by the musical score and/or conductor.
MU.912.S.1.1:	Improvise rhythmic and melodic phrases over harmonic progressions. **Clarifications:** e.g., using text or scat syllables
MU.912.S.1.4:	Perform and notate, independently and accurately, melodies by ear. **Clarifications:** e.g., singing, playing, writing
MU.912.S.2.1:	Apply the ability to memorize and internalize musical structure, accurate and expressive details, and processing skills to the creation or performance of music literature. **Clarifications:**

	e.g., memorization, sequential process
MU.912.S.2.2:	Transfer expressive elements and performance techniques from one piece of music to another.
MU.912.S.3.1:	Synthesize a broad range of musical skills by performing a varied repertoire with expression, appropriate stylistic interpretation, technical accuracy, and kinesthetic energy.
MU.912.S.3.2:	Sight-read music accurately and expressively to show synthesis of skills. **Clarifications:** e.g., musical elements, expressive qualities, performance technique
MU.912.S.3.3:	Transcribe aurally presented songs into melodic and/or rhythmic notation to show synthesis of aural and notational skills.
MU.912.S.3.4:	Analyze and describe the effect of rehearsal sessions and/or strategies on refinement of skills and techniques.
MU.912.S.3.5:	Develop and demonstrate proper vocal or instrumental technique. **Clarifications:** e.g., posture, breathing, fingering, embouchure, bow technique, tuning, strumming
MA.K12.MTR.1.1:	Mathematicians who participate in effortful learning both individually and with others: • Analyze the problem in a way that makes sense given the task. • Ask questions that will help with solving the task. • Build perseverance by modifying methods as needed while solving a challenging task. • Stay engaged and maintain a positive mindset when working to solve tasks. • Help and support each other when attempting a new method or approach. **Clarifications:** Teachers who encourage students to participate actively in effortful learning both individually and with others: • Cultivate a community of growth mindset learners. • Foster perseverance in students by choosing tasks that are challenging. • Develop students' ability to analyze and problem solve. • Recognize students' effort when solving challenging problems.
MA.K12.MTR.2.1:	Demonstrate understanding by representing problems in multiple ways. Mathematicians who demonstrate understanding by representing problems in multiple ways: • Build understanding through modeling and using manipulatives. • Represent solutions to problems in multiple ways using objects, drawings, tables, graphs and equations. • Progress from modeling problems with objects and drawings to using algorithms and equations. • Express connections between concepts and representations. • Choose a representation based on the given context or purpose. **Clarifications:** Teachers who encourage students to demonstrate understanding by representing problems in multiple ways: • Help students make connections between concepts and representations. • Provide opportunities for students to use manipulatives when investigating concepts. • Guide students from concrete to pictorial to abstract representations as understanding progresses. • Show students that various representations can have different purposes and can be useful in different situations.
MA.K12.MTR.3.1:	Complete tasks with mathematical fluency. Mathematicians who complete tasks with mathematical fluency: • Select efficient and appropriate methods for solving problems within the given context. • Maintain flexibility and accuracy while performing procedures and mental calculations. • Complete tasks accurately and with confidence. • Adapt procedures to apply them to a new context. • Use feedback to improve efficiency when performing calculations. **Clarifications:** Teachers who encourage students to complete tasks with mathematical fluency: • Provide students with the flexibility to solve problems by selecting a procedure that allows them to solve efficiently and accurately. • Offer multiple opportunities for students to practice efficient and generalizable methods. • Provide opportunities for students to reflect on the method they used and determine if a more efficient method could have been used.
MA.K12.MTR.4.1:	Engage in discussions that reflect on the mathematical thinking of self and others. Mathematicians who engage in discussions that reflect on the mathematical thinking of self and others: • Communicate mathematical ideas, vocabulary and methods effectively. • Analyze the mathematical thinking of others. • Compare the efficiency of a method to those expressed by others. • Recognize errors and suggest how to correctly solve the task. • Justify results by explaining methods and processes. • Construct possible arguments based on evidence. **Clarifications:** Teachers who encourage students to engage in discussions that reflect on the mathematical thinking of self and others: • Establish a culture in which students ask questions of the teacher and their peers, and error is an opportunity for learning. • Create opportunities for students to discuss their thinking with peers. • Select, sequence and present student work to advance and deepen understanding of correct and increasingly efficient methods. • Develop students' ability to justify methods and compare their responses to the responses of their peers.
	Use patterns and structure to help understand and connect mathematical concepts. Mathematicians who use patterns and structure to help understand and connect mathematical concepts:

MA.K12.MTR.5.1:	• Focus on relevant details within a problem. • Create plans and procedures to logically order events, steps or ideas to solve problems. • Decompose a complex problem into manageable parts. • Relate previously learned concepts to new concepts. • Look for similarities among problems. • Connect solutions of problems to more complicated large-scale situations. **Clarifications:** Teachers who encourage students to use patterns and structure to help understand and connect mathematical concepts: • Help students recognize the patterns in the world around them and connect these patterns to mathematical concepts. • Support students to develop generalizations based on the similarities found among problems. • Provide opportunities for students to create plans and procedures to solve problems. • Develop students' ability to construct relationships between their current understanding and more sophisticated ways of thinking.
MA.K12.MTR.6.1:	Assess the reasonableness of solutions. Mathematicians who assess the reasonableness of solutions: • Estimate to discover possible solutions. • Use benchmark quantities to determine if a solution makes sense. • Check calculations when solving problems. • Verify possible solutions by explaining the methods used. • Evaluate results based on the given context. **Clarifications:** Teachers who encourage students to assess the reasonableness of solutions: • Have students estimate or predict solutions prior to solving. • Prompt students to continually ask, "Does this solution make sense? How do you know?" • Reinforce that students check their work as they progress within and after a task. • Strengthen students' ability to verify solutions through justifications.
MA.K12.MTR.7.1:	Apply mathematics to real-world contexts. Mathematicians who apply mathematics to real-world contexts: • Connect mathematical concepts to everyday experiences. • Use models and methods to understand, represent and solve problems. • Perform investigations to gather data or determine if a method is appropriate. • Redesign models and methods to improve accuracy or efficiency. **Clarifications:** Teachers who encourage students to apply mathematics to real-world contexts: • Provide opportunities for students to create models, both concrete and abstract, and perform investigations. • Challenge students to question the accuracy of their models and methods. • Support students as they validate conclusions by comparing them to the given situation. • Indicate how various concepts can be applied to other disciplines.
ELA.K12.EE.1.1:	Cite evidence to explain and justify reasoning. **Clarifications:** K-1 Students include textual evidence in their oral communication with guidance and support from adults. The evidence can consist of details from the text without naming the text. During 1st grade, students learn how to incorporate the evidence in their writing. 2-3 Students include relevant textual evidence in their written and oral communication. Students should name the text when they refer to it. In 3rd grade, students should use a combination of direct and indirect citations. 4-5 Students continue with previous skills and reference comments made by speakers and peers. Students cite texts that they've directly quoted, paraphrased, or used for information. When writing, students will use the form of citation dictated by the instructor or the style guide referenced by the instructor. 6-8 Students continue with previous skills and use a style guide to create a proper citation. 9-12 Students continue with previous skills and should be aware of existing style guides and the ways in which they differ.
ELA.K12.EE.2.1:	Read and comprehend grade-level complex texts proficiently. **Clarifications:** See Text Complexity for grade-level complexity bands and a text complexity rubric.
ELA.K12.EE.3.1:	Make inferences to support comprehension. **Clarifications:** Students will make inferences before the words infer or inference are introduced. Kindergarten students will answer questions like "Why is the girl smiling?" or make predictions about what will happen based on the title page. Students will use the terms and apply them in 2nd grade and beyond.
ELA.K12.EE.4.1:	Use appropriate collaborative techniques and active listening skills when engaging in discussions in a variety of situations. **Clarifications:** In kindergarten, students learn to listen to one another respectfully. In grades 1-2, students build upon these skills by justifying what they are thinking. For example: "I think _____ because _____." The collaborative conversations are becoming academic conversations. In grades 3-12, students engage in academic conversations discussing claims and justifying their reasoning, refining and applying skills. Students build on ideas, propel the conversation, and support claims and counterclaims with evidence.
	Use the accepted rules governing a specific format to create quality work. **Clarifications:**

ELA.K12.EE.5.1:	Students will incorporate skills learned into work products to produce quality work. For students to incorporate these skills appropriately, they must receive instruction. A 3rd grade student creating a poster board display must have instruction in how to effectively present information to do quality work.
ELA.K12.EE.6.1:	Use appropriate voice and tone when speaking or writing. **Clarifications:** In kindergarten and 1st grade, students learn the difference between formal and informal language. For example, the way we talk to our friends differs from the way we speak to adults. In 2nd grade and beyond, students practice appropriate social and academic language to discuss texts.
DA.912.F.3.8:	Demonstrate effective teamwork and accountability, using compromise, collaboration, and conflict resolution, to set and achieve goals as required in the work environment.
DA.912.S.2.1:	Sustain focused attention, respect, and discipline during class, rehearsal, and performance.
ELD.K12.ELL.SI.1:	English language learners communicate for social and instructional purposes within the school setting.

General Course Information and Notes

VERSION DESCRIPTION

This year-long, beginning-level class, designed for students with one year of experience or less in a choral performing group, promotes the enjoyment and appreciation of music through performance of basic, high-quality choral music. Rehearsals focus on the development of critical listening/aural skills; foundational instrumental technique and skills, music literacy, and ensemble skills; and aesthetic musical awareness culminating in periodic public performances.

GENERAL NOTES

All instruction related to Music benchmarks should be framed by the Big Ideas and Enduring Understandings. Non-Music benchmarks listed in this course are also required and should be fully integrated in support of arts instruction.

Special Note: This course may require students to participate in extra rehearsals and performances beyond the school day.

Florida's Benchmarks for Excellent Student Thinking (B.E.S.T.) Standards
This course includes Florida's B.E.S.T. ELA Expectations (EE) and Mathematical Thinking and Reasoning Standards (MTRs) for students. Florida educators should intentionally embed these standards within the content and their instruction as applicable. For guidance on the implementation of the EEs and MTRs, please visit cpalms.org/Standards/BEST_Standards.aspx and select the appropriate B.E.S.T. Standards package.

English Language Development ELD Standards Special Notes Section:
Teachers are required to provide listening, speaking, reading and writing instruction that allows English language learners (ELL) to communicate for social and instructional purposes within the school setting. For the given level of English language proficiency and with visual, graphic, or interactive support, students will interact with grade level words, expressions, sentences and discourse to process or produce language necessary for academic success. The ELD standard should specify a relevant content area concept or topic of study chosen by curriculum developers and teachers which maximizes an ELL's need for communication and social skills. To access an ELL supporting document which delineates performance definitions and descriptors, please click on the following link: cpalms.org/uploads/docs/standards/eld/SI.pdf

GENERAL INFORMATION

Course Number: 1303310

Course Path: Section: Grades PreK to 12 Education Courses > **Grade Group:** Grades 9 to 12 and Adult Education Courses > **Subject:** Music Education > **SubSubject:** Choral Music > **Abbreviated Title:** CHORUS 2

Number of Credits: One (1) credit

Course Length: Year (Y)

Course Type: Core Academic Course

Course Level: 2

Course Status: Draft - Course Pending Approval

Grade Level(s): 9,10,11,12

Graduation Requirement: Performing/Fine Arts

Educator Certifications

Music (Elementary and Secondary Grades K-12)
Vocal Music (Elementary and Secondary Grades K-12)

Chorus 3 (#1303320) 2022 - And Beyond

Course Standards

Name	Description
MU.912.C.1.1:	Apply listening strategies to promote appreciation and understanding of unfamiliar musical works. **Clarifications:** e.g., listening maps, active listening, checklists
MU.912.C.1.2:	Compare, using correct music vocabulary, the aesthetic impact of two or more performances of a musical work to one's own hypothesis of the composer's intent. **Clarifications:** e.g., quality recordings, individual and peer-group performances, composer notes, instrumentation, expressive elements, title
MU.912.C.1.4:	Compare and perform a variety of vocal styles and ensembles.
MU.912.C.2.1:	Evaluate and make appropriate adjustments to personal performance in solo and ensembles.
MU.912.C.2.2:	Evaluate performance quality in recorded and/or live performances.
MU.912.C.2.3:	Evaluate one's own or other's compositions and/or improvisations and generate improvements independently or cooperatively.
MU.912.C.3.1:	Make critical evaluations, based on exemplary models, of the quality and effectiveness of performances and apply the criteria to personal development in music.
MU.912.F.3.1:	Analyze and describe how meeting one's responsibilities in music offers opportunities to develop leadership skills, and identify personal examples of leadership in school and/or non-school settings.
MU.912.F.3.2:	Summarize copyright laws that govern printed, recorded, and on-line music to promote legal and responsible use of intellectual property and technology.
MU.912.F.3.3:	Define, prioritize, monitor, and successfully complete tasks related to individual musical performance or project presentation, without direct oversight, demonstrating skills for use in the workplace.
MU.912.F.3.4:	Design and implement a personal learning plan, related to the study of music, which demonstrates self-assessment, brain-storming, decision-making, and initiative to advance skills and/or knowledge.
MU.912.H.1.1:	Investigate and discuss how a culture's traditions are reflected through its music. **Clarifications:** e.g., patriotic, folk, celebration, entertainment, spiritual
MU.912.H.1.2:	Compare the work of, and influences on, two or more exemplary composers in the performance medium studied in class. **Clarifications:** e.g., vocal, instrumental, guitar, keyboard, electronic, handbells
MU.912.H.1.3:	Compare two or more works of a composer across performance media. **Clarifications:** e.g., orchestral and choral; guitar and string quartet; piano solo and piano concerto
MU.912.H.1.4:	Analyze how Western music has been influenced by historical and current world cultures.
MU.912.H.1.5:	Analyze music within cultures to gain understanding of authentic performance practices.
MU.912.H.2.1:	Evaluate the social impact of music on specific historical periods.
MU.912.H.2.3:	Analyze the evolution of a music genre. **Clarifications:** e.g., jazz, blues
MU.912.H.3.1:	Apply knowledge of science, math, and music to demonstrate, through an acoustic or digital performance medium, how sound production affects musical performance. **Clarifications:** e.g., acoustics, sound amplification, materials, mechanics
MU.912.H.3.2:	Combine personal interest with skills and knowledge from a non-music class to explore, design, and present a music-based or music-enhanced topic of interest to demonstrate the ability to make transfers across contexts. **Clarifications:** e.g., music and health, Holocaust, tolerance, African American history, world languages, scientific research, data analysis, problem-solving, public speaking
MU.912.O.1.1:	Evaluate the organizational principles and conventions in musical works and discuss their effect on structure. **Clarifications:** e.g., rhythm, melody, timbre, form, tonality, harmony, texture; solo, chamber ensemble, large ensemble
MU.912.O.2.1:	Transfer accepted composition conventions and performance practices of a specific style to a contrasting style of music.
MU.912.O.3.1:	Analyze expressive elements in a musical work and describe how the choices and manipulations of the elements support, for the listener, the implied meaning of the composer/performer. **Clarifications:** e.g., tempo markings, expression markings, articulation markings, phrasing, scales, modes, harmonic structure, timbre choice, rhythm, orchestration
MU.912.O.3.2:	Interpret and perform expressive elements indicated by the musical score and/or conductor.
MU.912.S.1.1:	Improvise rhythmic and melodic phrases over harmonic progressions. **Clarifications:**

	e.g., using text or scat syllables
MU.912.S.1.4:	Perform and notate, independently and accurately, melodies by ear. **Clarifications:** e.g., singing, playing, writing
MU.912.S.2.1:	Apply the ability to memorize and internalize musical structure, accurate and expressive details, and processing skills to the creation or performance of music literature. **Clarifications:** e.g., memorization, sequential process
MU.912.S.2.2:	Transfer expressive elements and performance techniques from one piece of music to another.
MU.912.S.3.1:	Synthesize a broad range of musical skills by performing a varied repertoire with expression, appropriate stylistic interpretation, technical accuracy, and kinesthetic energy.
MU.912.S.3.2:	Sight-read music accurately and expressively to show synthesis of skills. **Clarifications:** e.g., musical elements, expressive qualities, performance technique
MU.912.S.3.3:	Transcribe aurally presented songs into melodic and/or rhythmic notation to show synthesis of aural and notational skills.
MU.912.S.3.4:	Analyze and describe the effect of rehearsal sessions and/or strategies on refinement of skills and techniques.
MU.912.S.3.5:	Develop and demonstrate proper vocal or instrumental technique. **Clarifications:** e.g., posture, breathing, fingering, embouchure, bow technique, tuning, strumming
MA.K12.MTR.1.1:	Mathematicians who participate in effortful learning both individually and with others: • Analyze the problem in a way that makes sense given the task. • Ask questions that will help with solving the task. • Build perseverance by modifying methods as needed while solving a challenging task. • Stay engaged and maintain a positive mindset when working to solve tasks. • Help and support each other when attempting a new method or approach. **Clarifications:** Teachers who encourage students to participate actively in effortful learning both individually and with others: • Cultivate a community of growth mindset learners. • Foster perseverance in students by choosing tasks that are challenging. • Develop students' ability to analyze and problem solve. • Recognize students' effort when solving challenging problems.
MA.K12.MTR.2.1:	Demonstrate understanding by representing problems in multiple ways. Mathematicians who demonstrate understanding by representing problems in multiple ways: • Build understanding through modeling and using manipulatives. • Represent solutions to problems in multiple ways using objects, drawings, tables, graphs and equations. • Progress from modeling problems with objects and drawings to using algorithms and equations. • Express connections between concepts and representations. • Choose a representation based on the given context or purpose. **Clarifications:** Teachers who encourage students to demonstrate understanding by representing problems in multiple ways: • Help students make connections between concepts and representations. • Provide opportunities for students to use manipulatives when investigating concepts. • Guide students from concrete to pictorial to abstract representations as understanding progresses. • Show students that various representations can have different purposes and can be useful in different situations.
MA.K12.MTR.3.1:	Complete tasks with mathematical fluency. Mathematicians who complete tasks with mathematical fluency: • Select efficient and appropriate methods for solving problems within the given context. • Maintain flexibility and accuracy while performing procedures and mental calculations. • Complete tasks accurately and with confidence. • Adapt procedures to apply them to a new context. • Use feedback to improve efficiency when performing calculations. **Clarifications:** Teachers who encourage students to complete tasks with mathematical fluency: • Provide students with the flexibility to solve problems by selecting a procedure that allows them to solve efficiently and accurately. • Offer multiple opportunities for students to practice efficient and generalizable methods. • Provide opportunities for students to reflect on the method they used and determine if a more efficient method could have been used.
MA.K12.MTR.4.1:	Engage in discussions that reflect on the mathematical thinking of self and others. Mathematicians who engage in discussions that reflect on the mathematical thinking of self and others: • Communicate mathematical ideas, vocabulary and methods effectively. • Analyze the mathematical thinking of others. • Compare the efficiency of a method to those expressed by others. • Recognize errors and suggest how to correctly solve the task. • Justify results by explaining methods and processes. • Construct possible arguments based on evidence. **Clarifications:**

	Teachers who encourage students to engage in discussions that reflect on the mathematical thinking of self and others: • Establish a culture in which students ask questions of the teacher and their peers, and error is an opportunity for learning. • Create opportunities for students to discuss their thinking with peers. • Select, sequence and present student work to advance and deepen understanding of correct and increasingly efficient methods. • Develop students' ability to justify methods and compare their responses to the responses of their peers.
MA.K12.MTR.5.1:	Use patterns and structure to help understand and connect mathematical concepts. Mathematicians who use patterns and structure to help understand and connect mathematical concepts: • Focus on relevant details within a problem. • Create plans and procedures to logically order events, steps or ideas to solve problems. • Decompose a complex problem into manageable parts. • Relate previously learned concepts to new concepts. • Look for similarities among problems. • Connect solutions of problems to more complicated large-scale situations. **Clarifications:** Teachers who encourage students to use patterns and structure to help understand and connect mathematical concepts: • Help students recognize the patterns in the world around them and connect these patterns to mathematical concepts. • Support students to develop generalizations based on the similarities found among problems. • Provide opportunities for students to create plans and procedures to solve problems. • Develop students' ability to construct relationships between their current understanding and more sophisticated ways of thinking.
MA.K12.MTR.6.1:	Assess the reasonableness of solutions. Mathematicians who assess the reasonableness of solutions: • Estimate to discover possible solutions. • Use benchmark quantities to determine if a solution makes sense. • Check calculations when solving problems. • Verify possible solutions by explaining the methods used. • Evaluate results based on the given context. **Clarifications:** Teachers who encourage students to assess the reasonableness of solutions: • Have students estimate or predict solutions prior to solving. • Prompt students to continually ask, "Does this solution make sense? How do you know?" • Reinforce that students check their work as they progress within and after a task. • Strengthen students' ability to verify solutions through justifications.
MA.K12.MTR.7.1:	Apply mathematics to real-world contexts. Mathematicians who apply mathematics to real-world contexts: • Connect mathematical concepts to everyday experiences. • Use models and methods to understand, represent and solve problems. • Perform investigations to gather data or determine if a method is appropriate. • Redesign models and methods to improve accuracy or efficiency. **Clarifications:** Teachers who encourage students to apply mathematics to real-world contexts: • Provide opportunities for students to create models, both concrete and abstract, and perform investigations. • Challenge students to question the accuracy of their models and methods. • Support students as they validate conclusions by comparing them to the given situation. • Indicate how various concepts can be applied to other disciplines.
ELA.K12.EE.1.1:	Cite evidence to explain and justify reasoning. **Clarifications:** K-1 Students include textual evidence in their oral communication with guidance and support from adults. The evidence can consist of details from the text without naming the text. During 1st grade, students learn how to incorporate the evidence in their writing. 2-3 Students include relevant textual evidence in their written and oral communication. Students should name the text when they refer to it. In 3rd grade, students should use a combination of direct and indirect citations. 4-5 Students continue with previous skills and reference comments made by speakers and peers. Students cite texts that they've directly quoted, paraphrased, or used for information. When writing, students will use the form of citation dictated by the instructor or the style guide referenced by the instructor. 6-8 Students continue with previous skills and use a style guide to create a proper citation. 9-12 Students continue with previous skills and should be aware of existing style guides and the ways in which they differ.
ELA.K12.EE.2.1:	Read and comprehend grade-level complex texts proficiently. **Clarifications:** See Text Complexity for grade-level complexity bands and a text complexity rubric.
ELA.K12.EE.3.1:	Make inferences to support comprehension. **Clarifications:** Students will make inferences before the words infer or inference are introduced. Kindergarten students will answer questions like "Why is the girl smiling?" or make predictions about what will happen based on the title page. Students will use the terms and apply them in 2nd grade and beyond.
	Use appropriate collaborative techniques and active listening skills when engaging in discussions in a variety of situations. **Clarifications:**

ELA.K12.EE.4.1:	In kindergarten, students learn to listen to one another respectfully. In grades 1-2, students build upon these skills by justifying what they are thinking. For example: "I think _____ because _____." The collaborative conversations are becoming academic conversations. In grades 3-12, students engage in academic conversations discussing claims and justifying their reasoning, refining and applying skills. Students build on ideas, propel the conversation, and support claims and counterclaims with evidence.
ELA.K12.EE.5.1:	Use the accepted rules governing a specific format to create quality work. **Clarifications:** Students will incorporate skills learned into work products to produce quality work. For students to incorporate these skills appropriately, they must receive instruction. A 3rd grade student creating a poster board display must have instruction in how to effectively present information to do quality work.
ELA.K12.EE.6.1:	Use appropriate voice and tone when speaking or writing. **Clarifications:** In kindergarten and 1st grade, students learn the difference between formal and informal language. For example, the way we talk to our friends differs from the way we speak to adults. In 2nd grade and beyond, students practice appropriate social and academic language to discuss texts.
DA.912.F.3.8:	Demonstrate effective teamwork and accountability, using compromise, collaboration, and conflict resolution, to set and achieve goals as required in the work environment.
DA.912.S.2.1:	Sustain focused attention, respect, and discipline during class, rehearsal, and performance.
ELD.K12.ELL.SI.1:	English language learners communicate for social and instructional purposes within the school setting.

General Course Information and Notes

VERSION DESCRIPTION

This year-long, formative class, designed for students with previous participation in a school chorus who have basic knowledge of note-reading and vocal technique, concentrates on providing students opportunities to strengthen existing skills in critical listening, vocal techniques, and ensemble performance using high-quality three- and four-part choral literature. Rehearsals focus on gaining independence in music literacy and aesthetic engagement through critical listening and thinking skills.

GENERAL NOTES

All instruction related to Music benchmarks should be framed by the Big Ideas and Enduring Understandings. Non-Music benchmarks listed in this course are also required and should be fully integrated in support of arts instruction.

Special Note: This course requires students to participate in extra rehearsals and performances beyond the school day.

Florida's Benchmarks for Excellent Student Thinking (B.E.S.T.) Standards
This course includes Florida's B.E.S.T. ELA Expectations (EE) and Mathematical Thinking and Reasoning Standards (MTRs) for students. Florida educators should intentionally embed these standards within the content and their instruction as applicable. For guidance on the implementation of the EEs and MTRs, please visit cpalms.org/Standards/BEST_Standards.aspx and select the appropriate B.E.S.T. Standards package.

English Language Development ELD Standards Special Notes Section:
Teachers are required to provide listening, speaking, reading and writing instruction that allows English language learners (ELL) to communicate for social and instructional purposes within the school setting. For the given level of English language proficiency and with visual, graphic, or interactive support, students will interact with grade level words, expressions, sentences and discourse to process or produce language necessary for academic success. The ELD standard should specify a relevant content area concept or topic of study chosen by curriculum developers and teachers which maximizes an ELL's need for communication and social skills. To access an ELL supporting document which delineates performance definitions and descriptors, please click on the following link: cpalms.org/uploads/docs/standards/eld/SI.pdf

GENERAL INFORMATION

Course Number: 1303320

Course Path: Section: Grades PreK to 12 Education Courses > **Grade Group:** Grades 9 to 12 and Adult Education Courses > **Subject:** Music Education > **SubSubject:** Choral Music >

Abbreviated Title: CHORUS 3

Number of Credits: One (1) credit

Course Length: Year (Y)

Course Type: Core Academic Course

Course Level: 2

Course Status: Draft - Course Pending Approval

Grade Level(s): 9,10,11,12

Graduation Requirement: Performing/Fine Arts

Educator Certifications

Vocal Music (Elementary and Secondary Grades K-12)

Chorus 4 (#1303330) 2022 - And Beyond

Course Standards

Name	Description
MU.912.C.1.1:	Apply listening strategies to promote appreciation and understanding of unfamiliar musical works. **Clarifications:** e.g., listening maps, active listening, checklists
MU.912.C.1.2:	Compare, using correct music vocabulary, the aesthetic impact of two or more performances of a musical work to one's own hypothesis of the composer's intent. **Clarifications:** e.g., quality recordings, individual and peer-group performances, composer notes, instrumentation, expressive elements, title
MU.912.C.1.4:	Compare and perform a variety of vocal styles and ensembles.
MU.912.C.2.1:	Evaluate and make appropriate adjustments to personal performance in solo and ensembles.
MU.912.C.2.2:	Evaluate performance quality in recorded and/or live performances.
MU.912.C.2.3:	Evaluate one's own or other's compositions and/or improvisations and generate improvements independently or cooperatively.
MU.912.C.3.1:	Make critical evaluations, based on exemplary models, of the quality and effectiveness of performances and apply the criteria to personal development in music.
MU.912.F.1.1:	Analyze and evaluate the effect of "traditional" and contemporary technologies on the development of music.
MU.912.F.2.1:	Design or refine a résumé for application to higher education or the workforce that highlights marketable skills and knowledge gained through music training. **Clarifications:** e.g., repertoire lists, technology-based work, ability to research and analyze, and examples of leadership and collaborative skills
MU.912.F.2.2:	Analyze the effect of the arts and entertainment industry on the economic and social health of communities and regions. **Clarifications:** e.g., community revitalization, industry choosing new locations, cultural and social enrichment
MU.912.F.3.1:	Analyze and describe how meeting one's responsibilities in music offers opportunities to develop leadership skills, and identify personal examples of leadership in school and/or non-school settings.
MU.912.F.3.2:	Summarize copyright laws that govern printed, recorded, and on-line music to promote legal and responsible use of intellectual property and technology.
MU.912.F.3.3:	Define, prioritize, monitor, and successfully complete tasks related to individual musical performance or project presentation, without direct oversight, demonstrating skills for use in the workplace.
MU.912.F.3.4:	Design and implement a personal learning plan, related to the study of music, which demonstrates self-assessment, brain-storming, decision-making, and initiative to advance skills and/or knowledge.
MU.912.H.1.1:	Investigate and discuss how a culture's traditions are reflected through its music. **Clarifications:** e.g., patriotic, folk, celebration, entertainment, spiritual
MU.912.H.1.2:	Compare the work of, and influences on, two or more exemplary composers in the performance medium studied in class. **Clarifications:** e.g., vocal, instrumental, guitar, keyboard, electronic, handbells
MU.912.H.1.3:	Compare two or more works of a composer across performance media. **Clarifications:** e.g., orchestral and choral; guitar and string quartet; piano solo and piano concerto
MU.912.H.1.4:	Analyze how Western music has been influenced by historical and current world cultures.
MU.912.H.1.5:	Analyze music within cultures to gain understanding of authentic performance practices.
MU.912.H.2.1:	Evaluate the social impact of music on specific historical periods.
MU.912.H.2.2:	Analyze current musical trends, including audience environments and music acquisition, to predict possible directions of music.
MU.912.H.2.4:	Examine the effects of developing technology on composition, performance, and acquisition of music.
MU.912.O.1.1:	Evaluate the organizational principles and conventions in musical works and discuss their effect on structure. **Clarifications:** e.g., rhythm, melody, timbre, form, tonality, harmony, texture; solo, chamber ensemble, large ensemble
MU.912.O.2.1:	Transfer accepted composition conventions and performance practices of a specific style to a contrasting style of music.
MU.912.O.3.1:	Analyze expressive elements in a musical work and describe how the choices and manipulations of the elements support, for the listener, the implied meaning of the composer/performer. **Clarifications:** e.g., tempo markings, expression markings, articulation markings, phrasing, scales, modes, harmonic structure, timbre choice, rhythm, orchestration
MU.912.O.3.2:	Interpret and perform expressive elements indicated by the musical score and/or conductor.
MU.912.S.1.1:	Improvise rhythmic and melodic phrases over harmonic progressions. **Clarifications:** e.g., using text or scat syllables
	Arrange a musical work by manipulating two or more aspects of the composition.

MU.912.S.1.3:	**Clarifications:** e.g., texture, mode, form, tempo, voicing
MU.912.S.1.4:	Perform and notate, independently and accurately, melodies by ear. **Clarifications:** e.g., singing, playing, writing
MU.912.S.2.1:	Apply the ability to memorize and internalize musical structure, accurate and expressive details, and processing skills to the creation or performance of music literature. **Clarifications:** e.g., memorization, sequential process
MU.912.S.2.2:	Transfer expressive elements and performance techniques from one piece of music to another.
MU.912.S.3.1:	Synthesize a broad range of musical skills by performing a varied repertoire with expression, appropriate stylistic interpretation, technical accuracy, and kinesthetic energy.
MU.912.S.3.2:	Sight-read music accurately and expressively to show synthesis of skills. **Clarifications:** e.g., musical elements, expressive qualities, performance technique
MU.912.S.3.3:	Transcribe aurally presented songs into melodic and/or rhythmic notation to show synthesis of aural and notational skills.
MU.912.S.3.4:	Analyze and describe the effect of rehearsal sessions and/or strategies on refinement of skills and techniques.
MU.912.S.3.5:	Develop and demonstrate proper vocal or instrumental technique. **Clarifications:** e.g., posture, breathing, fingering, embouchure, bow technique, tuning, strumming
MA.K12.MTR.1.1:	Mathematicians who participate in effortful learning both individually and with others: • Analyze the problem in a way that makes sense given the task. • Ask questions that will help with solving the task. • Build perseverance by modifying methods as needed while solving a challenging task. • Stay engaged and maintain a positive mindset when working to solve tasks. • Help and support each other when attempting a new method or approach. **Clarifications:** Teachers who encourage students to participate actively in effortful learning both individually and with others: • Cultivate a community of growth mindset learners. • Foster perseverance in students by choosing tasks that are challenging. • Develop students' ability to analyze and problem solve. • Recognize students' effort when solving challenging problems.
MA.K12.MTR.2.1:	Demonstrate understanding by representing problems in multiple ways. Mathematicians who demonstrate understanding by representing problems in multiple ways: • Build understanding through modeling and using manipulatives. • Represent solutions to problems in multiple ways using objects, drawings, tables, graphs and equations. • Progress from modeling problems with objects and drawings to using algorithms and equations. • Express connections between concepts and representations. • Choose a representation based on the given context or purpose. **Clarifications:** Teachers who encourage students to demonstrate understanding by representing problems in multiple ways: • Help students make connections between concepts and representations. • Provide opportunities for students to use manipulatives when investigating concepts. • Guide students from concrete to pictorial to abstract representations as understanding progresses. • Show students that various representations can have different purposes and can be useful in different situations.
MA.K12.MTR.3.1:	Complete tasks with mathematical fluency. Mathematicians who complete tasks with mathematical fluency: • Select efficient and appropriate methods for solving problems within the given context. • Maintain flexibility and accuracy while performing procedures and mental calculations. • Complete tasks accurately and with confidence. • Adapt procedures to apply them to a new context. • Use feedback to improve efficiency when performing calculations. **Clarifications:** Teachers who encourage students to complete tasks with mathematical fluency: • Provide students with the flexibility to solve problems by selecting a procedure that allows them to solve efficiently and accurately. • Offer multiple opportunities for students to practice efficient and generalizable methods. • Provide opportunities for students to reflect on the method they used and determine if a more efficient method could have been used.
MA.K12.MTR.4.1:	Engage in discussions that reflect on the mathematical thinking of self and others. Mathematicians who engage in discussions that reflect on the mathematical thinking of self and others: • Communicate mathematical ideas, vocabulary and methods effectively. • Analyze the mathematical thinking of others. • Compare the efficiency of a method to those expressed by others. • Recognize errors and suggest how to correctly solve the task. • Justify results by explaining methods and processes. • Construct possible arguments based on evidence.

	Clarifications: Teachers who encourage students to engage in discussions that reflect on the mathematical thinking of self and others: • Establish a culture in which students ask questions of the teacher and their peers, and error is an opportunity for learning. • Create opportunities for students to discuss their thinking with peers. • Select, sequence and present student work to advance and deepen understanding of correct and increasingly efficient methods. • Develop students' ability to justify methods and compare their responses to the responses of their peers.
MA.K12.MTR.5.1:	Use patterns and structure to help understand and connect mathematical concepts. Mathematicians who use patterns and structure to help understand and connect mathematical concepts: • Focus on relevant details within a problem. • Create plans and procedures to logically order events, steps or ideas to solve problems. • Decompose a complex problem into manageable parts. • Relate previously learned concepts to new concepts. • Look for similarities among problems. • Connect solutions of problems to more complicated large-scale situations. **Clarifications:** Teachers who encourage students to use patterns and structure to help understand and connect mathematical concepts: • Help students recognize the patterns in the world around them and connect these patterns to mathematical concepts. • Support students to develop generalizations based on the similarities found among problems. • Provide opportunities for students to create plans and procedures to solve problems. • Develop students' ability to construct relationships between their current understanding and more sophisticated ways of thinking.
MA.K12.MTR.6.1:	Assess the reasonableness of solutions. Mathematicians who assess the reasonableness of solutions: • Estimate to discover possible solutions. • Use benchmark quantities to determine if a solution makes sense. • Check calculations when solving problems. • Verify possible solutions by explaining the methods used. • Evaluate results based on the given context. **Clarifications:** Teachers who encourage students to assess the reasonableness of solutions: • Have students estimate or predict solutions prior to solving. • Prompt students to continually ask, "Does this solution make sense? How do you know?" • Reinforce that students check their work as they progress within and after a task. • Strengthen students' ability to verify solutions through justifications.
MA.K12.MTR.7.1:	Apply mathematics to real-world contexts. Mathematicians who apply mathematics to real-world contexts: • Connect mathematical concepts to everyday experiences. • Use models and methods to understand, represent and solve problems. • Perform investigations to gather data or determine if a method is appropriate. • Redesign models and methods to improve accuracy or efficiency. **Clarifications:** Teachers who encourage students to apply mathematics to real-world contexts: • Provide opportunities for students to create models, both concrete and abstract, and perform investigations. • Challenge students to question the accuracy of their models and methods. • Support students as they validate conclusions by comparing them to the given situation. • Indicate how various concepts can be applied to other disciplines.
ELA.K12.EE.1.1:	Cite evidence to explain and justify reasoning. **Clarifications:** K-1 Students include textual evidence in their oral communication with guidance and support from adults. The evidence can consist of details from the text without naming the text. During 1st grade, students learn how to incorporate the evidence in their writing. 2-3 Students include relevant textual evidence in their written and oral communication. Students should name the text when they refer to it. In 3rd grade, students should use a combination of direct and indirect citations. 4-5 Students continue with previous skills and reference comments made by speakers and peers. Students cite texts that they've directly quoted, paraphrased, or used for information. When writing, students will use the form of citation dictated by the instructor or the style guide referenced by the instructor. 6-8 Students continue with previous skills and use a style guide to create a proper citation. 9-12 Students continue with previous skills and should be aware of existing style guides and the ways in which they differ.
ELA.K12.EE.2.1:	Read and comprehend grade-level complex texts proficiently. **Clarifications:** See Text Complexity for grade-level complexity bands and a text complexity rubric.
ELA.K12.EE.3.1:	Make inferences to support comprehension. **Clarifications:** Students will make inferences before the words infer or inference are introduced. Kindergarten students will answer questions like "Why is the girl smiling?" or make predictions about what will happen based on the title page. Students will use the terms and apply them in 2nd grade and beyond.
	Use appropriate collaborative techniques and active listening skills when engaging in discussions in a variety of situations.

ELA.K12.EE.4.1:	**Clarifications:** In kindergarten, students learn to listen to one another respectfully. In grades 1-2, students build upon these skills by justifying what they are thinking. For example: "I think _____ because _____." The collaborative conversations are becoming academic conversations. In grades 3-12, students engage in academic conversations discussing claims and justifying their reasoning, refining and applying skills. Students build on ideas, propel the conversation, and support claims and counterclaims with evidence.
ELA.K12.EE.5.1:	Use the accepted rules governing a specific format to create quality work. **Clarifications:** Students will incorporate skills learned into work products to produce quality work. For students to incorporate these skills appropriately, they must receive instruction. A 3rd grade student creating a poster board display must have instruction in how to effectively present information to do quality work.
ELA.K12.EE.6.1:	Use appropriate voice and tone when speaking or writing. **Clarifications:** In kindergarten and 1st grade, students learn the difference between formal and informal language. For example, the way we talk to our friends differs from the way we speak to adults. In 2nd grade and beyond, students practice appropriate social and academic language to discuss texts.
DA.912.F.3.8:	Demonstrate effective teamwork and accountability, using compromise, collaboration, and conflict resolution, to set and achieve goals as required in the work environment.
DA.912.S.2.1:	Sustain focused attention, respect, and discipline during class, rehearsal, and performance.
ELD.K12.ELL.SI.1:	English language learners communicate for social and instructional purposes within the school setting.

General Course Information and Notes

VERSION DESCRIPTION

This year-long, intermediate-level class is designed for students with previous participation in a high school chorus and moderate skills in critical listening, vocal techniques, music literacy, and choral performance. Rehearsals focus on enhancing these skills and students' aesthetic engagement with music through a variety of high-quality three- and four-part choral literature, providing students with the means to learn how to reflect and use a combination of analytical, assessment, and problem-solving skills consistently to improve their own and others' performance.

GENERAL NOTES

All instruction related to Music benchmarks should be framed by the Big Ideas and Enduring Understandings. Non-Music benchmarks listed in this course are also required and should be fully integrated in support of arts instruction.

Special Note: This course requires students to participate in extra rehearsals and performances beyond the school day. Additional experiences with small ensembles and solo performance may be available. Students who enjoy the challenges and successes of this course may wish to take an accelerated music class in the future.

Florida's Benchmarks for Excellent Student Thinking (B.E.S.T.) Standards
This course includes Florida's B.E.S.T. ELA Expectations (EE) and Mathematical Thinking and Reasoning Standards (MTRs) for students. Florida educators should intentionally embed these standards within the content and their instruction as applicable. For guidance on the implementation of the EEs and MTRs, please visit cpalms.org/Standards/BEST_Standards.aspx and select the appropriate B.E.S.T. Standards package.

English Language Development ELD Standards Special Notes Section:
Teachers are required to provide listening, speaking, reading and writing instruction that allows English language learners (ELL) to communicate for social and instructional purposes within the school setting. For the given level of English language proficiency and with visual, graphic, or interactive support, students will interact with grade level words, expressions, sentences and discourse to process or produce language necessary for academic success. The ELD standard should specify a relevant content area concept or topic of study chosen by curriculum developers and teachers which maximizes an ELL's need for communication and social skills. To access an ELL supporting document which delineates performance definitions and descriptors, please click on the following link: cpalms.org/uploads/docs/standards/eld/SI.pdf

GENERAL INFORMATION

Course Number: 1303330

Course Path: Section: Grades PreK to 12 Education Courses > **Grade Group:** Grades 9 to 12 and Adult Education Courses > **Subject:** Music Education > **SubSubject:** Choral Music >
Abbreviated Title: CHORUS 4

Number of Credits: One (1) credit

Course Length: Year (Y)

Course Type: Core Academic Course

Course Level: 2

Course Status: Draft - Course Pending Approval

Grade Level(s): 9,10,11,12

Graduation Requirement: Performing/Fine Arts

Educator Certifications

Music (Elementary and Secondary Grades K-12)
Vocal Music (Elementary and Secondary Grades K-12)

Chorus 5 Honors (#1303340) 2022 - And Beyond

Course Standards

Name	Description
MU.912.C.1.1:	Apply listening strategies to promote appreciation and understanding of unfamiliar musical works. **Clarifications:** e.g., listening maps, active listening, checklists
MU.912.C.1.2:	Compare, using correct music vocabulary, the aesthetic impact of two or more performances of a musical work to one's own hypothesis of the composer's intent. **Clarifications:** e.g., quality recordings, individual and peer-group performances, composer notes, instrumentation, expressive elements, title
MU.912.C.1.4:	Compare and perform a variety of vocal styles and ensembles.
MU.912.C.2.1:	Evaluate and make appropriate adjustments to personal performance in solo and ensembles.
MU.912.C.2.2:	Evaluate performance quality in recorded and/or live performances.
MU.912.C.2.3:	Evaluate one's own or other's compositions and/or improvisations and generate improvements independently or cooperatively.
MU.912.C.3.1:	Make critical evaluations, based on exemplary models, of the quality and effectiveness of performances and apply the criteria to personal development in music.
MU.912.F.1.1:	Analyze and evaluate the effect of "traditional" and contemporary technologies on the development of music.
MU.912.F.2.1:	Design or refine a résumé for application to higher education or the workforce that highlights marketable skills and knowledge gained through music training. **Clarifications:** e.g., repertoire lists, technology-based work, ability to research and analyze, and examples of leadership and collaborative skills
MU.912.F.2.2:	Analyze the effect of the arts and entertainment industry on the economic and social health of communities and regions. **Clarifications:** e.g., community revitalization, industry choosing new locations, cultural and social enrichment
MU.912.F.2.3:	Compare the organizational structure of a professional orchestra, chorus, quintet, or other ensemble to that of a business. **Clarifications:** e.g., leadership, financial needs and structure, marketing, personnel matters, manager, travel
MU.912.F.3.1:	Analyze and describe how meeting one's responsibilities in music offers opportunities to develop leadership skills, and identify personal examples of leadership in school and/or non-school settings.
MU.912.F.3.2:	Summarize copyright laws that govern printed, recorded, and on-line music to promote legal and responsible use of intellectual property and technology.
MU.912.F.3.3:	Define, prioritize, monitor, and successfully complete tasks related to individual musical performance or project presentation, without direct oversight, demonstrating skills for use in the workplace.
MU.912.F.3.4:	Design and implement a personal learning plan, related to the study of music, which demonstrates self-assessment, brain-storming, decision-making, and initiative to advance skills and/or knowledge.
MU.912.H.1.1:	Investigate and discuss how a culture's traditions are reflected through its music. **Clarifications:** e.g., patriotic, folk, celebration, entertainment, spiritual
MU.912.H.1.2:	Compare the work of, and influences on, two or more exemplary composers in the performance medium studied in class. **Clarifications:** e.g., vocal, instrumental, guitar, keyboard, electronic, handbells
MU.912.H.1.3:	Compare two or more works of a composer across performance media. **Clarifications:** e.g., orchestral and choral; guitar and string quartet; piano solo and piano concerto
MU.912.H.1.4:	Analyze how Western music has been influenced by historical and current world cultures.
MU.912.H.1.5:	Analyze music within cultures to gain understanding of authentic performance practices.
MU.912.H.2.1:	Evaluate the social impact of music on specific historical periods.
MU.912.H.2.2:	Analyze current musical trends, including audience environments and music acquisition, to predict possible directions of music.
MU.912.H.2.3:	Analyze the evolution of a music genre. **Clarifications:** e.g., jazz, blues
MU.912.H.2.4:	Examine the effects of developing technology on composition, performance, and acquisition of music.
MU.912.H.3.1:	Apply knowledge of science, math, and music to demonstrate, through an acoustic or digital performance medium, how sound production affects musical performance. **Clarifications:** e.g., acoustics, sound amplification, materials, mechanics
MU.912.H.3.2:	Combine personal interest with skills and knowledge from a non-music class to explore, design, and present a music-based or music-enhanced topic of interest to demonstrate the ability to make transfers across contexts. **Clarifications:** e.g., music and health, Holocaust, tolerance, African American history, world languages, scientific research, data analysis, problem-solving, public

	speaking
MU.912.O.1.1:	Evaluate the organizational principles and conventions in musical works and discuss their effect on structure. **Clarifications:** e.g., rhythm, melody, timbre, form, tonality, harmony, texture; solo, chamber ensemble, large ensemble
MU.912.O.2.1:	Transfer accepted composition conventions and performance practices of a specific style to a contrasting style of music.
MU.912.O.2.2:	Transpose melodies into different modalities through performance and composition.
MU.912.O.3.1:	Analyze expressive elements in a musical work and describe how the choices and manipulations of the elements support, for the listener, the implied meaning of the composer/performer. **Clarifications:** e.g., tempo markings, expression markings, articulation markings, phrasing, scales, modes, harmonic structure, timbre choice, rhythm, orchestration
MU.912.O.3.2:	Interpret and perform expressive elements indicated by the musical score and/or conductor.
MU.912.S.1.1:	Improvise rhythmic and melodic phrases over harmonic progressions. **Clarifications:** e.g., using text or scat syllables
MU.912.S.1.2:	Compose music for voices and/or acoustic, digital, or electronic instruments.
MU.912.S.1.3:	Arrange a musical work by manipulating two or more aspects of the composition. **Clarifications:** e.g., texture, mode, form, tempo, voicing
MU.912.S.1.4:	Perform and notate, independently and accurately, melodies by ear. **Clarifications:** e.g., singing, playing, writing
MU.912.S.2.1:	Apply the ability to memorize and internalize musical structure, accurate and expressive details, and processing skills to the creation or performance of music literature. **Clarifications:** e.g., memorization, sequential process
MU.912.S.2.2:	Transfer expressive elements and performance techniques from one piece of music to another.
MU.912.S.3.1:	Synthesize a broad range of musical skills by performing a varied repertoire with expression, appropriate stylistic interpretation, technical accuracy, and kinesthetic energy.
MU.912.S.3.2:	Sight-read music accurately and expressively to show synthesis of skills. **Clarifications:** e.g., musical elements, expressive qualities, performance technique
MU.912.S.3.3:	Transcribe aurally presented songs into melodic and/or rhythmic notation to show synthesis of aural and notational skills.
MU.912.S.3.4:	Analyze and describe the effect of rehearsal sessions and/or strategies on refinement of skills and techniques.
MU.912.S.3.5:	Develop and demonstrate proper vocal or instrumental technique. **Clarifications:** e.g., posture, breathing, fingering, embouchure, bow technique, tuning, strumming
MA.K12.MTR.1.1:	Mathematicians who participate in effortful learning both individually and with others: • Analyze the problem in a way that makes sense given the task. • Ask questions that will help with solving the task. • Build perseverance by modifying methods as needed while solving a challenging task. • Stay engaged and maintain a positive mindset when working to solve tasks. • Help and support each other when attempting a new method or approach. **Clarifications:** Teachers who encourage students to participate actively in effortful learning both individually and with others: • Cultivate a community of growth mindset learners. • Foster perseverance in students by choosing tasks that are challenging. • Develop students' ability to analyze and problem solve. • Recognize students' effort when solving challenging problems.
MA.K12.MTR.2.1:	Demonstrate understanding by representing problems in multiple ways. Mathematicians who demonstrate understanding by representing problems in multiple ways: • Build understanding through modeling and using manipulatives. • Represent solutions to problems in multiple ways using objects, drawings, tables, graphs and equations. • Progress from modeling problems with objects and drawings to using algorithms and equations. • Express connections between concepts and representations. • Choose a representation based on the given context or purpose. **Clarifications:** Teachers who encourage students to demonstrate understanding by representing problems in multiple ways: • Help students make connections between concepts and representations. • Provide opportunities for students to use manipulatives when investigating concepts. • Guide students from concrete to pictorial to abstract representations as understanding progresses. • Show students that various representations can have different purposes and can be useful in different situations.
	Complete tasks with mathematical fluency. Mathematicians who complete tasks with mathematical fluency: • Select efficient and appropriate methods for solving problems within the given context.

MA.K12.MTR.3.1:	• Maintain flexibility and accuracy while performing procedures and mental calculations. • Complete tasks accurately and with confidence. • Adapt procedures to apply them to a new context. • Use feedback to improve efficiency when performing calculations. **Clarifications:** Teachers who encourage students to complete tasks with mathematical fluency: • Provide students with the flexibility to solve problems by selecting a procedure that allows them to solve efficiently and accurately. • Offer multiple opportunities for students to practice efficient and generalizable methods. • Provide opportunities for students to reflect on the method they used and determine if a more efficient method could have been used.
MA.K12.MTR.4.1:	Engage in discussions that reflect on the mathematical thinking of self and others. Mathematicians who engage in discussions that reflect on the mathematical thinking of self and others: • Communicate mathematical ideas, vocabulary and methods effectively. • Analyze the mathematical thinking of others. • Compare the efficiency of a method to those expressed by others. • Recognize errors and suggest how to correctly solve the task. • Justify results by explaining methods and processes. • Construct possible arguments based on evidence. **Clarifications:** Teachers who encourage students to engage in discussions that reflect on the mathematical thinking of self and others: • Establish a culture in which students ask questions of the teacher and their peers, and error is an opportunity for learning. • Create opportunities for students to discuss their thinking with peers. • Select, sequence and present student work to advance and deepen understanding of correct and increasingly efficient methods. • Develop students' ability to justify methods and compare their responses to the responses of their peers.
MA.K12.MTR.5.1:	Use patterns and structure to help understand and connect mathematical concepts. Mathematicians who use patterns and structure to help understand and connect mathematical concepts: • Focus on relevant details within a problem. • Create plans and procedures to logically order events, steps or ideas to solve problems. • Decompose a complex problem into manageable parts. • Relate previously learned concepts to new concepts. • Look for similarities among problems. • Connect solutions of problems to more complicated large-scale situations. **Clarifications:** Teachers who encourage students to use patterns and structure to help understand and connect mathematical concepts: • Help students recognize the patterns in the world around them and connect these patterns to mathematical concepts. • Support students to develop generalizations based on the similarities found among problems. • Provide opportunities for students to create plans and procedures to solve problems. • Develop students' ability to construct relationships between their current understanding and more sophisticated ways of thinking.
MA.K12.MTR.6.1:	Assess the reasonableness of solutions. Mathematicians who assess the reasonableness of solutions: • Estimate to discover possible solutions. • Use benchmark quantities to determine if a solution makes sense. • Check calculations when solving problems. • Verify possible solutions by explaining the methods used. • Evaluate results based on the given context. **Clarifications:** Teachers who encourage students to assess the reasonableness of solutions: • Have students estimate or predict solutions prior to solving. • Prompt students to continually ask, "Does this solution make sense? How do you know?" • Reinforce that students check their work as they progress within and after a task. • Strengthen students' ability to verify solutions through justifications.
MA.K12.MTR.7.1:	Apply mathematics to real-world contexts. Mathematicians who apply mathematics to real-world contexts: • Connect mathematical concepts to everyday experiences. • Use models and methods to understand, represent and solve problems. • Perform investigations to gather data or determine if a method is appropriate. • Redesign models and methods to improve accuracy or efficiency. **Clarifications:** Teachers who encourage students to apply mathematics to real-world contexts: • Provide opportunities for students to create models, both concrete and abstract, and perform investigations. • Challenge students to question the accuracy of their models and methods. • Support students as they validate conclusions by comparing them to the given situation. • Indicate how various concepts can be applied to other disciplines.
	Cite evidence to explain and justify reasoning. **Clarifications:** K-1 Students include textual evidence in their oral communication with guidance and support from adults. The evidence can consist of details from the text without naming the text. During 1st grade, students learn how to incorporate the evidence in their writing. 2-3 Students include relevant textual evidence in their written and oral communication. Students should name the text when they refer to it.

ELA.K12.EE.1.1:	In 3rd grade, students should use a combination of direct and indirect citations. 4-5 Students continue with previous skills and reference comments made by speakers and peers. Students cite texts that they've directly quoted, paraphrased, or used for information. When writing, students will use the form of citation dictated by the instructor or the style guide referenced by the instructor. 6-8 Students continue with previous skills and use a style guide to create a proper citation. 9-12 Students continue with previous skills and should be aware of existing style guides and the ways in which they differ.
ELA.K12.EE.2.1:	Read and comprehend grade-level complex texts proficiently. **Clarifications:** See Text Complexity for grade-level complexity bands and a text complexity rubric.
ELA.K12.EE.3.1:	Make inferences to support comprehension. **Clarifications:** Students will make inferences before the words infer or inference are introduced. Kindergarten students will answer questions like "Why is the girl smiling?" or make predictions about what will happen based on the title page. Students will use the terms and apply them in 2nd grade and beyond.
ELA.K12.EE.4.1:	Use appropriate collaborative techniques and active listening skills when engaging in discussions in a variety of situations. **Clarifications:** In kindergarten, students learn to listen to one another respectfully. In grades 1-2, students build upon these skills by justifying what they are thinking. For example: "I think _____ because _____." The collaborative conversations are becoming academic conversations. In grades 3-12, students engage in academic conversations discussing claims and justifying their reasoning, refining and applying skills. Students build on ideas, propel the conversation, and support claims and counterclaims with evidence.
ELA.K12.EE.5.1:	Use the accepted rules governing a specific format to create quality work. **Clarifications:** Students will incorporate skills learned into work products to produce quality work. For students to incorporate these skills appropriately, they must receive instruction. A 3rd grade student creating a poster board display must have instruction in how to effectively present information to do quality work.
ELA.K12.EE.6.1:	Use appropriate voice and tone when speaking or writing. **Clarifications:** In kindergarten and 1st grade, students learn the difference between formal and informal language. For example, the way we talk to our friends differs from the way we speak to adults. In 2nd grade and beyond, students practice appropriate social and academic language to discuss texts.
DA.912.F.3.8:	Demonstrate effective teamwork and accountability, using compromise, collaboration, and conflict resolution, to set and achieve goals as required in the work environment.
DA.912.S.2.1:	Sustain focused attention, respect, and discipline during class, rehearsal, and performance.
ELD.K12.ELL.SI.1:	English language learners communicate for social and instructional purposes within the school setting.
SS.912.H.1.5:	Examine artistic response to social issues and new ideas in various cultures. **Clarifications:** Examples are Victor Hugo's Les Miserables, Langston Hughes' poetry, Pete Seeger's Bring 'Em Home.

General Course Information and Notes

VERSION DESCRIPTION

This year-long, advanced class is designed for students with previous participation in a high school chorus who have demonstrated a capacity for developing advanced listening/aural skills and advanced knowledge of vocal techniques, musical literacy, and choral performance. Chorus V focuses on development and application of these skills and provides opportunities for aesthetic engagement and making individual musical choices, where appropriate, while preparing a variety of high-quality choral literature.

GENERAL NOTES

All instruction related to Music benchmarks should be framed by the Big Ideas and Enduring Understandings. Non-Music benchmarks listed in this course are also required and should be fully integrated in support of arts instruction.

Special Notes: Students may be required to attend and/or participate in rehearsals and performances outside the school day to support, extend, and assess learning in the classroom. Additional experiences with small ensembles, solo performance, and leadership opportunities may be available. Students who enjoy the challenges and successes of this course may wish to take an accelerated music class in the future.

Honors and Advanced Level Course Note: Advanced courses require a greater demand on students through increased academic rigor. Academic rigor is obtained through the application, analysis, evaluation, and creation of complex ideas that are often abstract and multi-faceted. Students are challenged to think and collaborate critically on the content they are learning. Honors level rigor will be achieved by increasing text complexity through text selection, focus on high-level qualitative measures, and complexity of task. Instruction will be structured to give students a deeper understanding of conceptual themes and organization within and across disciplines. Academic rigor is more than simply assigning to students a greater quantity of work.

Florida's Benchmarks for Excellent Student Thinking (B.E.S.T.) Standards
This course includes Florida's B.E.S.T. ELA Expectations (EE) and Mathematical Thinking and Reasoning Standards (MTRs) for students. Florida educators should intentionally

embed these standards within the content and their instruction as applicable. For guidance on the implementation of the EEs and MTRs, please visit cpalms.org/Standards/BEST_Standards.aspx and select the appropriate B.E.S.T. Standards package.

English Language Development ELD Standards Special Notes Section:
Teachers are required to provide listening, speaking, reading and writing instruction that allows English language learners (ELL) to communicate for social and instructional purposes within the school setting. For the given level of English language proficiency and with visual, graphic, or interactive support, students will interact with grade level words, expressions, sentences and discourse to process or produce language necessary for academic success. The ELD standard should specify a relevant content area concept or topic of study chosen by curriculum developers and teachers which maximizes an ELL's need for communication and social skills. To access an ELL supporting document which delineates performance definitions and descriptors, please click on the following link: cpalms.org/uploads/docs/standards/eld/SI.pdf

GENERAL INFORMATION

Course Number: 1303340

Course Path: Section: Grades PreK to 12 Education Courses > **Grade Group:** Grades 9 to 12 and Adult Education Courses > **Subject:** Music Education > **SubSubject:** Choral Music >

Abbreviated Title: CHORUS 5 HON

Number of Credits: One (1) credit

Course Length: Year (Y)

Course Attributes:

- Honors

Course Type: Core Academic Course

Course Level: 3

Course Status: Draft - Course Pending Approval

Grade Level(s): 9,10,11,12

Graduation Requirement: Performing/Fine Arts

Educator Certifications

Vocal Music (Elementary and Secondary Grades K-12)
Music (Elementary and Secondary Grades K-12)

Chorus 6 Honors (#1303350) 2022 - And Beyond

Course Standards

Name	Description
MU.912.C.1.1:	Apply listening strategies to promote appreciation and understanding of unfamiliar musical works. **Clarifications:** e.g., listening maps, active listening, checklists
MU.912.C.1.2:	Compare, using correct music vocabulary, the aesthetic impact of two or more performances of a musical work to one's own hypothesis of the composer's intent. **Clarifications:** e.g., quality recordings, individual and peer-group performances, composer notes, instrumentation, expressive elements, title
MU.912.C.1.4:	Compare and perform a variety of vocal styles and ensembles.
MU.912.C.2.1:	Evaluate and make appropriate adjustments to personal performance in solo and ensembles.
MU.912.C.2.2:	Evaluate performance quality in recorded and/or live performances.
MU.912.C.2.3:	Evaluate one's own or other's compositions and/or improvisations and generate improvements independently or cooperatively.
MU.912.C.3.1:	Make critical evaluations, based on exemplary models, of the quality and effectiveness of performances and apply the criteria to personal development in music.
MU.912.F.1.1:	Analyze and evaluate the effect of "traditional" and contemporary technologies on the development of music.
MU.912.F.1.2:	Incorporate or adapt new, emerging, or previously unfamiliar technology to create an innovative composition, music project, or related product.
MU.912.F.2.1:	Design or refine a résumé for application to higher education or the workforce that highlights marketable skills and knowledge gained through music training. **Clarifications:** e.g., repertoire lists, technology-based work, ability to research and analyze, and examples of leadership and collaborative skills
MU.912.F.2.2:	Analyze the effect of the arts and entertainment industry on the economic and social health of communities and regions. **Clarifications:** e.g., community revitalization, industry choosing new locations, cultural and social enrichment
MU.912.F.2.3:	Compare the organizational structure of a professional orchestra, chorus, quintet, or other ensemble to that of a business. **Clarifications:** e.g., leadership, financial needs and structure, marketing, personnel matters, manager, travel
MU.912.F.3.1:	Analyze and describe how meeting one's responsibilities in music offers opportunities to develop leadership skills, and identify personal examples of leadership in school and/or non-school settings.
MU.912.F.3.2:	Summarize copyright laws that govern printed, recorded, and on-line music to promote legal and responsible use of intellectual property and technology.
MU.912.F.3.3:	Define, prioritize, monitor, and successfully complete tasks related to individual musical performance or project presentation, without direct oversight, demonstrating skills for use in the workplace.
MU.912.F.3.4:	Design and implement a personal learning plan, related to the study of music, which demonstrates self-assessment, brain-storming, decision-making, and initiative to advance skills and/or knowledge.
MU.912.H.1.1:	Investigate and discuss how a culture's traditions are reflected through its music. **Clarifications:** e.g., patriotic, folk, celebration, entertainment, spiritual
MU.912.H.1.2:	Compare the work of, and influences on, two or more exemplary composers in the performance medium studied in class. **Clarifications:** e.g., vocal, instrumental, guitar, keyboard, electronic, handbells
MU.912.H.1.3:	Compare two or more works of a composer across performance media. **Clarifications:** e.g., orchestral and choral; guitar and string quartet; piano solo and piano concerto
MU.912.H.1.4:	Analyze how Western music has been influenced by historical and current world cultures.
MU.912.H.1.5:	Analyze music within cultures to gain understanding of authentic performance practices.
MU.912.H.2.1:	Evaluate the social impact of music on specific historical periods.
MU.912.H.2.2:	Analyze current musical trends, including audience environments and music acquisition, to predict possible directions of music.
MU.912.H.2.3:	Analyze the evolution of a music genre. **Clarifications:** e.g., jazz, blues
MU.912.H.2.4:	Examine the effects of developing technology on composition, performance, and acquisition of music.
MU.912.H.3.1:	Apply knowledge of science, math, and music to demonstrate, through an acoustic or digital performance medium, how sound production affects musical performance. **Clarifications:** e.g., acoustics, sound amplification, materials, mechanics
	Combine personal interest with skills and knowledge from a non-music class to explore, design, and present a music-based or music-enhanced topic of interest to demonstrate the ability to make transfers across contexts.

MU.912.H.3.2:	**Clarifications:** e.g., music and health, Holocaust, tolerance, African American history, world languages, scientific research, data analysis, problem-solving, public speaking
MU.912.O.1.1:	Evaluate the organizational principles and conventions in musical works and discuss their effect on structure. **Clarifications:** e.g., rhythm, melody, timbre, form, tonality, harmony, texture; solo, chamber ensemble, large ensemble
MU.912.O.2.1:	Transfer accepted composition conventions and performance practices of a specific style to a contrasting style of music.
MU.912.O.2.2:	Transpose melodies into different modalities through performance and composition.
MU.912.O.3.1:	Analyze expressive elements in a musical work and describe how the choices and manipulations of the elements support, for the listener, the implied meaning of the composer/performer. **Clarifications:** e.g., tempo markings, expression markings, articulation markings, phrasing, scales, modes, harmonic structure, timbre choice, rhythm, orchestration
MU.912.O.3.2:	Interpret and perform expressive elements indicated by the musical score and/or conductor.
MU.912.S.1.1:	Improvise rhythmic and melodic phrases over harmonic progressions. **Clarifications:** e.g., using text or scat syllables
MU.912.S.1.2:	Compose music for voices and/or acoustic, digital, or electronic instruments.
MU.912.S.1.3:	Arrange a musical work by manipulating two or more aspects of the composition. **Clarifications:** e.g., texture, mode, form, tempo, voicing
MU.912.S.1.4:	Perform and notate, independently and accurately, melodies by ear. **Clarifications:** e.g., singing, playing, writing
MU.912.S.2.1:	Apply the ability to memorize and internalize musical structure, accurate and expressive details, and processing skills to the creation or performance of music literature. **Clarifications:** e.g., memorization, sequential process
MU.912.S.2.2:	Transfer expressive elements and performance techniques from one piece of music to another.
MU.912.S.3.1:	Synthesize a broad range of musical skills by performing a varied repertoire with expression, appropriate stylistic interpretation, technical accuracy, and kinesthetic energy.
MU.912.S.3.2:	Sight-read music accurately and expressively to show synthesis of skills. **Clarifications:** e.g., musical elements, expressive qualities, performance technique
MU.912.S.3.3:	Transcribe aurally presented songs into melodic and/or rhythmic notation to show synthesis of aural and notational skills.
MU.912.S.3.4:	Analyze and describe the effect of rehearsal sessions and/or strategies on refinement of skills and techniques.
MU.912.S.3.5:	Develop and demonstrate proper vocal or instrumental technique. **Clarifications:** e.g., posture, breathing, fingering, embouchure, bow technique, tuning, strumming
MA.K12.MTR.1.1:	Mathematicians who participate in effortful learning both individually and with others: • Analyze the problem in a way that makes sense given the task. • Ask questions that will help with solving the task. • Build perseverance by modifying methods as needed while solving a challenging task. • Stay engaged and maintain a positive mindset when working to solve tasks. • Help and support each other when attempting a new method or approach. **Clarifications:** Teachers who encourage students to participate actively in effortful learning both individually and with others: • Cultivate a community of growth mindset learners. • Foster perseverance in students by choosing tasks that are challenging. • Develop students' ability to analyze and problem solve. • Recognize students' effort when solving challenging problems.
MA.K12.MTR.2.1:	Demonstrate understanding by representing problems in multiple ways. Mathematicians who demonstrate understanding by representing problems in multiple ways: • Build understanding through modeling and using manipulatives. • Represent solutions to problems in multiple ways using objects, drawings, tables, graphs and equations. • Progress from modeling problems with objects and drawings to using algorithms and equations. • Express connections between concepts and representations. • Choose a representation based on the given context or purpose. **Clarifications:** Teachers who encourage students to demonstrate understanding by representing problems in multiple ways: • Help students make connections between concepts and representations. • Provide opportunities for students to use manipulatives when investigating concepts. • Guide students from concrete to pictorial to abstract representations as understanding progresses. • Show students that various representations can have different purposes and can be useful in different situations.
	Complete tasks with mathematical fluency.

MA.K12.MTR.3.1:

Mathematicians who complete tasks with mathematical fluency:

- Select efficient and appropriate methods for solving problems within the given context.
- Maintain flexibility and accuracy while performing procedures and mental calculations.
- Complete tasks accurately and with confidence.
- Adapt procedures to apply them to a new context.
- Use feedback to improve efficiency when performing calculations.

Clarifications:
Teachers who encourage students to complete tasks with mathematical fluency:

- Provide students with the flexibility to solve problems by selecting a procedure that allows them to solve efficiently and accurately.
- Offer multiple opportunities for students to practice efficient and generalizable methods.
- Provide opportunities for students to reflect on the method they used and determine if a more efficient method could have been used.

MA.K12.MTR.4.1:

Engage in discussions that reflect on the mathematical thinking of self and others.
Mathematicians who engage in discussions that reflect on the mathematical thinking of self and others:

- Communicate mathematical ideas, vocabulary and methods effectively.
- Analyze the mathematical thinking of others.
- Compare the efficiency of a method to those expressed by others.
- Recognize errors and suggest how to correctly solve the task.
- Justify results by explaining methods and processes.
- Construct possible arguments based on evidence.

Clarifications:
Teachers who encourage students to engage in discussions that reflect on the mathematical thinking of self and others:

- Establish a culture in which students ask questions of the teacher and their peers, and error is an opportunity for learning.
- Create opportunities for students to discuss their thinking with peers.
- Select, sequence and present student work to advance and deepen understanding of correct and increasingly efficient methods.
- Develop students' ability to justify methods and compare their responses to the responses of their peers.

MA.K12.MTR.5.1:

Use patterns and structure to help understand and connect mathematical concepts.
Mathematicians who use patterns and structure to help understand and connect mathematical concepts:

- Focus on relevant details within a problem.
- Create plans and procedures to logically order events, steps or ideas to solve problems.
- Decompose a complex problem into manageable parts.
- Relate previously learned concepts to new concepts.
- Look for similarities among problems.
- Connect solutions of problems to more complicated large-scale situations.

Clarifications:
Teachers who encourage students to use patterns and structure to help understand and connect mathematical concepts:

- Help students recognize the patterns in the world around them and connect these patterns to mathematical concepts.
- Support students to develop generalizations based on the similarities found among problems.
- Provide opportunities for students to create plans and procedures to solve problems.
- Develop students' ability to construct relationships between their current understanding and more sophisticated ways of thinking.

MA.K12.MTR.6.1:

Assess the reasonableness of solutions.
Mathematicians who assess the reasonableness of solutions:

- Estimate to discover possible solutions.
- Use benchmark quantities to determine if a solution makes sense.
- Check calculations when solving problems.
- Verify possible solutions by explaining the methods used.
- Evaluate results based on the given context.

Clarifications:
Teachers who encourage students to assess the reasonableness of solutions:

- Have students estimate or predict solutions prior to solving.
- Prompt students to continually ask, "Does this solution make sense? How do you know?"
- Reinforce that students check their work as they progress within and after a task.
- Strengthen students' ability to verify solutions through justifications.

MA.K12.MTR.7.1:

Apply mathematics to real-world contexts.
Mathematicians who apply mathematics to real-world contexts:

- Connect mathematical concepts to everyday experiences.
- Use models and methods to understand, represent and solve problems.
- Perform investigations to gather data or determine if a method is appropriate. • Redesign models and methods to improve accuracy or efficiency.

Clarifications:
Teachers who encourage students to apply mathematics to real-world contexts:

- Provide opportunities for students to create models, both concrete and abstract, and perform investigations.
- Challenge students to question the accuracy of their models and methods.
- Support students as they validate conclusions by comparing them to the given situation.
- Indicate how various concepts can be applied to other disciplines.

Cite evidence to explain and justify reasoning.

Clarifications:

ELA.K12.EE.1.1:	K-1 Students include textual evidence in their oral communication with guidance and support from adults. The evidence can consist of details from the text without naming the text. During 1st grade, students learn how to incorporate the evidence in their writing. 2-3 Students include relevant textual evidence in their written and oral communication. Students should name the text when they refer to it. In 3rd grade, students should use a combination of direct and indirect citations. 4-5 Students continue with previous skills and reference comments made by speakers and peers. Students cite texts that they've directly quoted, paraphrased, or used for information. When writing, students will use the form of citation dictated by the instructor or the style guide referenced by the instructor. 6-8 Students continue with previous skills and use a style guide to create a proper citation. 9-12 Students continue with previous skills and should be aware of existing style guides and the ways in which they differ.
ELA.K12.EE.2.1:	Read and comprehend grade-level complex texts proficiently. **Clarifications:** See Text Complexity for grade-level complexity bands and a text complexity rubric.
ELA.K12.EE.3.1:	Make inferences to support comprehension. **Clarifications:** Students will make inferences before the words infer or inference are introduced. Kindergarten students will answer questions like "Why is the girl smiling?" or make predictions about what will happen based on the title page. Students will use the terms and apply them in 2nd grade and beyond.
ELA.K12.EE.4.1:	Use appropriate collaborative techniques and active listening skills when engaging in discussions in a variety of situations. **Clarifications:** In kindergarten, students learn to listen to one another respectfully. In grades 1-2, students build upon these skills by justifying what they are thinking. For example: "I think _____ because _____." The collaborative conversations are becoming academic conversations. In grades 3-12, students engage in academic conversations discussing claims and justifying their reasoning, refining and applying skills. Students build on ideas, propel the conversation, and support claims and counterclaims with evidence.
ELA.K12.EE.5.1:	Use the accepted rules governing a specific format to create quality work. **Clarifications:** Students will incorporate skills learned into work products to produce quality work. For students to incorporate these skills appropriately, they must receive instruction. A 3rd grade student creating a poster board display must have instruction in how to effectively present information to do quality work.
ELA.K12.EE.6.1:	Use appropriate voice and tone when speaking or writing. **Clarifications:** In kindergarten and 1st grade, students learn the difference between formal and informal language. For example, the way we talk to our friends differs from the way we speak to adults. In 2nd grade and beyond, students practice appropriate social and academic language to discuss texts.
DA.912.F.3.8:	Demonstrate effective teamwork and accountability, using compromise, collaboration, and conflict resolution, to set and achieve goals as required in the work environment.
DA.912.S.2.1:	Sustain focused attention, respect, and discipline during class, rehearsal, and performance.
ELD.K12.ELL.SI.1:	English language learners communicate for social and instructional purposes within the school setting.
SS.912.H.1.5:	Examine artistic response to social issues and new ideas in various cultures. **Clarifications:** Examples are Victor Hugo's Les Miserables, Langston Hughes' poetry, Pete Seeger's Bring 'Em Home.

General Course Information and Notes

VERSION DESCRIPTION

This year-long, very advanced class is designed for students who have demonstrated a capacity for developing very advanced listening/aural skills and performance techniques, as well as very advanced knowledge of vocal techniques, musical literacy, ensemble skills, and related musical knowledge. Chorus VI focuses on managing, mastering, and refining these skills and techniques through a variety of high-quality choral literature at a high level of aesthetic engagement. Musical independence and student leadership are promoted through significant opportunities for peer mentoring, solo work, and participation as a performer, conductor, or coach in a small or large ensemble.

GENERAL NOTES

All instruction related to Music benchmarks should be framed by the Big Ideas and Enduring Understandings. Non-Music benchmarks listed in this course are also required and should be fully integrated in support of arts instruction.

Special Note: Students may be required to attend and/or participate in rehearsals and performances outside the school day to support, extend, and assess learning in the classroom. Additional experiences with small ensembles, solo performance, and leadership opportunities may be available. Students who enjoy the challenges and successes of this course may wish to take an accelerated music class in the future.

Honors and Advanced Level Course Note: Advanced courses require a greater demand on students through increased academic rigor. Academic rigor is obtained through the application, analysis, evaluation, and creation of complex ideas that are often abstract and multi-faceted. Students are challenged to think and collaborate critically on the content they are learning. Honors level rigor will be achieved by increasing text complexity through text selection, focus on high-level qualitative measures, and complexity of task. Instruction will be structured to give students a deeper understanding of conceptual themes and organization within and across disciplines. Academic

rigor is more than simply assigning to students a greater quantity of work.

Florida's Benchmarks for Excellent Student Thinking (B.E.S.T.) Standards
This course includes Florida's B.E.S.T. ELA Expectations (EE) and Mathematical Thinking and Reasoning Standards (MTRs) for students. Florida educators should intentionally embed these standards within the content and their instruction as applicable. For guidance on the implementation of the EEs and MTRs, please visit cpalms.org/Standards/BEST_Standards.aspx and select the appropriate B.E.S.T. Standards package.

English Language Development ELD Standards Special Notes Section:
Teachers are required to provide listening, speaking, reading and writing instruction that allows English language learners (ELL) to communicate for social and instructional purposes within the school setting. For the given level of English language proficiency and with visual, graphic, or interactive support, students will interact with grade level words, expressions, sentences and discourse to process or produce language necessary for academic success. The ELD standard should specify a relevant content area concept or topic of study chosen by curriculum developers and teachers which maximizes an ELL's need for communication and social skills. To access an ELL supporting document which delineates performance definitions and descriptors, please click on the following link: cpalms.org/uploads/docs/standards/eld/SI.pdf

GENERAL INFORMATION

Course Number: 1303350

Course Path: Section: Grades PreK to 12 Education Courses > **Grade Group:** Grades 9 to 12 and Adult Education Courses > **Subject:** Music Education > **SubSubject:** Choral Music >

Abbreviated Title: CHORUS 6 HON

Number of Credits: One (1) credit

Course Length: Year (Y)

Course Attributes:

- Honors

Course Type: Core Academic Course

Course Level: 3

Course Status: Draft - Course Pending Approval

Grade Level(s): 9,10,11,12

Graduation Requirement: Performing/Fine Arts

Educator Certifications

Vocal Music (Elementary and Secondary Grades K-12)
Music (Elementary and Secondary Grades K-12)

Chorus Register-specific 1 (#1303360) 2022 - And Beyond

Course Standards

Name	Description
MU.912.C.1.1:	Apply listening strategies to promote appreciation and understanding of unfamiliar musical works. **Clarifications:** e.g., listening maps, active listening, checklists
MU.912.C.1.4:	Compare and perform a variety of vocal styles and ensembles.
MU.912.C.2.1:	Evaluate and make appropriate adjustments to personal performance in solo and ensembles.
MU.912.C.2.2:	Evaluate performance quality in recorded and/or live performances.
MU.912.C.3.1:	Make critical evaluations, based on exemplary models, of the quality and effectiveness of performances and apply the criteria to personal development in music.
MU.912.F.3.1:	Analyze and describe how meeting one's responsibilities in music offers opportunities to develop leadership skills, and identify personal examples of leadership in school and/or non-school settings.
MU.912.F.3.2:	Summarize copyright laws that govern printed, recorded, and on-line music to promote legal and responsible use of intellectual property and technology.
MU.912.H.1.1:	Investigate and discuss how a culture's traditions are reflected through its music. **Clarifications:** e.g., patriotic, folk, celebration, entertainment, spiritual
MU.912.H.2.1:	Evaluate the social impact of music on specific historical periods.
MU.912.O.1.1:	Evaluate the organizational principles and conventions in musical works and discuss their effect on structure. **Clarifications:** e.g., rhythm, melody, timbre, form, tonality, harmony, texture; solo, chamber ensemble, large ensemble
MU.912.O.3.2:	Interpret and perform expressive elements indicated by the musical score and/or conductor.
MU.912.S.1.1:	Improvise rhythmic and melodic phrases over harmonic progressions. **Clarifications:** e.g., using text or scat syllables
MU.912.S.1.3:	Arrange a musical work by manipulating two or more aspects of the composition. **Clarifications:** e.g., texture, mode, form, tempo, voicing
MU.912.S.1.4:	Perform and notate, independently and accurately, melodies by ear. **Clarifications:** e.g., singing, playing, writing
MU.912.S.2.2:	Transfer expressive elements and performance techniques from one piece of music to another.
MU.912.S.3.1:	Synthesize a broad range of musical skills by performing a varied repertoire with expression, appropriate stylistic interpretation, technical accuracy, and kinesthetic energy.
MU.912.S.3.2:	Sight-read music accurately and expressively to show synthesis of skills. **Clarifications:** e.g., musical elements, expressive qualities, performance technique
MU.912.S.3.4:	Analyze and describe the effect of rehearsal sessions and/or strategies on refinement of skills and techniques.
MU.912.S.3.5:	Develop and demonstrate proper vocal or instrumental technique. **Clarifications:** e.g., posture, breathing, fingering, embouchure, bow technique, tuning, strumming
MA.K12.MTR.1.1:	Mathematicians who participate in effortful learning both individually and with others: • Analyze the problem in a way that makes sense given the task. • Ask questions that will help with solving the task. • Build perseverance by modifying methods as needed while solving a challenging task. • Stay engaged and maintain a positive mindset when working to solve tasks. • Help and support each other when attempting a new method or approach. **Clarifications:** Teachers who encourage students to participate actively in effortful learning both individually and with others: • Cultivate a community of growth mindset learners. • Foster perseverance in students by choosing tasks that are challenging. • Develop students' ability to analyze and problem solve. • Recognize students' effort when solving challenging problems.
	Demonstrate understanding by representing problems in multiple ways. Mathematicians who demonstrate understanding by representing problems in multiple ways: • Build understanding through modeling and using manipulatives. • Represent solutions to problems in multiple ways using objects, drawings, tables, graphs and equations. • Progress from modeling problems with objects and drawings to using algorithms and equations.

- Express connections between concepts and representations.

MA.K12.MTR.2.1:

- Choose a representation based on the given context or purpose.

Clarifications:
Teachers who encourage students to demonstrate understanding by representing problems in multiple ways:

- Help students make connections between concepts and representations.
- Provide opportunities for students to use manipulatives when investigating concepts.
- Guide students from concrete to pictorial to abstract representations as understanding progresses.
- Show students that various representations can have different purposes and can be useful in different situations.

Complete tasks with mathematical fluency.
Mathematicians who complete tasks with mathematical fluency:

- Select efficient and appropriate methods for solving problems within the given context.
- Maintain flexibility and accuracy while performing procedures and mental calculations.
- Complete tasks accurately and with confidence.
- Adapt procedures to apply them to a new context.

MA.K12.MTR.3.1:

- Use feedback to improve efficiency when performing calculations.

Clarifications:
Teachers who encourage students to complete tasks with mathematical fluency:

- Provide students with the flexibility to solve problems by selecting a procedure that allows them to solve efficiently and accurately.
- Offer multiple opportunities for students to practice efficient and generalizable methods.
- Provide opportunities for students to reflect on the method they used and determine if a more efficient method could have been used.

Engage in discussions that reflect on the mathematical thinking of self and others.
Mathematicians who engage in discussions that reflect on the mathematical thinking of self and others:

- Communicate mathematical ideas, vocabulary and methods effectively.
- Analyze the mathematical thinking of others.
- Compare the efficiency of a method to those expressed by others.
- Recognize errors and suggest how to correctly solve the task.
- Justify results by explaining methods and processes.

MA.K12.MTR.4.1:

- Construct possible arguments based on evidence.

Clarifications:
Teachers who encourage students to engage in discussions that reflect on the mathematical thinking of self and others:

- Establish a culture in which students ask questions of the teacher and their peers, and error is an opportunity for learning.
- Create opportunities for students to discuss their thinking with peers.
- Select, sequence and present student work to advance and deepen understanding of correct and increasingly efficient methods.
- Develop students' ability to justify methods and compare their responses to the responses of their peers.

Use patterns and structure to help understand and connect mathematical concepts.
Mathematicians who use patterns and structure to help understand and connect mathematical concepts:

- Focus on relevant details within a problem.
- Create plans and procedures to logically order events, steps or ideas to solve problems.
- Decompose a complex problem into manageable parts.
- Relate previously learned concepts to new concepts.
- Look for similarities among problems.

MA.K12.MTR.5.1:

- Connect solutions of problems to more complicated large-scale situations.

Clarifications:
Teachers who encourage students to use patterns and structure to help understand and connect mathematical concepts:

- Help students recognize the patterns in the world around them and connect these patterns to mathematical concepts.
- Support students to develop generalizations based on the similarities found among problems.
- Provide opportunities for students to create plans and procedures to solve problems.
- Develop students' ability to construct relationships between their current understanding and more sophisticated ways of thinking.

Assess the reasonableness of solutions.
Mathematicians who assess the reasonableness of solutions:

- Estimate to discover possible solutions.
- Use benchmark quantities to determine if a solution makes sense.
- Check calculations when solving problems.
- Verify possible solutions by explaining the methods used.

MA.K12.MTR.6.1:

- Evaluate results based on the given context.

Clarifications:
Teachers who encourage students to assess the reasonableness of solutions:

- Have students estimate or predict solutions prior to solving.
- Prompt students to continually ask, "Does this solution make sense? How do you know?"
- Reinforce that students check their work as they progress within and after a task.
- Strengthen students' ability to verify solutions through justifications.

Apply mathematics to real-world contexts.
Mathematicians who apply mathematics to real-world contexts:

- Connect mathematical concepts to everyday experiences.
- Use models and methods to understand, represent and solve problems.

	• Perform investigations to gather data or determine if a method is appropriate. • Redesign models and methods to improve accuracy or efficiency.
MA.K12.MTR.7.1:	**Clarifications:** Teachers who encourage students to apply mathematics to real-world contexts: • Provide opportunities for students to create models, both concrete and abstract, and perform investigations. • Challenge students to question the accuracy of their models and methods. • Support students as they validate conclusions by comparing them to the given situation. • Indicate how various concepts can be applied to other disciplines.
ELA.K12.EE.1.1:	Cite evidence to explain and justify reasoning. **Clarifications:** K-1 Students include textual evidence in their oral communication with guidance and support from adults. The evidence can consist of details from the text without naming the text. During 1st grade, students learn how to incorporate the evidence in their writing. 2-3 Students include relevant textual evidence in their written and oral communication. Students should name the text when they refer to it. In 3rd grade, students should use a combination of direct and indirect citations. 4-5 Students continue with previous skills and reference comments made by speakers and peers. Students cite texts that they've directly quoted, paraphrased, or used for information. When writing, students will use the form of citation dictated by the instructor or the style guide referenced by the instructor. 6-8 Students continue with previous skills and use a style guide to create a proper citation. 9-12 Students continue with previous skills and should be aware of existing style guides and the ways in which they differ.
ELA.K12.EE.2.1:	Read and comprehend grade-level complex texts proficiently. **Clarifications:** See Text Complexity for grade-level complexity bands and a text complexity rubric.
ELA.K12.EE.3.1:	Make inferences to support comprehension. **Clarifications:** Students will make inferences before the words infer or inference are introduced. Kindergarten students will answer questions like "Why is the girl smiling?" or make predictions about what will happen based on the title page. Students will use the terms and apply them in 2nd grade and beyond.
ELA.K12.EE.4.1:	Use appropriate collaborative techniques and active listening skills when engaging in discussions in a variety of situations. **Clarifications:** In kindergarten, students learn to listen to one another respectfully. In grades 1-2, students build upon these skills by justifying what they are thinking. For example: "I think _____ because _____." The collaborative conversations are becoming academic conversations. In grades 3-12, students engage in academic conversations discussing claims and justifying their reasoning, refining and applying skills. Students build on ideas, propel the conversation, and support claims and counterclaims with evidence.
ELA.K12.EE.5.1:	Use the accepted rules governing a specific format to create quality work. **Clarifications:** Students will incorporate skills learned into work products to produce quality work. For students to incorporate these skills appropriately, they must receive instruction. A 3rd grade student creating a poster board display must have instruction in how to effectively present information to do quality work.
ELA.K12.EE.6.1:	Use appropriate voice and tone when speaking or writing. **Clarifications:** In kindergarten and 1st grade, students learn the difference between formal and informal language. For example, the way we talk to our friends differs from the way we speak to adults. In 2nd grade and beyond, students practice appropriate social and academic language to discuss texts.
DA.912.S.2.1:	Sustain focused attention, respect, and discipline during class, rehearsal, and performance.
ELD.K12.ELL.SI.1:	English language learners communicate for social and instructional purposes within the school setting.

General Course Information and Notes

VERSION DESCRIPTION

Students in this entry-level class focus on the rehearsal, performance, and study of high-quality music literature for singers of a similar voice range. As they address the technical needs of singers in a specific range of notes, they learn beginning music theory, musicianship, and choral performance skills. Public performances may serve as a culmination of specific instructional goals. Students may be required to attend and/or participate in rehearsals and performances outside the school day to support, extend, and assess learning in the classroom.

GENERAL NOTES

Florida's Benchmarks for Excellent Student Thinking (B.E.S.T.) Standards
This course includes Florida's B.E.S.T. ELA Expectations (EE) and Mathematical Thinking and Reasoning Standards (MTRs) for students. Florida educators should intentionally embed these standards within the content and their instruction as applicable. For guidance on the implementation of the EEs and MTRs, please visit cpalms.org/Standards/BEST_Standards.aspx and select the appropriate B.E.S.T. Standards package.

English Language Development ELD Standards Special Notes Section:

Teachers are required to provide listening, speaking, reading and writing instruction that allows English language learners (ELL) to communicate for social and instructional purposes within the school setting. For the given level of English language proficiency and with visual, graphic, or interactive support, students will interact with grade level words, expressions, sentences and discourse to process or produce language necessary for academic success. The ELD standard should specify a relevant content area concept or topic of study chosen by curriculum developers and teachers which maximizes an ELL's need for communication and social skills. To access an ELL supporting document which delineates performance definitions and descriptors, please click on the following link: cpalms.org/uploads/docs/standards/eld/SI.pdf

GENERAL INFORMATION

Course Number: 1303360

Course Path: Section: Grades PreK to 12 Education Courses > **Grade Group:** Grades 9 to 12 and Adult Education Courses > **Subject:** Music Education > **SubSubject:** Choral Music >

Abbreviated Title: CHORUS REG-SPEC 1

Number of Credits: One (1) credit

Course Length: Year (Y)

Course Type: Core Academic Course

Course Level: 2

Course Status: Draft - Course Pending Approval

Grade Level(s): 9,10,11,12

Graduation Requirement: Performing/Fine Arts

Educator Certifications

Vocal Music (Elementary and Secondary Grades K-12)
Music (Elementary and Secondary Grades K-12)

Chorus Register-specific 2 (#1303370) 2022 - And Beyond

Course Standards

Name	Description
MU.912.C.1.1:	Apply listening strategies to promote appreciation and understanding of unfamiliar musical works. **Clarifications:** e.g., listening maps, active listening, checklists
MU.912.C.1.2:	Compare, using correct music vocabulary, the aesthetic impact of two or more performances of a musical work to one's own hypothesis of the composer's intent. **Clarifications:** e.g., quality recordings, individual and peer-group performances, composer notes, instrumentation, expressive elements, title
MU.912.C.1.4:	Compare and perform a variety of vocal styles and ensembles.
MU.912.C.2.1:	Evaluate and make appropriate adjustments to personal performance in solo and ensembles.
MU.912.C.2.2:	Evaluate performance quality in recorded and/or live performances.
MU.912.C.3.1:	Make critical evaluations, based on exemplary models, of the quality and effectiveness of performances and apply the criteria to personal development in music.
MU.912.F.3.1:	Analyze and describe how meeting one's responsibilities in music offers opportunities to develop leadership skills, and identify personal examples of leadership in school and/or non-school settings.
MU.912.F.3.2:	Summarize copyright laws that govern printed, recorded, and on-line music to promote legal and responsible use of intellectual property and technology.
MU.912.H.1.1:	Investigate and discuss how a culture's traditions are reflected through its music. **Clarifications:** e.g., patriotic, folk, celebration, entertainment, spiritual
MU.912.H.1.3:	Compare two or more works of a composer across performance media. **Clarifications:** e.g., orchestral and choral; guitar and string quartet; piano solo and piano concerto
MU.912.H.2.1:	Evaluate the social impact of music on specific historical periods.
MU.912.H.2.4:	Examine the effects of developing technology on composition, performance, and acquisition of music.
MU.912.H.3.1:	Apply knowledge of science, math, and music to demonstrate, through an acoustic or digital performance medium, how sound production affects musical performance. **Clarifications:** e.g., acoustics, sound amplification, materials, mechanics
MU.912.O.1.1:	Evaluate the organizational principles and conventions in musical works and discuss their effect on structure. **Clarifications:** e.g., rhythm, melody, timbre, form, tonality, harmony, texture; solo, chamber ensemble, large ensemble
MU.912.O.3.2:	Interpret and perform expressive elements indicated by the musical score and/or conductor.
MU.912.S.1.1:	Improvise rhythmic and melodic phrases over harmonic progressions. **Clarifications:** e.g., using text or scat syllables
MU.912.S.1.3:	Arrange a musical work by manipulating two or more aspects of the composition. **Clarifications:** e.g., texture, mode, form, tempo, voicing
MU.912.S.1.4:	Perform and notate, independently and accurately, melodies by ear. **Clarifications:** e.g., singing, playing, writing
MU.912.S.2.1:	Apply the ability to memorize and internalize musical structure, accurate and expressive details, and processing skills to the creation or performance of music literature. **Clarifications:** e.g., memorization, sequential process
MU.912.S.2.2:	Transfer expressive elements and performance techniques from one piece of music to another.
MU.912.S.3.1:	Synthesize a broad range of musical skills by performing a varied repertoire with expression, appropriate stylistic interpretation, technical accuracy, and kinesthetic energy.
MU.912.S.3.2:	Sight-read music accurately and expressively to show synthesis of skills. **Clarifications:** e.g., musical elements, expressive qualities, performance technique
MU.912.S.3.4:	Analyze and describe the effect of rehearsal sessions and/or strategies on refinement of skills and techniques.
MU.912.S.3.5:	Develop and demonstrate proper vocal or instrumental technique. **Clarifications:** e.g., posture, breathing, fingering, embouchure, bow technique, tuning, strumming
	Mathematicians who participate in effortful learning both individually and with others:

- Analyze the problem in a way that makes sense given the task.
- Ask questions that will help with solving the task.
- Build perseverance by modifying methods as needed while solving a challenging task.
- Stay engaged and maintain a positive mindset when working to solve tasks.
- Help and support each other when attempting a new method or approach.

MA.K12.MTR.1.1:

Clarifications:
Teachers who encourage students to participate actively in effortful learning both individually and with others:
- Cultivate a community of growth mindset learners.
- Foster perseverance in students by choosing tasks that are challenging.
- Develop students' ability to analyze and problem solve.
- Recognize students' effort when solving challenging problems.

Demonstrate understanding by representing problems in multiple ways.
Mathematicians who demonstrate understanding by representing problems in multiple ways:

- Build understanding through modeling and using manipulatives.
- Represent solutions to problems in multiple ways using objects, drawings, tables, graphs and equations.
- Progress from modeling problems with objects and drawings to using algorithms and equations.
- Express connections between concepts and representations.
- Choose a representation based on the given context or purpose.

MA.K12.MTR.2.1:

Clarifications:
Teachers who encourage students to demonstrate understanding by representing problems in multiple ways:
- Help students make connections between concepts and representations.
- Provide opportunities for students to use manipulatives when investigating concepts.
- Guide students from concrete to pictorial to abstract representations as understanding progresses.
- Show students that various representations can have different purposes and can be useful in different situations.

Complete tasks with mathematical fluency.
Mathematicians who complete tasks with mathematical fluency:

- Select efficient and appropriate methods for solving problems within the given context.
- Maintain flexibility and accuracy while performing procedures and mental calculations.
- Complete tasks accurately and with confidence.
- Adapt procedures to apply them to a new context.
- Use feedback to improve efficiency when performing calculations.

MA.K12.MTR.3.1:

Clarifications:
Teachers who encourage students to complete tasks with mathematical fluency:
- Provide students with the flexibility to solve problems by selecting a procedure that allows them to solve efficiently and accurately.
- Offer multiple opportunities for students to practice efficient and generalizable methods.
- Provide opportunities for students to reflect on the method they used and determine if a more efficient method could have been used.

Engage in discussions that reflect on the mathematical thinking of self and others.
Mathematicians who engage in discussions that reflect on the mathematical thinking of self and others:

- Communicate mathematical ideas, vocabulary and methods effectively.
- Analyze the mathematical thinking of others.
- Compare the efficiency of a method to those expressed by others.
- Recognize errors and suggest how to correctly solve the task.
- Justify results by explaining methods and processes.
- Construct possible arguments based on evidence.

MA.K12.MTR.4.1:

Clarifications:
Teachers who encourage students to engage in discussions that reflect on the mathematical thinking of self and others:
- Establish a culture in which students ask questions of the teacher and their peers, and error is an opportunity for learning.
- Create opportunities for students to discuss their thinking with peers.
- Select, sequence and present student work to advance and deepen understanding of correct and increasingly efficient methods.
- Develop students' ability to justify methods and compare their responses to the responses of their peers.

Use patterns and structure to help understand and connect mathematical concepts.
Mathematicians who use patterns and structure to help understand and connect mathematical concepts:

- Focus on relevant details within a problem.
- Create plans and procedures to logically order events, steps or ideas to solve problems.
- Decompose a complex problem into manageable parts.
- Relate previously learned concepts to new concepts.
- Look for similarities among problems.
- Connect solutions of problems to more complicated large-scale situations.

MA.K12.MTR.5.1:

Clarifications:
Teachers who encourage students to use patterns and structure to help understand and connect mathematical concepts:
- Help students recognize the patterns in the world around them and connect these patterns to mathematical concepts.
- Support students to develop generalizations based on the similarities found among problems.
- Provide opportunities for students to create plans and procedures to solve problems.
- Develop students' ability to construct relationships between their current understanding and more sophisticated ways of thinking.

Assess the reasonableness of solutions.
Mathematicians who assess the reasonableness of solutions:

MA.K12.MTR.6.1:	• Estimate to discover possible solutions. • Use benchmark quantities to determine if a solution makes sense. • Check calculations when solving problems. • Verify possible solutions by explaining the methods used. • Evaluate results based on the given context. **Clarifications:** Teachers who encourage students to assess the reasonableness of solutions: • Have students estimate or predict solutions prior to solving. • Prompt students to continually ask, "Does this solution make sense? How do you know?" • Reinforce that students check their work as they progress within and after a task. • Strengthen students' ability to verify solutions through justifications.
MA.K12.MTR.7.1:	Apply mathematics to real-world contexts. Mathematicians who apply mathematics to real-world contexts: • Connect mathematical concepts to everyday experiences. • Use models and methods to understand, represent and solve problems. • Perform investigations to gather data or determine if a method is appropriate. • Redesign models and methods to improve accuracy or efficiency. **Clarifications:** Teachers who encourage students to apply mathematics to real-world contexts: • Provide opportunities for students to create models, both concrete and abstract, and perform investigations. • Challenge students to question the accuracy of their models and methods. • Support students as they validate conclusions by comparing them to the given situation. • Indicate how various concepts can be applied to other disciplines.
ELA.K12.EE.1.1:	Cite evidence to explain and justify reasoning. **Clarifications:** K-1 Students include textual evidence in their oral communication with guidance and support from adults. The evidence can consist of details from the text without naming the text. During 1st grade, students learn how to incorporate the evidence in their writing. 2-3 Students include relevant textual evidence in their written and oral communication. Students should name the text when they refer to it. In 3rd grade, students should use a combination of direct and indirect citations. 4-5 Students continue with previous skills and reference comments made by speakers and peers. Students cite texts that they've directly quoted, paraphrased, or used for information. When writing, students will use the form of citation dictated by the instructor or the style guide referenced by the instructor. 6-8 Students continue with previous skills and use a style guide to create a proper citation. 9-12 Students continue with previous skills and should be aware of existing style guides and the ways in which they differ.
ELA.K12.EE.2.1:	Read and comprehend grade-level complex texts proficiently. **Clarifications:** See Text Complexity for grade-level complexity bands and a text complexity rubric.
ELA.K12.EE.3.1:	Make inferences to support comprehension. **Clarifications:** Students will make inferences before the words infer or inference are introduced. Kindergarten students will answer questions like "Why is the girl smiling?" or make predictions about what will happen based on the title page. Students will use the terms and apply them in 2nd grade and beyond.
ELA.K12.EE.4.1:	Use appropriate collaborative techniques and active listening skills when engaging in discussions in a variety of situations. **Clarifications:** In kindergarten, students learn to listen to one another respectfully. In grades 1-2, students build upon these skills by justifying what they are thinking. For example: "I think _____ because _____." The collaborative conversations are becoming academic conversations. In grades 3-12, students engage in academic conversations discussing claims and justifying their reasoning, refining and applying skills. Students build on ideas, propel the conversation, and support claims and counterclaims with evidence.
ELA.K12.EE.5.1:	Use the accepted rules governing a specific format to create quality work. **Clarifications:** Students will incorporate skills learned into work products to produce quality work. For students to incorporate these skills appropriately, they must receive instruction. A 3rd grade student creating a poster board display must have instruction in how to effectively present information to do quality work.
ELA.K12.EE.6.1:	Use appropriate voice and tone when speaking or writing. **Clarifications:** In kindergarten and 1st grade, students learn the difference between formal and informal language. For example, the way we talk to our friends differs from the way we speak to adults. In 2nd grade and beyond, students practice appropriate social and academic language to discuss texts.
DA.912.S.2.1:	Sustain focused attention, respect, and discipline during class, rehearsal, and performance.
ELD.K12.ELL.SI.1:	English language learners communicate for social and instructional purposes within the school setting.

General Course Information and Notes

VERSION DESCRIPTION

Students with prior choral or vocal instruction focus on developing skills to perform high-quality literature with singers in a similar vocal range. Through two- and three-part music, students build musicianship and choral ensemble skills. Public performances may serve as a culmination of specific instructional goals. Students may be required to attend and/or participate in rehearsals and performances outside the school day to support, extend, and assess learning in the classroom.

GENERAL NOTES

Florida's Benchmarks for Excellent Student Thinking (B.E.S.T.) Standards
This course includes Florida's B.E.S.T. ELA Expectations (EE) and Mathematical Thinking and Reasoning Standards (MTRs) for students. Florida educators should intentionally embed these standards within the content and their instruction as applicable. For guidance on the implementation of the EEs and MTRs, please visit cpalms.org/Standards/BEST_Standards.aspx and select the appropriate B.E.S.T. Standards package.

English Language Development ELD Standards Special Notes Section:
Teachers are required to provide listening, speaking, reading and writing instruction that allows English language learners (ELL) to communicate for social and instructional purposes within the school setting. For the given level of English language proficiency and with visual, graphic, or interactive support, students will interact with grade level words, expressions, sentences and discourse to process or produce language necessary for academic success. The ELD standard should specify a relevant content area concept or topic of study chosen by curriculum developers and teachers which maximizes an ELL's need for communication and social skills. To access an ELL supporting document which delineates performance definitions and descriptors, please click on the following link: cpalms.org/uploads/docs/standards/eld/SI.pdf

GENERAL INFORMATION

Course Number: 1303370

Course Path: Section: Grades PreK to 12 Education Courses > **Grade Group:** Grades 9 to 12 and Adult Education Courses > **Subject:** Music Education > **SubSubject:** Choral Music >
Abbreviated Title: CHORUS REG-SPEC 2

Number of Credits: One (1) credit

Course Length: Year (Y)

Course Type: Core Academic Course

Course Level: 2

Course Status: Draft - Course Pending Approval

Grade Level(s): 9,10,11,12

Graduation Requirement: Performing/Fine Arts

Educator Certifications

Vocal Music (Elementary and Secondary Grades K-12)
Music (Elementary and Secondary Grades K-12)

Chorus Register-specific 3 (#1303380) 2022 - And Beyond

Course Standards

Name	Description
MU.912.C.1.1:	Apply listening strategies to promote appreciation and understanding of unfamiliar musical works. **Clarifications:** e.g., listening maps, active listening, checklists
MU.912.C.1.2:	Compare, using correct music vocabulary, the aesthetic impact of two or more performances of a musical work to one's own hypothesis of the composer's intent. **Clarifications:** e.g., quality recordings, individual and peer-group performances, composer notes, instrumentation, expressive elements, title
MU.912.C.1.4:	Compare and perform a variety of vocal styles and ensembles.
MU.912.C.2.1:	Evaluate and make appropriate adjustments to personal performance in solo and ensembles.
MU.912.C.2.2:	Evaluate performance quality in recorded and/or live performances.
MU.912.C.3.1:	Make critical evaluations, based on exemplary models, of the quality and effectiveness of performances and apply the criteria to personal development in music.
MU.912.F.2.3:	Compare the organizational structure of a professional orchestra, chorus, quintet, or other ensemble to that of a business. **Clarifications:** e.g., leadership, financial needs and structure, marketing, personnel matters, manager, travel
MU.912.F.3.1:	Analyze and describe how meeting one's responsibilities in music offers opportunities to develop leadership skills, and identify personal examples of leadership in school and/or non-school settings.
MU.912.F.3.2:	Summarize copyright laws that govern printed, recorded, and on-line music to promote legal and responsible use of intellectual property and technology.
MU.912.F.3.4:	Design and implement a personal learning plan, related to the study of music, which demonstrates self-assessment, brain-storming, decision-making, and initiative to advance skills and/or knowledge.
MU.912.H.1.1:	Investigate and discuss how a culture's traditions are reflected through its music. **Clarifications:** e.g., patriotic, folk, celebration, entertainment, spiritual
MU.912.H.1.2:	Compare the work of, and influences on, two or more exemplary composers in the performance medium studied in class. **Clarifications:** e.g., vocal, instrumental, guitar, keyboard, electronic, handbells
MU.912.H.1.3:	Compare two or more works of a composer across performance media. **Clarifications:** e.g., orchestral and choral; guitar and string quartet; piano solo and piano concerto
MU.912.H.2.1:	Evaluate the social impact of music on specific historical periods.
MU.912.H.2.4:	Examine the effects of developing technology on composition, performance, and acquisition of music.
MU.912.H.3.1:	Apply knowledge of science, math, and music to demonstrate, through an acoustic or digital performance medium, how sound production affects musical performance. **Clarifications:** e.g., acoustics, sound amplification, materials, mechanics
MU.912.O.1.1:	Evaluate the organizational principles and conventions in musical works and discuss their effect on structure. **Clarifications:** e.g., rhythm, melody, timbre, form, tonality, harmony, texture; solo, chamber ensemble, large ensemble
MU.912.O.3.2:	Interpret and perform expressive elements indicated by the musical score and/or conductor.
MU.912.S.1.1:	Improvise rhythmic and melodic phrases over harmonic progressions. **Clarifications:** e.g., using text or scat syllables
MU.912.S.1.3:	Arrange a musical work by manipulating two or more aspects of the composition. **Clarifications:** e.g., texture, mode, form, tempo, voicing
MU.912.S.1.4:	Perform and notate, independently and accurately, melodies by ear. **Clarifications:** e.g., singing, playing, writing
MU.912.S.2.1:	Apply the ability to memorize and internalize musical structure, accurate and expressive details, and processing skills to the creation or performance of music literature. **Clarifications:** e.g., memorization, sequential process
MU.912.S.2.2:	Transfer expressive elements and performance techniques from one piece of music to another.
MU.912.S.3.1:	Synthesize a broad range of musical skills by performing a varied repertoire with expression, appropriate stylistic interpretation, technical accuracy, and kinesthetic energy.

	Sight-read music accurately and expressively to show synthesis of skills.
MU.912.S.3.2:	**Clarifications:** e.g., musical elements, expressive qualities, performance technique
MU.912.S.3.4:	Analyze and describe the effect of rehearsal sessions and/or strategies on refinement of skills and techniques.
	Develop and demonstrate proper vocal or instrumental technique.
MU.912.S.3.5:	**Clarifications:** e.g., posture, breathing, fingering, embouchure, bow technique, tuning, strumming
	Mathematicians who participate in effortful learning both individually and with others: • Analyze the problem in a way that makes sense given the task. • Ask questions that will help with solving the task. • Build perseverance by modifying methods as needed while solving a challenging task. • Stay engaged and maintain a positive mindset when working to solve tasks. • Help and support each other when attempting a new method or approach.
MA.K12.MTR.1.1:	**Clarifications:** Teachers who encourage students to participate actively in effortful learning both individually and with others: • Cultivate a community of growth mindset learners. • Foster perseverance in students by choosing tasks that are challenging. • Develop students' ability to analyze and problem solve. • Recognize students' effort when solving challenging problems.
	Demonstrate understanding by representing problems in multiple ways. Mathematicians who demonstrate understanding by representing problems in multiple ways: • Build understanding through modeling and using manipulatives. • Represent solutions to problems in multiple ways using objects, drawings, tables, graphs and equations. • Progress from modeling problems with objects and drawings to using algorithms and equations. • Express connections between concepts and representations. • Choose a representation based on the given context or purpose.
MA.K12.MTR.2.1:	**Clarifications:** Teachers who encourage students to demonstrate understanding by representing problems in multiple ways: • Help students make connections between concepts and representations. • Provide opportunities for students to use manipulatives when investigating concepts. • Guide students from concrete to pictorial to abstract representations as understanding progresses. • Show students that various representations can have different purposes and can be useful in different situations.
	Complete tasks with mathematical fluency. Mathematicians who complete tasks with mathematical fluency: • Select efficient and appropriate methods for solving problems within the given context. • Maintain flexibility and accuracy while performing procedures and mental calculations. • Complete tasks accurately and with confidence. • Adapt procedures to apply them to a new context. • Use feedback to improve efficiency when performing calculations.
MA.K12.MTR.3.1:	**Clarifications:** Teachers who encourage students to complete tasks with mathematical fluency: • Provide students with the flexibility to solve problems by selecting a procedure that allows them to solve efficiently and accurately. • Offer multiple opportunities for students to practice efficient and generalizable methods. • Provide opportunities for students to reflect on the method they used and determine if a more efficient method could have been used.
	Engage in discussions that reflect on the mathematical thinking of self and others. Mathematicians who engage in discussions that reflect on the mathematical thinking of self and others: • Communicate mathematical ideas, vocabulary and methods effectively. • Analyze the mathematical thinking of others. • Compare the efficiency of a method to those expressed by others. • Recognize errors and suggest how to correctly solve the task. • Justify results by explaining methods and processes. • Construct possible arguments based on evidence.
MA.K12.MTR.4.1:	**Clarifications:** Teachers who encourage students to engage in discussions that reflect on the mathematical thinking of self and others: • Establish a culture in which students ask questions of the teacher and their peers, and error is an opportunity for learning. • Create opportunities for students to discuss their thinking with peers. • Select, sequence and present student work to advance and deepen understanding of correct and increasingly efficient methods. • Develop students' ability to justify methods and compare their responses to the responses of their peers.
	Use patterns and structure to help understand and connect mathematical concepts. Mathematicians who use patterns and structure to help understand and connect mathematical concepts: • Focus on relevant details within a problem. • Create plans and procedures to logically order events, steps or ideas to solve problems. • Decompose a complex problem into manageable parts. • Relate previously learned concepts to new concepts.

MA.K12.MTR.5.1:	• Look for similarities among problems. • Connect solutions of problems to more complicated large-scale situations. **Clarifications:** Teachers who encourage students to use patterns and structure to help understand and connect mathematical concepts: • Help students recognize the patterns in the world around them and connect these patterns to mathematical concepts. • Support students to develop generalizations based on the similarities found among problems. • Provide opportunities for students to create plans and procedures to solve problems. • Develop students' ability to construct relationships between their current understanding and more sophisticated ways of thinking.
MA.K12.MTR.6.1:	Assess the reasonableness of solutions. Mathematicians who assess the reasonableness of solutions: • Estimate to discover possible solutions. • Use benchmark quantities to determine if a solution makes sense. • Check calculations when solving problems. • Verify possible solutions by explaining the methods used. • Evaluate results based on the given context. **Clarifications:** Teachers who encourage students to assess the reasonableness of solutions: • Have students estimate or predict solutions prior to solving. • Prompt students to continually ask, "Does this solution make sense? How do you know?" • Reinforce that students check their work as they progress within and after a task. • Strengthen students' ability to verify solutions through justifications.
MA.K12.MTR.7.1:	Apply mathematics to real-world contexts. Mathematicians who apply mathematics to real-world contexts: • Connect mathematical concepts to everyday experiences. • Use models and methods to understand, represent and solve problems. • Perform investigations to gather data or determine if a method is appropriate. • Redesign models and methods to improve accuracy or efficiency. **Clarifications:** Teachers who encourage students to apply mathematics to real-world contexts: • Provide opportunities for students to create models, both concrete and abstract, and perform investigations. • Challenge students to question the accuracy of their models and methods. • Support students as they validate conclusions by comparing them to the given situation. • Indicate how various concepts can be applied to other disciplines.
ELA.K12.EE.1.1:	Cite evidence to explain and justify reasoning. **Clarifications:** K-1 Students include textual evidence in their oral communication with guidance and support from adults. The evidence can consist of details from the text without naming the text. During 1st grade, students learn how to incorporate the evidence in their writing. 2-3 Students include relevant textual evidence in their written and oral communication. Students should name the text when they refer to it. In 3rd grade, students should use a combination of direct and indirect citations. 4-5 Students continue with previous skills and reference comments made by speakers and peers. Students cite texts that they've directly quoted, paraphrased, or used for information. When writing, students will use the form of citation dictated by the instructor or the style guide referenced by the instructor. 6-8 Students continue with previous skills and use a style guide to create a proper citation. 9-12 Students continue with previous skills and should be aware of existing style guides and the ways in which they differ.
ELA.K12.EE.2.1:	Read and comprehend grade-level complex texts proficiently. **Clarifications:** See Text Complexity for grade-level complexity bands and a text complexity rubric.
ELA.K12.EE.3.1:	Make inferences to support comprehension. **Clarifications:** Students will make inferences before the words infer or inference are introduced. Kindergarten students will answer questions like "Why is the girl smiling?" or make predictions about what will happen based on the title page. Students will use the terms and apply them in 2nd grade and beyond.
ELA.K12.EE.4.1:	Use appropriate collaborative techniques and active listening skills when engaging in discussions in a variety of situations. **Clarifications:** In kindergarten, students learn to listen to one another respectfully. In grades 1-2, students build upon these skills by justifying what they are thinking. For example: "I think _____ because _____." The collaborative conversations are becoming academic conversations. In grades 3-12, students engage in academic conversations discussing claims and justifying their reasoning, refining and applying skills. Students build on ideas, propel the conversation, and support claims and counterclaims with evidence.
ELA.K12.EE.5.1:	Use the accepted rules governing a specific format to create quality work. **Clarifications:** Students will incorporate skills learned into work products to produce quality work. For students to incorporate these skills appropriately, they must receive instruction. A 3rd grade student creating a poster board display must have instruction in how to effectively present information to do quality work.
	Use appropriate voice and tone when speaking or writing.

ELA.K12.EE.6.1:	**Clarifications:** In kindergarten and 1st grade, students learn the difference between formal and informal language. For example, the way we talk to our friends differs from the way we speak to adults. In 2nd grade and beyond, students practice appropriate social and academic language to discuss texts.
DA.912.S.2.1:	Sustain focused attention, respect, and discipline during class, rehearsal, and performance.
ELD.K12.ELL.SI.1:	English language learners communicate for social and instructional purposes within the school setting.

General Course Information and Notes

VERSION DESCRIPTION

Students continue to build on previous choral experience to develop skills to perform increasingly challenging, high-quality literature for singers in a similar vocal range. As singers explore two-, three-, and four-part literature in its historical and cultural context, they enhance their musicianship and choral ensemble skills. Public performances may serve as a culmination of specific instructional goals. Students may be required to attend and/or participate in rehearsals and performances outside the school day to support, extend, and assess learning in the classroom.

GENERAL NOTES

Florida's Benchmarks for Excellent Student Thinking (B.E.S.T.) Standards
This course includes Florida's B.E.S.T. ELA Expectations (EE) and Mathematical Thinking and Reasoning Standards (MTRs) for students. Florida educators should intentionally embed these standards within the content and their instruction as applicable. For guidance on the implementation of the EEs and MTRs, please visit cpalms.org/Standards/BEST_Standards.aspx and select the appropriate B.E.S.T. Standards package.

English Language Development ELD Standards Special Notes Section:
Teachers are required to provide listening, speaking, reading and writing instruction that allows English language learners (ELL) to communicate for social and instructional purposes within the school setting. For the given level of English language proficiency and with visual, graphic, or interactive support, students will interact with grade level words, expressions, sentences and discourse to process or produce language necessary for academic success. The ELD standard should specify a relevant content area concept or topic of study chosen by curriculum developers and teachers which maximizes an ELL's need for communication and social skills. To access an ELL supporting document which delineates performance definitions and descriptors, please click on the following link: cpalms.org/uploads/docs/standards/eld/SI.pdf

GENERAL INFORMATION

Course Number: 1303380

Course Path: Section: Grades PreK to 12 Education Courses > **Grade Group:** Grades 9 to 12 and Adult Education Courses > **Subject:** Music Education > **SubSubject:** Choral Music > **Abbreviated Title:** CHORUS REG-SPEC 3

Number of Credits: One (1) credit

Course Length: Year (Y)

Course Type: Core Academic Course

Course Level: 2

Course Status: Draft - Course Pending Approval

Grade Level(s): 9,10,11,12

Graduation Requirement: Performing/Fine Arts

Educator Certifications

Music (Elementary and Secondary Grades K-12)
Vocal Music (Elementary and Secondary Grades K-12)

Chorus Register-specific 4 Honors (#1303390) 2022 - And Beyond

Course Standards

Name	Description
MU.912.C.1.1:	Apply listening strategies to promote appreciation and understanding of unfamiliar musical works. **Clarifications:** e.g., listening maps, active listening, checklists
MU.912.C.1.2:	Compare, using correct music vocabulary, the aesthetic impact of two or more performances of a musical work to one's own hypothesis of the composer's intent. **Clarifications:** e.g., quality recordings, individual and peer-group performances, composer notes, instrumentation, expressive elements, title
MU.912.C.1.4:	Compare and perform a variety of vocal styles and ensembles.
MU.912.C.2.1:	Evaluate and make appropriate adjustments to personal performance in solo and ensembles.
MU.912.C.2.2:	Evaluate performance quality in recorded and/or live performances.
MU.912.C.2.3:	Evaluate one's own or other's compositions and/or improvisations and generate improvements independently or cooperatively.
MU.912.C.3.1:	Make critical evaluations, based on exemplary models, of the quality and effectiveness of performances and apply the criteria to personal development in music.
MU.912.F.1.1:	Analyze and evaluate the effect of "traditional" and contemporary technologies on the development of music.
MU.912.F.2.1:	Design or refine a résumé for application to higher education or the workforce that highlights marketable skills and knowledge gained through music training. **Clarifications:** e.g., repertoire lists, technology-based work, ability to research and analyze, and examples of leadership and collaborative skills
MU.912.F.2.2:	Analyze the effect of the arts and entertainment industry on the economic and social health of communities and regions. **Clarifications:** e.g., community revitalization, industry choosing new locations, cultural and social enrichment
MU.912.F.3.1:	Analyze and describe how meeting one's responsibilities in music offers opportunities to develop leadership skills, and identify personal examples of leadership in school and/or non-school settings.
MU.912.F.3.2:	Summarize copyright laws that govern printed, recorded, and on-line music to promote legal and responsible use of intellectual property and technology.
MU.912.F.3.3:	Define, prioritize, monitor, and successfully complete tasks related to individual musical performance or project presentation, without direct oversight, demonstrating skills for use in the workplace.
MU.912.F.3.4:	Design and implement a personal learning plan, related to the study of music, which demonstrates self-assessment, brain-storming, decision-making, and initiative to advance skills and/or knowledge.
MU.912.H.1.1:	Investigate and discuss how a culture's traditions are reflected through its music. **Clarifications:** e.g., patriotic, folk, celebration, entertainment, spiritual
MU.912.H.1.3:	Compare two or more works of a composer across performance media. **Clarifications:** e.g., orchestral and choral; guitar and string quartet; piano solo and piano concerto
MU.912.H.1.4:	Analyze how Western music has been influenced by historical and current world cultures.
MU.912.H.1.5:	Analyze music within cultures to gain understanding of authentic performance practices.
MU.912.H.2.2:	Analyze current musical trends, including audience environments and music acquisition, to predict possible directions of music.
MU.912.H.2.3:	Analyze the evolution of a music genre. **Clarifications:** e.g., jazz, blues
MU.912.H.3.1:	Apply knowledge of science, math, and music to demonstrate, through an acoustic or digital performance medium, how sound production affects musical performance. **Clarifications:** e.g., acoustics, sound amplification, materials, mechanics
MU.912.H.3.2:	Combine personal interest with skills and knowledge from a non-music class to explore, design, and present a music-based or music-enhanced topic of interest to demonstrate the ability to make transfers across contexts. **Clarifications:** e.g., music and health, Holocaust, tolerance, African American history, world languages, scientific research, data analysis, problem-solving, public speaking
MU.912.O.1.1:	Evaluate the organizational principles and conventions in musical works and discuss their effect on structure. **Clarifications:** e.g., rhythm, melody, timbre, form, tonality, harmony, texture; solo, chamber ensemble, large ensemble
MU.912.O.2.1:	Transfer accepted composition conventions and performance practices of a specific style to a contrasting style of music.
MU.912.O.2.2:	Transpose melodies into different modalities through performance and composition.
	Analyze expressive elements in a musical work and describe how the choices and manipulations of the elements support, for the listener, the implied meaning of the composer/performer.

MU.912.O.3.1:	**Clarifications:** e.g., tempo markings, expression markings, articulation markings, phrasing, scales, modes, harmonic structure, timbre choice, rhythm, orchestration
MU.912.O.3.2:	Interpret and perform expressive elements indicated by the musical score and/or conductor.
MU.912.S.1.1:	Improvise rhythmic and melodic phrases over harmonic progressions. **Clarifications:** e.g., using text or scat syllables
MU.912.S.1.2:	Compose music for voices and/or acoustic, digital, or electronic instruments.
MU.912.S.1.3:	Arrange a musical work by manipulating two or more aspects of the composition. **Clarifications:** e.g., texture, mode, form, tempo, voicing
MU.912.S.1.4:	Perform and notate, independently and accurately, melodies by ear. **Clarifications:** e.g., singing, playing, writing
MU.912.S.2.1:	Apply the ability to memorize and internalize musical structure, accurate and expressive details, and processing skills to the creation or performance of music literature. **Clarifications:** e.g., memorization, sequential process
MU.912.S.2.2:	Transfer expressive elements and performance techniques from one piece of music to another.
MU.912.S.3.1:	Synthesize a broad range of musical skills by performing a varied repertoire with expression, appropriate stylistic interpretation, technical accuracy, and kinesthetic energy.
MU.912.S.3.2:	Sight-read music accurately and expressively to show synthesis of skills. **Clarifications:** e.g., musical elements, expressive qualities, performance technique
MU.912.S.3.3:	Transcribe aurally presented songs into melodic and/or rhythmic notation to show synthesis of aural and notational skills.
MU.912.S.3.4:	Analyze and describe the effect of rehearsal sessions and/or strategies on refinement of skills and techniques.
MU.912.S.3.5:	Develop and demonstrate proper vocal or instrumental technique. **Clarifications:** e.g., posture, breathing, fingering, embouchure, bow technique, tuning, strumming
MA.K12.MTR.1.1:	Mathematicians who participate in effortful learning both individually and with others: • Analyze the problem in a way that makes sense given the task. • Ask questions that will help with solving the task. • Build perseverance by modifying methods as needed while solving a challenging task. • Stay engaged and maintain a positive mindset when working to solve tasks. • Help and support each other when attempting a new method or approach. **Clarifications:** Teachers who encourage students to participate actively in effortful learning both individually and with others: • Cultivate a community of growth mindset learners. • Foster perseverance in students by choosing tasks that are challenging. • Develop students' ability to analyze and problem solve. • Recognize students' effort when solving challenging problems.
MA.K12.MTR.2.1:	Demonstrate understanding by representing problems in multiple ways. Mathematicians who demonstrate understanding by representing problems in multiple ways: • Build understanding through modeling and using manipulatives. • Represent solutions to problems in multiple ways using objects, drawings, tables, graphs and equations. • Progress from modeling problems with objects and drawings to using algorithms and equations. • Express connections between concepts and representations. • Choose a representation based on the given context or purpose. **Clarifications:** Teachers who encourage students to demonstrate understanding by representing problems in multiple ways: • Help students make connections between concepts and representations. • Provide opportunities for students to use manipulatives when investigating concepts. • Guide students from concrete to pictorial to abstract representations as understanding progresses. • Show students that various representations can have different purposes and can be useful in different situations.
MA.K12.MTR.3.1:	Complete tasks with mathematical fluency. Mathematicians who complete tasks with mathematical fluency: • Select efficient and appropriate methods for solving problems within the given context. • Maintain flexibility and accuracy while performing procedures and mental calculations. • Complete tasks accurately and with confidence. • Adapt procedures to apply them to a new context. • Use feedback to improve efficiency when performing calculations. **Clarifications:** Teachers who encourage students to complete tasks with mathematical fluency: • Provide students with the flexibility to solve problems by selecting a procedure that allows them to solve efficiently and accurately. • Offer multiple opportunities for students to practice efficient and generalizable methods.

	• Provide opportunities for students to reflect on the method they used and determine if a more efficient method could have been used.
MA.K12.MTR.4.1:	Engage in discussions that reflect on the mathematical thinking of self and others. Mathematicians who engage in discussions that reflect on the mathematical thinking of self and others: • Communicate mathematical ideas, vocabulary and methods effectively. • Analyze the mathematical thinking of others. • Compare the efficiency of a method to those expressed by others. • Recognize errors and suggest how to correctly solve the task. • Justify results by explaining methods and processes. • Construct possible arguments based on evidence. **Clarifications:** Teachers who encourage students to engage in discussions that reflect on the mathematical thinking of self and others: • Establish a culture in which students ask questions of the teacher and their peers, and error is an opportunity for learning. • Create opportunities for students to discuss their thinking with peers. • Select, sequence and present student work to advance and deepen understanding of correct and increasingly efficient methods. • Develop students' ability to justify methods and compare their responses to the responses of their peers.
MA.K12.MTR.5.1:	Use patterns and structure to help understand and connect mathematical concepts. Mathematicians who use patterns and structure to help understand and connect mathematical concepts: • Focus on relevant details within a problem. • Create plans and procedures to logically order events, steps or ideas to solve problems. • Decompose a complex problem into manageable parts. • Relate previously learned concepts to new concepts. • Look for similarities among problems. • Connect solutions of problems to more complicated large-scale situations. **Clarifications:** Teachers who encourage students to use patterns and structure to help understand and connect mathematical concepts: • Help students recognize the patterns in the world around them and connect these patterns to mathematical concepts. • Support students to develop generalizations based on the similarities found among problems. • Provide opportunities for students to create plans and procedures to solve problems. • Develop students' ability to construct relationships between their current understanding and more sophisticated ways of thinking.
MA.K12.MTR.6.1:	Assess the reasonableness of solutions. Mathematicians who assess the reasonableness of solutions: • Estimate to discover possible solutions. • Use benchmark quantities to determine if a solution makes sense. • Check calculations when solving problems. • Verify possible solutions by explaining the methods used. • Evaluate results based on the given context. **Clarifications:** Teachers who encourage students to assess the reasonableness of solutions: • Have students estimate or predict solutions prior to solving. • Prompt students to continually ask, "Does this solution make sense? How do you know?" • Reinforce that students check their work as they progress within and after a task. • Strengthen students' ability to verify solutions through justifications.
MA.K12.MTR.7.1:	Apply mathematics to real-world contexts. Mathematicians who apply mathematics to real-world contexts: • Connect mathematical concepts to everyday experiences. • Use models and methods to understand, represent and solve problems. • Perform investigations to gather data or determine if a method is appropriate. • Redesign models and methods to improve accuracy or efficiency. **Clarifications:** Teachers who encourage students to apply mathematics to real-world contexts: • Provide opportunities for students to create models, both concrete and abstract, and perform investigations. • Challenge students to question the accuracy of their models and methods. • Support students as they validate conclusions by comparing them to the given situation. • Indicate how various concepts can be applied to other disciplines.
ELA.K12.EE.1.1:	Cite evidence to explain and justify reasoning. **Clarifications:** K-1 Students include textual evidence in their oral communication with guidance and support from adults. The evidence can consist of details from the text without naming the text. During 1st grade, students learn how to incorporate the evidence in their writing. 2-3 Students include relevant textual evidence in their written and oral communication. Students should name the text when they refer to it. In 3rd grade, students should use a combination of direct and indirect citations. 4-5 Students continue with previous skills and reference comments made by speakers and peers. Students cite texts that they've directly quoted, paraphrased, or used for information. When writing, students will use the form of citation dictated by the instructor or the style guide referenced by the instructor. 6-8 Students continue with previous skills and use a style guide to create a proper citation. 9-12 Students continue with previous skills and should be aware of existing style guides and the ways in which they differ.

ELA.K12.EE.2.1:	Read and comprehend grade-level complex texts proficiently. **Clarifications:** See Text Complexity for grade-level complexity bands and a text complexity rubric.
ELA.K12.EE.3.1:	Make inferences to support comprehension. **Clarifications:** Students will make inferences before the words infer or inference are introduced. Kindergarten students will answer questions like "Why is the girl smiling?" or make predictions about what will happen based on the title page. Students will use the terms and apply them in 2nd grade and beyond.
ELA.K12.EE.4.1:	Use appropriate collaborative techniques and active listening skills when engaging in discussions in a variety of situations. **Clarifications:** In kindergarten, students learn to listen to one another respectfully. In grades 1-2, students build upon these skills by justifying what they are thinking. For example: "I think _____ because _____." The collaborative conversations are becoming academic conversations. In grades 3-12, students engage in academic conversations discussing claims and justifying their reasoning, refining and applying skills. Students build on ideas, propel the conversation, and support claims and counterclaims with evidence.
ELA.K12.EE.5.1:	Use the accepted rules governing a specific format to create quality work. **Clarifications:** Students will incorporate skills learned into work products to produce quality work. For students to incorporate these skills appropriately, they must receive instruction. A 3rd grade student creating a poster board display must have instruction in how to effectively present information to do quality work.
ELA.K12.EE.6.1:	Use appropriate voice and tone when speaking or writing. **Clarifications:** In kindergarten and 1st grade, students learn the difference between formal and informal language. For example, the way we talk to our friends differs from the way we speak to adults. In 2nd grade and beyond, students practice appropriate social and academic language to discuss texts.
DA.912.S.2.1:	Sustain focused attention, respect, and discipline during class, rehearsal, and performance.
ELD.K12.ELL.SI.1:	English language learners communicate for social and instructional purposes within the school setting.

General Course Information and Notes

VERSION DESCRIPTION

Students build and refine technical and expressive skills through the study, rehearsal, and performance of high-quality literature for singers in a similar vocal range. As singers explore three- and four-part literature in its historical and cultural context, they develop advanced musicianship and choral ensemble skills. In keeping with the rigor expected in an Honors course, students undertake independent study that includes synthesis of learning and experience. Public performances may serve as a culmination of specific instructional goals. Students may be required to attend and/or participate in rehearsals and performances outside the school day to support, extend, and assess learning in the classroom.

GENERAL NOTES

Honors and Advanced Level Course Note: Advanced courses require a greater demand on students through increased academic rigor. Academic rigor is obtained through the application, analysis, evaluation, and creation of complex ideas that are often abstract and multi-faceted. Students are challenged to think and collaborate critically on the content they are learning. Honors level rigor will be achieved by increasing text complexity through text selection, focus on high-level qualitative measures, and complexity of task. Instruction will be structured to give students a deeper understanding of conceptual themes and organization within and across disciplines. Academic rigor is more than simply assigning to students a greater quantity of work.

Florida's Benchmarks for Excellent Student Thinking (B.E.S.T.) Standards
This course includes Florida's B.E.S.T. ELA Expectations (EE) and Mathematical Thinking and Reasoning Standards (MTRs) for students. Florida educators should intentionally embed these standards within the content and their instruction as applicable. For guidance on the implementation of the EEs and MTRs, please visit cpalms.org/Standards/BEST_Standards.aspx and select the appropriate B.E.S.T. Standards package.

English Language Development ELD Standards Special Notes Section:
Teachers are required to provide listening, speaking, reading and writing instruction that allows English language learners (ELL) to communicate for social and instructional purposes within the school setting. For the given level of English language proficiency and with visual, graphic, or interactive support, students will interact with grade level words, expressions, sentences and discourse to process or produce language necessary for academic success. The ELD standard should specify a relevant content area concept or topic of study chosen by curriculum developers and teachers which maximizes an ELL's need for communication and social skills. To access an ELL supporting document which delineates performance definitions and descriptors, please click on the following link: cpalms.org/uploads/docs/standards/eld/SI.pdf

GENERAL INFORMATION

Course Number: 1303390

Course Path: Section: Grades PreK to 12 Education Courses > **Grade Group:** Grades 9 to 12 and Adult Education Courses > **Subject:** Music Education > **SubSubject:** Choral Music >
Abbreviated Title: CHORUS REG-SPEC 4 H

Number of Credits: One (1) credit

Course Length: Year (Y)

Course Attributes:

- Honors

Course Type: Core Academic Course

Course Level: 3

Course Status: Draft - Course Pending Approval

Grade Level(s): 9,10,11,12

Graduation Requirement: Performing/Fine Arts

Educator Certifications

Music (Elementary and Secondary Grades K-12)
Vocal Music (Elementary and Secondary Grades K-12)

Vocal Techniques 1 (#1303400) 2022 - And Beyond

Course Standards

Name	Description
MU.912.C.1.1:	Apply listening strategies to promote appreciation and understanding of unfamiliar musical works. **Clarifications:** e.g., listening maps, active listening, checklists
MU.912.C.2.1:	Evaluate and make appropriate adjustments to personal performance in solo and ensembles.
MU.912.C.2.2:	Evaluate performance quality in recorded and/or live performances.
MU.912.C.3.1:	Make critical evaluations, based on exemplary models, of the quality and effectiveness of performances and apply the criteria to personal development in music.
MU.912.F.3.3:	Define, prioritize, monitor, and successfully complete tasks related to individual musical performance or project presentation, without direct oversight, demonstrating skills for use in the workplace.
MU.912.O.2.1:	Transfer accepted composition conventions and performance practices of a specific style to a contrasting style of music.
MU.912.O.3.2:	Interpret and perform expressive elements indicated by the musical score and/or conductor.
MU.912.S.2.2:	Transfer expressive elements and performance techniques from one piece of music to another.
MU.912.S.3.1:	Synthesize a broad range of musical skills by performing a varied repertoire with expression, appropriate stylistic interpretation, technical accuracy, and kinesthetic energy.
MU.912.S.3.4:	Analyze and describe the effect of rehearsal sessions and/or strategies on refinement of skills and techniques.
MU.912.S.3.5:	Develop and demonstrate proper vocal or instrumental technique. **Clarifications:** e.g., posture, breathing, fingering, embouchure, bow technique, tuning, strumming
MA.K12.MTR.1.1:	Mathematicians who participate in effortful learning both individually and with others: • Analyze the problem in a way that makes sense given the task. • Ask questions that will help with solving the task. • Build perseverance by modifying methods as needed while solving a challenging task. • Stay engaged and maintain a positive mindset when working to solve tasks. • Help and support each other when attempting a new method or approach. **Clarifications:** Teachers who encourage students to participate actively in effortful learning both individually and with others: • Cultivate a community of growth mindset learners. • Foster perseverance in students by choosing tasks that are challenging. • Develop students' ability to analyze and problem solve. • Recognize students' effort when solving challenging problems.
MA.K12.MTR.2.1:	Demonstrate understanding by representing problems in multiple ways. Mathematicians who demonstrate understanding by representing problems in multiple ways: • Build understanding through modeling and using manipulatives. • Represent solutions to problems in multiple ways using objects, drawings, tables, graphs and equations. • Progress from modeling problems with objects and drawings to using algorithms and equations. • Express connections between concepts and representations. • Choose a representation based on the given context or purpose. **Clarifications:** Teachers who encourage students to demonstrate understanding by representing problems in multiple ways: • Help students make connections between concepts and representations. • Provide opportunities for students to use manipulatives when investigating concepts. • Guide students from concrete to pictorial to abstract representations as understanding progresses. • Show students that various representations can have different purposes and can be useful in different situations.
MA.K12.MTR.3.1:	Complete tasks with mathematical fluency. Mathematicians who complete tasks with mathematical fluency: • Select efficient and appropriate methods for solving problems within the given context. • Maintain flexibility and accuracy while performing procedures and mental calculations. • Complete tasks accurately and with confidence. • Adapt procedures to apply them to a new context. • Use feedback to improve efficiency when performing calculations. **Clarifications:** Teachers who encourage students to complete tasks with mathematical fluency: • Provide students with the flexibility to solve problems by selecting a procedure that allows them to solve efficiently and accurately. • Offer multiple opportunities for students to practice efficient and generalizable methods. • Provide opportunities for students to reflect on the method they used and determine if a more efficient method could have been used.
	Engage in discussions that reflect on the mathematical thinking of self and others. Mathematicians who engage in discussions that reflect on the mathematical thinking of self and others:

MA.K12.MTR.4.1:	• Communicate mathematical ideas, vocabulary and methods effectively. • Analyze the mathematical thinking of others. • Compare the efficiency of a method to those expressed by others. • Recognize errors and suggest how to correctly solve the task. • Justify results by explaining methods and processes. • Construct possible arguments based on evidence. **Clarifications:** Teachers who encourage students to engage in discussions that reflect on the mathematical thinking of self and others: • Establish a culture in which students ask questions of the teacher and their peers, and error is an opportunity for learning. • Create opportunities for students to discuss their thinking with peers. • Select, sequence and present student work to advance and deepen understanding of correct and increasingly efficient methods. • Develop students' ability to justify methods and compare their responses to the responses of their peers.
MA.K12.MTR.5.1:	Use patterns and structure to help understand and connect mathematical concepts. Mathematicians who use patterns and structure to help understand and connect mathematical concepts: • Focus on relevant details within a problem. • Create plans and procedures to logically order events, steps or ideas to solve problems. • Decompose a complex problem into manageable parts. • Relate previously learned concepts to new concepts. • Look for similarities among problems. • Connect solutions of problems to more complicated large-scale situations. **Clarifications:** Teachers who encourage students to use patterns and structure to help understand and connect mathematical concepts: • Help students recognize the patterns in the world around them and connect these patterns to mathematical concepts. • Support students to develop generalizations based on the similarities found among problems. • Provide opportunities for students to create plans and procedures to solve problems. • Develop students' ability to construct relationships between their current understanding and more sophisticated ways of thinking.
MA.K12.MTR.6.1:	Assess the reasonableness of solutions. Mathematicians who assess the reasonableness of solutions: • Estimate to discover possible solutions. • Use benchmark quantities to determine if a solution makes sense. • Check calculations when solving problems. • Verify possible solutions by explaining the methods used. • Evaluate results based on the given context. **Clarifications:** Teachers who encourage students to assess the reasonableness of solutions: • Have students estimate or predict solutions prior to solving. • Prompt students to continually ask, "Does this solution make sense? How do you know?" • Reinforce that students check their work as they progress within and after a task. • Strengthen students' ability to verify solutions through justifications.
MA.K12.MTR.7.1:	Apply mathematics to real-world contexts. Mathematicians who apply mathematics to real-world contexts: • Connect mathematical concepts to everyday experiences. • Use models and methods to understand, represent and solve problems. • Perform investigations to gather data or determine if a method is appropriate. • Redesign models and methods to improve accuracy or efficiency. **Clarifications:** Teachers who encourage students to apply mathematics to real-world contexts: • Provide opportunities for students to create models, both concrete and abstract, and perform investigations. • Challenge students to question the accuracy of their models and methods. • Support students as they validate conclusions by comparing them to the given situation. • Indicate how various concepts can be applied to other disciplines.
ELA.K12.EE.1.1:	Cite evidence to explain and justify reasoning. **Clarifications:** K-1 Students include textual evidence in their oral communication with guidance and support from adults. The evidence can consist of details from the text without naming the text. During 1st grade, students learn how to incorporate the evidence in their writing. 2-3 Students include relevant textual evidence in their written and oral communication. Students should name the text when they refer to it. In 3rd grade, students should use a combination of direct and indirect citations. 4-5 Students continue with previous skills and reference comments made by speakers and peers. Students cite texts that they've directly quoted, paraphrased, or used for information. When writing, students will use the form of citation dictated by the instructor or the style guide referenced by the instructor. 6-8 Students continue with previous skills and use a style guide to create a proper citation. 9-12 Students continue with previous skills and should be aware of existing style guides and the ways in which they differ.
ELA.K12.EE.2.1:	Read and comprehend grade-level complex texts proficiently. **Clarifications:** See Text Complexity for grade-level complexity bands and a text complexity rubric.
	Make inferences to support comprehension.

ELA.K12.EE.3.1:	**Clarifications:** Students will make inferences before the words infer or inference are introduced. Kindergarten students will answer questions like "Why is the girl smiling?" or make predictions about what will happen based on the title page. Students will use the terms and apply them in 2nd grade and beyond.
ELA.K12.EE.4.1:	Use appropriate collaborative techniques and active listening skills when engaging in discussions in a variety of situations. **Clarifications:** In kindergarten, students learn to listen to one another respectfully. In grades 1-2, students build upon these skills by justifying what they are thinking. For example: "I think _____ because _____." The collaborative conversations are becoming academic conversations. In grades 3-12, students engage in academic conversations discussing claims and justifying their reasoning, refining and applying skills. Students build on ideas, propel the conversation, and support claims and counterclaims with evidence.
ELA.K12.EE.5.1:	Use the accepted rules governing a specific format to create quality work. **Clarifications:** Students will incorporate skills learned into work products to produce quality work. For students to incorporate these skills appropriately, they must receive instruction. A 3rd grade student creating a poster board display must have instruction in how to effectively present information to do quality work.
ELA.K12.EE.6.1:	Use appropriate voice and tone when speaking or writing. **Clarifications:** In kindergarten and 1st grade, students learn the difference between formal and informal language. For example, the way we talk to our friends differs from the way we speak to adults. In 2nd grade and beyond, students practice appropriate social and academic language to discuss texts.
DA.912.S.2.1:	Sustain focused attention, respect, and discipline during class, rehearsal, and performance.
ELD.K12.ELL.SI.1:	English language learners communicate for social and instructional purposes within the school setting.

General Course Information and Notes

VERSION DESCRIPTION

Students in this entry-level class focus on the development of musical and technical skills on a specific voice through etudes, scales, and selected music literature. Through problem-solving, critical thinking, and reflection, students develop the physical and cognitive skills to be more disciplined performers. Public performances may serve as a culmination of specific instructional goals. Students may be required to attend and/or participate in rehearsals and performances outside the school day to support, extend, and assess learning in the classroom.

GENERAL NOTES

Florida's Benchmarks for Excellent Student Thinking (B.E.S.T.) Standards
This course includes Florida's B.E.S.T. ELA Expectations (EE) and Mathematical Thinking and Reasoning Standards (MTRs) for students. Florida educators should intentionally embed these standards within the content and their instruction as applicable. For guidance on the implementation of the EEs and MTRs, please visit cpalms.org/Standards/BEST_Standards.aspx and select the appropriate B.E.S.T. Standards package.

English Language Development ELD Standards Special Notes Section:
Teachers are required to provide listening, speaking, reading and writing instruction that allows English language learners (ELL) to communicate for social and instructional purposes within the school setting. For the given level of English language proficiency and with visual, graphic, or interactive support, students will interact with grade level words, expressions, sentences and discourse to process or produce language necessary for academic success. The ELD standard should specify a relevant content area concept or topic of study chosen by curriculum developers and teachers which maximizes an ELL's need for communication and social skills. To access an ELL supporting document which delineates performance definitions and descriptors, please click on the following link: cpalms.org/uploads/docs/standards/eld/SI.pdf

GENERAL INFORMATION

Course Number: 1303400

Course Path: Section: Grades PreK to 12 Education Courses > **Grade Group:** Grades 9 to 12 and Adult Education Courses > **Subject:** Music Education > **SubSubject:** Choral Music > **Abbreviated Title:** VOCAL TECNQS 1

Number of Credits: One (1) credit

Course Length: Year (Y)

Course Type: Core Academic Course

Course Level: 2

Course Status: Draft - Course Pending Approval

Grade Level(s): 9,10,11,12

Graduation Requirement: Performing/Fine Arts

Educator Certifications

Vocal Techniques 2 (#1303410) 2022 - And Beyond

Course Standards

Name	Description
MU.912.C.1.1:	Apply listening strategies to promote appreciation and understanding of unfamiliar musical works. **Clarifications:** e.g., listening maps, active listening, checklists
MU.912.C.2.1:	Evaluate and make appropriate adjustments to personal performance in solo and ensembles.
MU.912.C.2.2:	Evaluate performance quality in recorded and/or live performances.
MU.912.C.3.1:	Make critical evaluations, based on exemplary models, of the quality and effectiveness of performances and apply the criteria to personal development in music.
MU.912.F.3.3:	Define, prioritize, monitor, and successfully complete tasks related to individual musical performance or project presentation, without direct oversight, demonstrating skills for use in the workplace.
MU.912.F.3.4:	Design and implement a personal learning plan, related to the study of music, which demonstrates self-assessment, brain-storming, decision-making, and initiative to advance skills and/or knowledge.
MU.912.O.2.1:	Transfer accepted composition conventions and performance practices of a specific style to a contrasting style of music.
MU.912.O.3.2:	Interpret and perform expressive elements indicated by the musical score and/or conductor.
MU.912.S.2.2:	Transfer expressive elements and performance techniques from one piece of music to another.
MU.912.S.3.1:	Synthesize a broad range of musical skills by performing a varied repertoire with expression, appropriate stylistic interpretation, technical accuracy, and kinesthetic energy.
MU.912.S.3.2:	Sight-read music accurately and expressively to show synthesis of skills. **Clarifications:** e.g., musical elements, expressive qualities, performance technique
MU.912.S.3.4:	Analyze and describe the effect of rehearsal sessions and/or strategies on refinement of skills and techniques.
MU.912.S.3.5:	Develop and demonstrate proper vocal or instrumental technique. **Clarifications:** e.g., posture, breathing, fingering, embouchure, bow technique, tuning, strumming
MA.K12.MTR.1.1:	Mathematicians who participate in effortful learning both individually and with others: • Analyze the problem in a way that makes sense given the task. • Ask questions that will help with solving the task. • Build perseverance by modifying methods as needed while solving a challenging task. • Stay engaged and maintain a positive mindset when working to solve tasks. • Help and support each other when attempting a new method or approach. **Clarifications:** Teachers who encourage students to participate actively in effortful learning both individually and with others: • Cultivate a community of growth mindset learners. • Foster perseverance in students by choosing tasks that are challenging. • Develop students' ability to analyze and problem solve. • Recognize students' effort when solving challenging problems.
MA.K12.MTR.2.1:	Demonstrate understanding by representing problems in multiple ways. Mathematicians who demonstrate understanding by representing problems in multiple ways: • Build understanding through modeling and using manipulatives. • Represent solutions to problems in multiple ways using objects, drawings, tables, graphs and equations. • Progress from modeling problems with objects and drawings to using algorithms and equations. • Express connections between concepts and representations. • Choose a representation based on the given context or purpose. **Clarifications:** Teachers who encourage students to demonstrate understanding by representing problems in multiple ways: • Help students make connections between concepts and representations. • Provide opportunities for students to use manipulatives when investigating concepts. • Guide students from concrete to pictorial to abstract representations as understanding progresses. • Show students that various representations can have different purposes and can be useful in different situations.
MA.K12.MTR.3.1:	Complete tasks with mathematical fluency. Mathematicians who complete tasks with mathematical fluency: • Select efficient and appropriate methods for solving problems within the given context. • Maintain flexibility and accuracy while performing procedures and mental calculations. • Complete tasks accurately and with confidence. • Adapt procedures to apply them to a new context. • Use feedback to improve efficiency when performing calculations. **Clarifications:** Teachers who encourage students to complete tasks with mathematical fluency:

	• Provide students with the flexibility to solve problems by selecting a procedure that allows them to solve efficiently and accurately. • Offer multiple opportunities for students to practice efficient and generalizable methods. • Provide opportunities for students to reflect on the method they used and determine if a more efficient method could have been used.
MA.K12.MTR.4.1:	Engage in discussions that reflect on the mathematical thinking of self and others. Mathematicians who engage in discussions that reflect on the mathematical thinking of self and others: • Communicate mathematical ideas, vocabulary and methods effectively. • Analyze the mathematical thinking of others. • Compare the efficiency of a method to those expressed by others. • Recognize errors and suggest how to correctly solve the task. • Justify results by explaining methods and processes. • Construct possible arguments based on evidence. **Clarifications:** Teachers who encourage students to engage in discussions that reflect on the mathematical thinking of self and others: • Establish a culture in which students ask questions of the teacher and their peers, and error is an opportunity for learning. • Create opportunities for students to discuss their thinking with peers. • Select, sequence and present student work to advance and deepen understanding of correct and increasingly efficient methods. • Develop students' ability to justify methods and compare their responses to the responses of their peers.
MA.K12.MTR.5.1:	Use patterns and structure to help understand and connect mathematical concepts. Mathematicians who use patterns and structure to help understand and connect mathematical concepts: • Focus on relevant details within a problem. • Create plans and procedures to logically order events, steps or ideas to solve problems. • Decompose a complex problem into manageable parts. • Relate previously learned concepts to new concepts. • Look for similarities among problems. • Connect solutions of problems to more complicated large-scale situations. **Clarifications:** Teachers who encourage students to use patterns and structure to help understand and connect mathematical concepts: • Help students recognize the patterns in the world around them and connect these patterns to mathematical concepts. • Support students to develop generalizations based on the similarities found among problems. • Provide opportunities for students to create plans and procedures to solve problems. • Develop students' ability to construct relationships between their current understanding and more sophisticated ways of thinking.
MA.K12.MTR.6.1:	Assess the reasonableness of solutions. Mathematicians who assess the reasonableness of solutions: • Estimate to discover possible solutions. • Use benchmark quantities to determine if a solution makes sense. • Check calculations when solving problems. • Verify possible solutions by explaining the methods used. • Evaluate results based on the given context. **Clarifications:** Teachers who encourage students to assess the reasonableness of solutions: • Have students estimate or predict solutions prior to solving. • Prompt students to continually ask, "Does this solution make sense? How do you know?" • Reinforce that students check their work as they progress within and after a task. • Strengthen students' ability to verify solutions through justifications.
MA.K12.MTR.7.1:	Apply mathematics to real-world contexts. Mathematicians who apply mathematics to real-world contexts: • Connect mathematical concepts to everyday experiences. • Use models and methods to understand, represent and solve problems. • Perform investigations to gather data or determine if a method is appropriate. • Redesign models and methods to improve accuracy or efficiency. **Clarifications:** Teachers who encourage students to apply mathematics to real-world contexts: • Provide opportunities for students to create models, both concrete and abstract, and perform investigations. • Challenge students to question the accuracy of their models and methods. • Support students as they validate conclusions by comparing them to the given situation. • Indicate how various concepts can be applied to other disciplines.
ELA.K12.EE.1.1:	Cite evidence to explain and justify reasoning. **Clarifications:** K-1 Students include textual evidence in their oral communication with guidance and support from adults. The evidence can consist of details from the text without naming the text. During 1st grade, students learn how to incorporate the evidence in their writing. 2-3 Students include relevant textual evidence in their written and oral communication. Students should name the text when they refer to it. In 3rd grade, students should use a combination of direct and indirect citations. 4-5 Students continue with previous skills and reference comments made by speakers and peers. Students cite texts that they've directly quoted, paraphrased, or used for information. When writing, students will use the form of citation dictated by the instructor or the style guide referenced by the instructor. 6-8 Students continue with previous skills and use a style guide to create a proper citation.

	9-12 Students continue with previous skills and should be aware of existing style guides and the ways in which they differ.
ELA.K12.EE.2.1:	Read and comprehend grade-level complex texts proficiently. **Clarifications:** See Text Complexity for grade-level complexity bands and a text complexity rubric.
ELA.K12.EE.3.1:	Make inferences to support comprehension. **Clarifications:** Students will make inferences before the words infer or inference are introduced. Kindergarten students will answer questions like "Why is the girl smiling?" or make predictions about what will happen based on the title page. Students will use the terms and apply them in 2nd grade and beyond.
ELA.K12.EE.4.1:	Use appropriate collaborative techniques and active listening skills when engaging in discussions in a variety of situations. **Clarifications:** In kindergarten, students learn to listen to one another respectfully. In grades 1-2, students build upon these skills by justifying what they are thinking. For example: "I think _____ because _____." The collaborative conversations are becoming academic conversations. In grades 3-12, students engage in academic conversations discussing claims and justifying their reasoning, refining and applying skills. Students build on ideas, propel the conversation, and support claims and counterclaims with evidence.
ELA.K12.EE.5.1:	Use the accepted rules governing a specific format to create quality work. **Clarifications:** Students will incorporate skills learned into work products to produce quality work. For students to incorporate these skills appropriately, they must receive instruction. A 3rd grade student creating a poster board display must have instruction in how to effectively present information to do quality work.
ELA.K12.EE.6.1:	Use appropriate voice and tone when speaking or writing. **Clarifications:** In kindergarten and 1st grade, students learn the difference between formal and informal language. For example, the way we talk to our friends differs from the way we speak to adults. In 2nd grade and beyond, students practice appropriate social and academic language to discuss texts.
DA.912.S.2.1:	Sustain focused attention, respect, and discipline during class, rehearsal, and performance.
ELD.K12.ELL.SI.1:	English language learners communicate for social and instructional purposes within the school setting.

General Course Information and Notes

VERSION DESCRIPTION

Students in this novice-level class continue to develop musical and technical skills on a specific voice through developmentally appropriate solo literature, etudes, scales, and exercises. Through problem-solving, critical thinking, and reflection, students develop the physical and cognitive skills necessary to be more disciplined performers. Public performances may serve as a culmination of specific instructional goals. Students may be required to attend and/or participate in rehearsals and performances outside the school day to support, extend, and assess learning in the classroom.

GENERAL NOTES

Florida's Benchmarks for Excellent Student Thinking (B.E.S.T.) Standards
This course includes Florida's B.E.S.T. ELA Expectations (EE) and Mathematical Thinking and Reasoning Standards (MTRs) for students. Florida educators should intentionally embed these standards within the content and their instruction as applicable. For guidance on the implementation of the EEs and MTRs, please visit cpalms.org/Standards/BEST_Standards.aspx and select the appropriate B.E.S.T. Standards package.

English Language Development ELD Standards Special Notes Section:
Teachers are required to provide listening, speaking, reading and writing instruction that allows English language learners (ELL) to communicate for social and instructional purposes within the school setting. For the given level of English language proficiency and with visual, graphic, or interactive support, students will interact with grade level words, expressions, sentences and discourse to process or produce language necessary for academic success. The ELD standard should specify a relevant content area concept or topic of study chosen by curriculum developers and teachers which maximizes an ELL's need for communication and social skills. To access an ELL supporting document which delineates performance definitions and descriptors, please click on the following link: cpalms.org/uploads/docs/standards/eld/SI.pdf

GENERAL INFORMATION

Course Number: 1303410

Course Path: Section: Grades PreK to 12 Education Courses > **Grade Group:** Grades 9 to 12 and Adult Education Courses > **Subject:** Music Education > **SubSubject:** Choral Music >
Abbreviated Title: VOCAL TECNQS 2

Number of Credits: One (1) credit

Course Length: Year (Y)

Course Type: Core Academic Course

Course Level: 2

Course Status: Draft - Course Pending Approval

Grade Level(s): 9,10,11,12

Graduation Requirement: Performing/Fine Arts

Educator Certifications

Vocal Music (Elementary and Secondary Grades K-12)
Music (Elementary and Secondary Grades K-12)

Vocal Techniques 3 (#1303420) 2022 - And Beyond

Course Standards

Name	Description
MU.912.C.1.1:	Apply listening strategies to promote appreciation and understanding of unfamiliar musical works. **Clarifications:** e.g., listening maps, active listening, checklists
MU.912.C.2.1:	Evaluate and make appropriate adjustments to personal performance in solo and ensembles.
MU.912.C.2.2:	Evaluate performance quality in recorded and/or live performances.
MU.912.C.3.1:	Make critical evaluations, based on exemplary models, of the quality and effectiveness of performances and apply the criteria to personal development in music.
MU.912.F.3.3:	Define, prioritize, monitor, and successfully complete tasks related to individual musical performance or project presentation, without direct oversight, demonstrating skills for use in the workplace.
MU.912.F.3.4:	Design and implement a personal learning plan, related to the study of music, which demonstrates self-assessment, brain-storming, decision-making, and initiative to advance skills and/or knowledge.
MU.912.H.1.1:	Investigate and discuss how a culture's traditions are reflected through its music. **Clarifications:** e.g., patriotic, folk, celebration, entertainment, spiritual
MU.912.H.3.1:	Apply knowledge of science, math, and music to demonstrate, through an acoustic or digital performance medium, how sound production affects musical performance. **Clarifications:** e.g., acoustics, sound amplification, materials, mechanics
MU.912.O.2.1:	Transfer accepted composition conventions and performance practices of a specific style to a contrasting style of music.
MU.912.O.3.1:	Analyze expressive elements in a musical work and describe how the choices and manipulations of the elements support, for the listener, the implied meaning of the composer/performer. **Clarifications:** e.g., tempo markings, expression markings, articulation markings, phrasing, scales, modes, harmonic structure, timbre choice, rhythm, orchestration
MU.912.O.3.2:	Interpret and perform expressive elements indicated by the musical score and/or conductor.
MU.912.S.2.2:	Transfer expressive elements and performance techniques from one piece of music to another.
MU.912.S.3.1:	Synthesize a broad range of musical skills by performing a varied repertoire with expression, appropriate stylistic interpretation, technical accuracy, and kinesthetic energy.
MU.912.S.3.2:	Sight-read music accurately and expressively to show synthesis of skills. **Clarifications:** e.g., musical elements, expressive qualities, performance technique
MU.912.S.3.4:	Analyze and describe the effect of rehearsal sessions and/or strategies on refinement of skills and techniques.
MU.912.S.3.5:	Develop and demonstrate proper vocal or instrumental technique. **Clarifications:** e.g., posture, breathing, fingering, embouchure, bow technique, tuning, strumming
MA.K12.MTR.1.1:	Mathematicians who participate in effortful learning both individually and with others: • Analyze the problem in a way that makes sense given the task. • Ask questions that will help with solving the task. • Build perseverance by modifying methods as needed while solving a challenging task. • Stay engaged and maintain a positive mindset when working to solve tasks. • Help and support each other when attempting a new method or approach. **Clarifications:** Teachers who encourage students to participate actively in effortful learning both individually and with others: • Cultivate a community of growth mindset learners. • Foster perseverance in students by choosing tasks that are challenging. • Develop students' ability to analyze and problem solve. • Recognize students' effort when solving challenging problems.
MA.K12.MTR.2.1:	Demonstrate understanding by representing problems in multiple ways. Mathematicians who demonstrate understanding by representing problems in multiple ways: • Build understanding through modeling and using manipulatives. • Represent solutions to problems in multiple ways using objects, drawings, tables, graphs and equations. • Progress from modeling problems with objects and drawings to using algorithms and equations. • Express connections between concepts and representations. • Choose a representation based on the given context or purpose. **Clarifications:** Teachers who encourage students to demonstrate understanding by representing problems in multiple ways: • Help students make connections between concepts and representations.

- Provide opportunities for students to use manipulatives when investigating concepts.
- Guide students from concrete to pictorial to abstract representations as understanding progresses.
- Show students that various representations can have different purposes and can be useful in different situations.

MA.K12.MTR.3.1:

Complete tasks with mathematical fluency.
Mathematicians who complete tasks with mathematical fluency:

- Select efficient and appropriate methods for solving problems within the given context.
- Maintain flexibility and accuracy while performing procedures and mental calculations.
- Complete tasks accurately and with confidence.
- Adapt procedures to apply them to a new context.
- Use feedback to improve efficiency when performing calculations.

Clarifications:
Teachers who encourage students to complete tasks with mathematical fluency:

- Provide students with the flexibility to solve problems by selecting a procedure that allows them to solve efficiently and accurately.
- Offer multiple opportunities for students to practice efficient and generalizable methods.
- Provide opportunities for students to reflect on the method they used and determine if a more efficient method could have been used.

MA.K12.MTR.4.1:

Engage in discussions that reflect on the mathematical thinking of self and others.
Mathematicians who engage in discussions that reflect on the mathematical thinking of self and others:

- Communicate mathematical ideas, vocabulary and methods effectively.
- Analyze the mathematical thinking of others.
- Compare the efficiency of a method to those expressed by others.
- Recognize errors and suggest how to correctly solve the task.
- Justify results by explaining methods and processes.
- Construct possible arguments based on evidence.

Clarifications:
Teachers who encourage students to engage in discussions that reflect on the mathematical thinking of self and others:

- Establish a culture in which students ask questions of the teacher and their peers, and error is an opportunity for learning.
- Create opportunities for students to discuss their thinking with peers.
- Select, sequence and present student work to advance and deepen understanding of correct and increasingly efficient methods.
- Develop students' ability to justify methods and compare their responses to the responses of their peers.

MA.K12.MTR.5.1:

Use patterns and structure to help understand and connect mathematical concepts.
Mathematicians who use patterns and structure to help understand and connect mathematical concepts:

- Focus on relevant details within a problem.
- Create plans and procedures to logically order events, steps or ideas to solve problems.
- Decompose a complex problem into manageable parts.
- Relate previously learned concepts to new concepts.
- Look for similarities among problems.
- Connect solutions of problems to more complicated large-scale situations.

Clarifications:
Teachers who encourage students to use patterns and structure to help understand and connect mathematical concepts:

- Help students recognize the patterns in the world around them and connect these patterns to mathematical concepts.
- Support students to develop generalizations based on the similarities found among problems.
- Provide opportunities for students to create plans and procedures to solve problems.
- Develop students' ability to construct relationships between their current understanding and more sophisticated ways of thinking.

MA.K12.MTR.6.1:

Assess the reasonableness of solutions.
Mathematicians who assess the reasonableness of solutions:

- Estimate to discover possible solutions.
- Use benchmark quantities to determine if a solution makes sense.
- Check calculations when solving problems.
- Verify possible solutions by explaining the methods used.
- Evaluate results based on the given context.

Clarifications:
Teachers who encourage students to assess the reasonableness of solutions:

- Have students estimate or predict solutions prior to solving.
- Prompt students to continually ask, "Does this solution make sense? How do you know?"
- Reinforce that students check their work as they progress within and after a task.
- Strengthen students' ability to verify solutions through justifications.

MA.K12.MTR.7.1:

Apply mathematics to real-world contexts.
Mathematicians who apply mathematics to real-world contexts:

- Connect mathematical concepts to everyday experiences.
- Use models and methods to understand, represent and solve problems.
- Perform investigations to gather data or determine if a method is appropriate. • Redesign models and methods to improve accuracy or efficiency.

Clarifications:
Teachers who encourage students to apply mathematics to real-world contexts:

- Provide opportunities for students to create models, both concrete and abstract, and perform investigations.
- Challenge students to question the accuracy of their models and methods.

	• Support students as they validate conclusions by comparing them to the given situation. • Indicate how various concepts can be applied to other disciplines.
ELA.K12.EE.1.1:	Cite evidence to explain and justify reasoning. **Clarifications:** K-1 Students include textual evidence in their oral communication with guidance and support from adults. The evidence can consist of details from the text without naming the text. During 1st grade, students learn how to incorporate the evidence in their writing. 2-3 Students include relevant textual evidence in their written and oral communication. Students should name the text when they refer to it. In 3rd grade, students should use a combination of direct and indirect citations. 4-5 Students continue with previous skills and reference comments made by speakers and peers. Students cite texts that they've directly quoted, paraphrased, or used for information. When writing, students will use the form of citation dictated by the instructor or the style guide referenced by the instructor. 6-8 Students continue with previous skills and use a style guide to create a proper citation. 9-12 Students continue with previous skills and should be aware of existing style guides and the ways in which they differ.
ELA.K12.EE.2.1:	Read and comprehend grade-level complex texts proficiently. **Clarifications:** See Text Complexity for grade-level complexity bands and a text complexity rubric.
ELA.K12.EE.3.1:	Make inferences to support comprehension. **Clarifications:** Students will make inferences before the words infer or inference are introduced. Kindergarten students will answer questions like "Why is the girl smiling?" or make predictions about what will happen based on the title page. Students will use the terms and apply them in 2nd grade and beyond.
ELA.K12.EE.4.1:	Use appropriate collaborative techniques and active listening skills when engaging in discussions in a variety of situations. **Clarifications:** In kindergarten, students learn to listen to one another respectfully. In grades 1-2, students build upon these skills by justifying what they are thinking. For example: "I think _____ because _____." The collaborative conversations are becoming academic conversations. In grades 3-12, students engage in academic conversations discussing claims and justifying their reasoning, refining and applying skills. Students build on ideas, propel the conversation, and support claims and counterclaims with evidence.
ELA.K12.EE.5.1:	Use the accepted rules governing a specific format to create quality work. **Clarifications:** Students will incorporate skills learned into work products to produce quality work. For students to incorporate these skills appropriately, they must receive instruction. A 3rd grade student creating a poster board display must have instruction in how to effectively present information to do quality work.
ELA.K12.EE.6.1:	Use appropriate voice and tone when speaking or writing. **Clarifications:** In kindergarten and 1st grade, students learn the difference between formal and informal language. For example, the way we talk to our friends differs from the way we speak to adults. In 2nd grade and beyond, students practice appropriate social and academic language to discuss texts.
DA.912.S.2.1:	Sustain focused attention, respect, and discipline during class, rehearsal, and performance.
ELD.K12.ELL.SI.1:	English language learners communicate for social and instructional purposes within the school setting.

General Course Information and Notes

VERSION DESCRIPTION

Students in this intermediate-level class develop their musical and technical skills further on a specific voice, and expand their technical and performance skills, enhanced by historical and cultural background knowledge of the music. Students explore more demanding solo literature, etudes, and technical exercises with increasing independence. Public performances may serve as a culmination of specific instructional goals. Students may be required to attend and/or participate in rehearsals and performances outside the school day to support, extend, and assess learning in the classroom.

GENERAL NOTES

Florida's Benchmarks for Excellent Student Thinking (B.E.S.T.) Standards
This course includes Florida's B.E.S.T. ELA Expectations (EE) and Mathematical Thinking and Reasoning Standards (MTRs) for students. Florida educators should intentionally embed these standards within the content and their instruction as applicable. For guidance on the implementation of the EEs and MTRs, please visit cpalms.org/Standards/BEST_Standards.aspx and select the appropriate B.E.S.T. Standards package.

English Language Development ELD Standards Special Notes Section:
Teachers are required to provide listening, speaking, reading and writing instruction that allows English language learners (ELL) to communicate for social and instructional purposes within the school setting. For the given level of English language proficiency and with visual, graphic, or interactive support, students will interact with grade level words, expressions, sentences and discourse to process or produce language necessary for academic success. The ELD standard should specify a relevant content area concept or topic of study chosen by curriculum developers and teachers which maximizes an ELL's need for communication and social skills. To access an ELL supporting document which delineates performance definitions and descriptors, please click on the following link: cpalms.org/uploads/docs/standards/eld/SI.pdf

GENERAL INFORMATION

Course Number: 1303420

Course Path: Section: Grades PreK to 12 Education Courses > **Grade Group:** Grades 9 to 12 and Adult Education Courses > **Subject:** Music Education > **SubSubject:** Choral Music >

Abbreviated Title: VOCAL TECNQS 3

Number of Credits: One (1) credit

Course Length: Year (Y)

Course Type: Core Academic Course

Course Level: 2

Course Status: Draft - Course Pending Approval

Grade Level(s): 9,10,11,12

Graduation Requirement: Performing/Fine Arts

Educator Certifications

Vocal Music (Elementary and Secondary Grades K-12)
Music (Elementary and Secondary Grades K-12)

Vocal Techniques 4 Honors (#1303430) 2022 - And Beyond

Course Standards

Name	Description
MU.912.C.1.1:	Apply listening strategies to promote appreciation and understanding of unfamiliar musical works. **Clarifications:** e.g., listening maps, active listening, checklists
MU.912.C.1.2:	Compare, using correct music vocabulary, the aesthetic impact of two or more performances of a musical work to one's own hypothesis of the composer's intent. **Clarifications:** e.g., quality recordings, individual and peer-group performances, composer notes, instrumentation, expressive elements, title
MU.912.C.2.1:	Evaluate and make appropriate adjustments to personal performance in solo and ensembles.
MU.912.C.2.2:	Evaluate performance quality in recorded and/or live performances.
MU.912.C.3.1:	Make critical evaluations, based on exemplary models, of the quality and effectiveness of performances and apply the criteria to personal development in music.
MU.912.F.2.1:	Design or refine a résumé for application to higher education or the workforce that highlights marketable skills and knowledge gained through music training. **Clarifications:** e.g., repertoire lists, technology-based work, ability to research and analyze, and examples of leadership and collaborative skills
MU.912.F.3.1:	Analyze and describe how meeting one's responsibilities in music offers opportunities to develop leadership skills, and identify personal examples of leadership in school and/or non-school settings.
MU.912.F.3.3:	Define, prioritize, monitor, and successfully complete tasks related to individual musical performance or project presentation, without direct oversight, demonstrating skills for use in the workplace.
MU.912.F.3.4:	Design and implement a personal learning plan, related to the study of music, which demonstrates self-assessment, brain-storming, decision-making, and initiative to advance skills and/or knowledge.
MU.912.H.1.1:	Investigate and discuss how a culture's traditions are reflected through its music. **Clarifications:** e.g., patriotic, folk, celebration, entertainment, spiritual
MU.912.H.3.1:	Apply knowledge of science, math, and music to demonstrate, through an acoustic or digital performance medium, how sound production affects musical performance. **Clarifications:** e.g., acoustics, sound amplification, materials, mechanics
MU.912.O.2.1:	Transfer accepted composition conventions and performance practices of a specific style to a contrasting style of music.
MU.912.O.2.2:	Transpose melodies into different modalities through performance and composition.
MU.912.O.3.1:	Analyze expressive elements in a musical work and describe how the choices and manipulations of the elements support, for the listener, the implied meaning of the composer/performer. **Clarifications:** e.g., tempo markings, expression markings, articulation markings, phrasing, scales, modes, harmonic structure, timbre choice, rhythm, orchestration
MU.912.O.3.2:	Interpret and perform expressive elements indicated by the musical score and/or conductor.
MU.912.S.2.1:	Apply the ability to memorize and internalize musical structure, accurate and expressive details, and processing skills to the creation or performance of music literature. **Clarifications:** e.g., memorization, sequential process
MU.912.S.2.2:	Transfer expressive elements and performance techniques from one piece of music to another.
MU.912.S.3.1:	Synthesize a broad range of musical skills by performing a varied repertoire with expression, appropriate stylistic interpretation, technical accuracy, and kinesthetic energy.
MU.912.S.3.2:	Sight-read music accurately and expressively to show synthesis of skills. **Clarifications:** e.g., musical elements, expressive qualities, performance technique
MU.912.S.3.4:	Analyze and describe the effect of rehearsal sessions and/or strategies on refinement of skills and techniques.
MU.912.S.3.5:	Develop and demonstrate proper vocal or instrumental technique. **Clarifications:** e.g., posture, breathing, fingering, embouchure, bow technique, tuning, strumming
MA.K12.MTR.1.1:	Mathematicians who participate in effortful learning both individually and with others: • Analyze the problem in a way that makes sense given the task. • Ask questions that will help with solving the task. • Build perseverance by modifying methods as needed while solving a challenging task. • Stay engaged and maintain a positive mindset when working to solve tasks. • Help and support each other when attempting a new method or approach. **Clarifications:**

Teachers who encourage students to participate actively in effortful learning both individually and with others:

- Cultivate a community of growth mindset learners.
- Foster perseverance in students by choosing tasks that are challenging.
- Develop students' ability to analyze and problem solve.
- Recognize students' effort when solving challenging problems.

MA.K12.MTR.2.1:

Demonstrate understanding by representing problems in multiple ways.
Mathematicians who demonstrate understanding by representing problems in multiple ways:

- Build understanding through modeling and using manipulatives.
- Represent solutions to problems in multiple ways using objects, drawings, tables, graphs and equations.
- Progress from modeling problems with objects and drawings to using algorithms and equations.
- Express connections between concepts and representations.
- Choose a representation based on the given context or purpose.

Clarifications:
Teachers who encourage students to demonstrate understanding by representing problems in multiple ways:

- Help students make connections between concepts and representations.
- Provide opportunities for students to use manipulatives when investigating concepts.
- Guide students from concrete to pictorial to abstract representations as understanding progresses.
- Show students that various representations can have different purposes and can be useful in different situations.

MA.K12.MTR.3.1:

Complete tasks with mathematical fluency.
Mathematicians who complete tasks with mathematical fluency:

- Select efficient and appropriate methods for solving problems within the given context.
- Maintain flexibility and accuracy while performing procedures and mental calculations.
- Complete tasks accurately and with confidence.
- Adapt procedures to apply them to a new context.
- Use feedback to improve efficiency when performing calculations.

Clarifications:
Teachers who encourage students to complete tasks with mathematical fluency:

- Provide students with the flexibility to solve problems by selecting a procedure that allows them to solve efficiently and accurately.
- Offer multiple opportunities for students to practice efficient and generalizable methods.
- Provide opportunities for students to reflect on the method they used and determine if a more efficient method could have been used.

MA.K12.MTR.4.1:

Engage in discussions that reflect on the mathematical thinking of self and others.
Mathematicians who engage in discussions that reflect on the mathematical thinking of self and others:

- Communicate mathematical ideas, vocabulary and methods effectively.
- Analyze the mathematical thinking of others.
- Compare the efficiency of a method to those expressed by others.
- Recognize errors and suggest how to correctly solve the task.
- Justify results by explaining methods and processes.
- Construct possible arguments based on evidence.

Clarifications:
Teachers who encourage students to engage in discussions that reflect on the mathematical thinking of self and others:

- Establish a culture in which students ask questions of the teacher and their peers, and error is an opportunity for learning.
- Create opportunities for students to discuss their thinking with peers.
- Select, sequence and present student work to advance and deepen understanding of correct and increasingly efficient methods.
- Develop students' ability to justify methods and compare their responses to the responses of their peers.

MA.K12.MTR.5.1:

Use patterns and structure to help understand and connect mathematical concepts.
Mathematicians who use patterns and structure to help understand and connect mathematical concepts:

- Focus on relevant details within a problem.
- Create plans and procedures to logically order events, steps or ideas to solve problems.
- Decompose a complex problem into manageable parts.
- Relate previously learned concepts to new concepts.
- Look for similarities among problems.
- Connect solutions of problems to more complicated large-scale situations.

Clarifications:
Teachers who encourage students to use patterns and structure to help understand and connect mathematical concepts:

- Help students recognize the patterns in the world around them and connect these patterns to mathematical concepts.
- Support students to develop generalizations based on the similarities found among problems.
- Provide opportunities for students to create plans and procedures to solve problems.
- Develop students' ability to construct relationships between their current understanding and more sophisticated ways of thinking.

MA.K12.MTR.6.1:

Assess the reasonableness of solutions.
Mathematicians who assess the reasonableness of solutions:

- Estimate to discover possible solutions.
- Use benchmark quantities to determine if a solution makes sense.
- Check calculations when solving problems.
- Verify possible solutions by explaining the methods used.
- Evaluate results based on the given context.

	Clarifications: Teachers who encourage students to assess the reasonableness of solutions: • Have students estimate or predict solutions prior to solving. • Prompt students to continually ask, "Does this solution make sense? How do you know?" • Reinforce that students check their work as they progress within and after a task. • Strengthen students' ability to verify solutions through justifications.
MA.K12.MTR.7.1:	Apply mathematics to real-world contexts. Mathematicians who apply mathematics to real-world contexts: • Connect mathematical concepts to everyday experiences. • Use models and methods to understand, represent and solve problems. • Perform investigations to gather data or determine if a method is appropriate. • Redesign models and methods to improve accuracy or efficiency. **Clarifications:** Teachers who encourage students to apply mathematics to real-world contexts: • Provide opportunities for students to create models, both concrete and abstract, and perform investigations. • Challenge students to question the accuracy of their models and methods. • Support students as they validate conclusions by comparing them to the given situation. • Indicate how various concepts can be applied to other disciplines.
ELA.K12.EE.1.1:	Cite evidence to explain and justify reasoning. **Clarifications:** K-1 Students include textual evidence in their oral communication with guidance and support from adults. The evidence can consist of details from the text without naming the text. During 1st grade, students learn how to incorporate the evidence in their writing. 2-3 Students include relevant textual evidence in their written and oral communication. Students should name the text when they refer to it. In 3rd grade, students should use a combination of direct and indirect citations. 4-5 Students continue with previous skills and reference comments made by speakers and peers. Students cite texts that they've directly quoted, paraphrased, or used for information. When writing, students will use the form of citation dictated by the instructor or the style guide referenced by the instructor. 6-8 Students continue with previous skills and use a style guide to create a proper citation. 9-12 Students continue with previous skills and should be aware of existing style guides and the ways in which they differ.
ELA.K12.EE.2.1:	Read and comprehend grade-level complex texts proficiently. **Clarifications:** See Text Complexity for grade-level complexity bands and a text complexity rubric.
ELA.K12.EE.3.1:	Make inferences to support comprehension. **Clarifications:** Students will make inferences before the words infer or inference are introduced. Kindergarten students will answer questions like "Why is the girl smiling?" or make predictions about what will happen based on the title page. Students will use the terms and apply them in 2nd grade and beyond.
ELA.K12.EE.4.1:	Use appropriate collaborative techniques and active listening skills when engaging in discussions in a variety of situations. **Clarifications:** In kindergarten, students learn to listen to one another respectfully. In grades 1-2, students build upon these skills by justifying what they are thinking. For example: "I think _____ because _____." The collaborative conversations are becoming academic conversations. In grades 3-12, students engage in academic conversations discussing claims and justifying their reasoning, refining and applying skills. Students build on ideas, propel the conversation, and support claims and counterclaims with evidence.
ELA.K12.EE.5.1:	Use the accepted rules governing a specific format to create quality work. **Clarifications:** Students will incorporate skills learned into work products to produce quality work. For students to incorporate these skills appropriately, they must receive instruction. A 3rd grade student creating a poster board display must have instruction in how to effectively present information to do quality work.
ELA.K12.EE.6.1:	Use appropriate voice and tone when speaking or writing. **Clarifications:** In kindergarten and 1st grade, students learn the difference between formal and informal language. For example, the way we talk to our friends differs from the way we speak to adults. In 2nd grade and beyond, students practice appropriate social and academic language to discuss texts.
DA.912.S.2.1:	Sustain focused attention, respect, and discipline during class, rehearsal, and performance.
ELD.K12.ELL.SI.1:	English language learners communicate for social and instructional purposes within the school setting.

General Course Information and Notes

VERSION DESCRIPTION

Students in this advanced class refine their musicianship and performance skills on a specified voice. Students prepare for post-secondary and community music experiences and develop artistry independently through a variety of advanced solos, etudes, and excerpts. Public performances may serve as a culmination of specific instructional goals. Students may be required to attend and/or participate in rehearsals and performances outside the school day to support, extend, and assess learning in the classroom.

GENERAL NOTES

Honors and Advanced Level Course Note: Advanced courses require a greater demand on students through increased academic rigor. Academic rigor is obtained through the application, analysis, evaluation, and creation of complex ideas that are often abstract and multi-faceted. Students are challenged to think and collaborate critically on the content they are learning. Honors level rigor will be achieved by increasing text complexity through text selection, focus on high-level qualitative measures, and complexity of task. Instruction will be structured to give students a deeper understanding of conceptual themes and organization within and across disciplines. Academic rigor is more than simply assigning to students a greater quantity of work.

Florida's Benchmarks for Excellent Student Thinking (B.E.S.T.) Standards
This course includes Florida's B.E.S.T. ELA Expectations (EE) and Mathematical Thinking and Reasoning Standards (MTRs) for students. Florida educators should intentionally embed these standards within the content and their instruction as applicable. For guidance on the implementation of the EEs and MTRs, please visit cpalms.org/Standards/BEST_Standards.aspx and select the appropriate B.E.S.T. Standards package.

English Language Development ELD Standards Special Notes Section:
Teachers are required to provide listening, speaking, reading and writing instruction that allows English language learners (ELL) to communicate for social and instructional purposes within the school setting. For the given level of English language proficiency and with visual, graphic, or interactive support, students will interact with grade level words, expressions, sentences and discourse to process or produce language necessary for academic success. The ELD standard should specify a relevant content area concept or topic of study chosen by curriculum developers and teachers which maximizes an ELL's need for communication and social skills. To access an ELL supporting document which delineates performance definitions and descriptors, please click on the following link: cpalms.org/uploads/docs/standards/eld/SI.pdf

GENERAL INFORMATION

Course Number: 1303430

Course Path: Section: Grades PreK to 12 Education Courses > **Grade Group:** Grades 9 to 12 and Adult Education Courses > **Subject:** Music Education > **SubSubject:** Choral Music >

Abbreviated Title: VOCAL TECNQS 4 HON

Number of Credits: One (1) credit

Course Length: Year (Y)

Course Attributes:

- Honors

Course Type: Core Academic Course

Course Level: 3

Course Status: Draft - Course Pending Approval

Grade Level(s): 9,10,11,12

Graduation Requirement: Performing/Fine Arts

Educator Certifications

Vocal Music (Elementary and Secondary Grades K-12)
Music (Elementary and Secondary Grades K-12)

Vocal Ensemble 1 (#1303440) 2022 - And Beyond

Course Standards

Name	Description
MU.912.C.1.1:	Apply listening strategies to promote appreciation and understanding of unfamiliar musical works. **Clarifications:** e.g., listening maps, active listening, checklists
MU.912.C.2.1:	Evaluate and make appropriate adjustments to personal performance in solo and ensembles.
MU.912.C.2.2:	Evaluate performance quality in recorded and/or live performances.
MU.912.C.3.1:	Make critical evaluations, based on exemplary models, of the quality and effectiveness of performances and apply the criteria to personal development in music.
MU.912.F.3.2:	Summarize copyright laws that govern printed, recorded, and on-line music to promote legal and responsible use of intellectual property and technology.
MU.912.H.1.5:	Analyze music within cultures to gain understanding of authentic performance practices.
MU.912.H.2.4:	Examine the effects of developing technology on composition, performance, and acquisition of music.
MU.912.O.3.2:	Interpret and perform expressive elements indicated by the musical score and/or conductor.
MU.912.S.1.3:	Arrange a musical work by manipulating two or more aspects of the composition. **Clarifications:** e.g., texture, mode, form, tempo, voicing
MU.912.S.2.2:	Transfer expressive elements and performance techniques from one piece of music to another.
MU.912.S.3.1:	Synthesize a broad range of musical skills by performing a varied repertoire with expression, appropriate stylistic interpretation, technical accuracy, and kinesthetic energy.
MU.912.S.3.2:	Sight-read music accurately and expressively to show synthesis of skills. **Clarifications:** e.g., musical elements, expressive qualities, performance technique
MU.912.S.3.5:	Develop and demonstrate proper vocal or instrumental technique. **Clarifications:** e.g., posture, breathing, fingering, embouchure, bow technique, tuning, strumming
MA.K12.MTR.1.1:	Mathematicians who participate in effortful learning both individually and with others: • Analyze the problem in a way that makes sense given the task. • Ask questions that will help with solving the task. • Build perseverance by modifying methods as needed while solving a challenging task. • Stay engaged and maintain a positive mindset when working to solve tasks. • Help and support each other when attempting a new method or approach. **Clarifications:** Teachers who encourage students to participate actively in effortful learning both individually and with others: • Cultivate a community of growth mindset learners. • Foster perseverance in students by choosing tasks that are challenging. • Develop students' ability to analyze and problem solve. • Recognize students' effort when solving challenging problems.
MA.K12.MTR.2.1:	Demonstrate understanding by representing problems in multiple ways. Mathematicians who demonstrate understanding by representing problems in multiple ways: • Build understanding through modeling and using manipulatives. • Represent solutions to problems in multiple ways using objects, drawings, tables, graphs and equations. • Progress from modeling problems with objects and drawings to using algorithms and equations. • Express connections between concepts and representations. • Choose a representation based on the given context or purpose. **Clarifications:** Teachers who encourage students to demonstrate understanding by representing problems in multiple ways: • Help students make connections between concepts and representations. • Provide opportunities for students to use manipulatives when investigating concepts. • Guide students from concrete to pictorial to abstract representations as understanding progresses. • Show students that various representations can have different purposes and can be useful in different situations.
MA.K12.MTR.3.1:	Complete tasks with mathematical fluency. Mathematicians who complete tasks with mathematical fluency: • Select efficient and appropriate methods for solving problems within the given context. • Maintain flexibility and accuracy while performing procedures and mental calculations. • Complete tasks accurately and with confidence. • Adapt procedures to apply them to a new context. • Use feedback to improve efficiency when performing calculations. **Clarifications:**

Teachers who encourage students to complete tasks with mathematical fluency:

- Provide students with the flexibility to solve problems by selecting a procedure that allows them to solve efficiently and accurately.
- Offer multiple opportunities for students to practice efficient and generalizable methods.
- Provide opportunities for students to reflect on the method they used and determine if a more efficient method could have been used.

MA.K12.MTR.4.1:

Engage in discussions that reflect on the mathematical thinking of self and others.
Mathematicians who engage in discussions that reflect on the mathematical thinking of self and others:

- Communicate mathematical ideas, vocabulary and methods effectively.
- Analyze the mathematical thinking of others.
- Compare the efficiency of a method to those expressed by others.
- Recognize errors and suggest how to correctly solve the task.
- Justify results by explaining methods and processes.
- Construct possible arguments based on evidence.

Clarifications:
Teachers who encourage students to engage in discussions that reflect on the mathematical thinking of self and others:

- Establish a culture in which students ask questions of the teacher and their peers, and error is an opportunity for learning.
- Create opportunities for students to discuss their thinking with peers.
- Select, sequence and present student work to advance and deepen understanding of correct and increasingly efficient methods.
- Develop students' ability to justify methods and compare their responses to the responses of their peers.

MA.K12.MTR.5.1:

Use patterns and structure to help understand and connect mathematical concepts.
Mathematicians who use patterns and structure to help understand and connect mathematical concepts:

- Focus on relevant details within a problem.
- Create plans and procedures to logically order events, steps or ideas to solve problems.
- Decompose a complex problem into manageable parts.
- Relate previously learned concepts to new concepts.
- Look for similarities among problems.
- Connect solutions of problems to more complicated large-scale situations.

Clarifications:
Teachers who encourage students to use patterns and structure to help understand and connect mathematical concepts:

- Help students recognize the patterns in the world around them and connect these patterns to mathematical concepts.
- Support students to develop generalizations based on the similarities found among problems.
- Provide opportunities for students to create plans and procedures to solve problems.
- Develop students' ability to construct relationships between their current understanding and more sophisticated ways of thinking.

MA.K12.MTR.6.1:

Assess the reasonableness of solutions.
Mathematicians who assess the reasonableness of solutions:

- Estimate to discover possible solutions.
- Use benchmark quantities to determine if a solution makes sense.
- Check calculations when solving problems.
- Verify possible solutions by explaining the methods used.
- Evaluate results based on the given context.

Clarifications:
Teachers who encourage students to assess the reasonableness of solutions:

- Have students estimate or predict solutions prior to solving.
- Prompt students to continually ask, "Does this solution make sense? How do you know?"
- Reinforce that students check their work as they progress within and after a task.
- Strengthen students' ability to verify solutions through justifications.

MA.K12.MTR.7.1:

Apply mathematics to real-world contexts.
Mathematicians who apply mathematics to real-world contexts:

- Connect mathematical concepts to everyday experiences.
- Use models and methods to understand, represent and solve problems.
- Perform investigations to gather data or determine if a method is appropriate. • Redesign models and methods to improve accuracy or efficiency.

Clarifications:
Teachers who encourage students to apply mathematics to real-world contexts:

- Provide opportunities for students to create models, both concrete and abstract, and perform investigations.
- Challenge students to question the accuracy of their models and methods.
- Support students as they validate conclusions by comparing them to the given situation.
- Indicate how various concepts can be applied to other disciplines.

ELA.K12.EE.1.1:

Cite evidence to explain and justify reasoning.

Clarifications:
K-1 Students include textual evidence in their oral communication with guidance and support from adults. The evidence can consist of details from the text without naming the text. During 1st grade, students learn how to incorporate the evidence in their writing.
2-3 Students include relevant textual evidence in their written and oral communication. Students should name the text when they refer to it. In 3rd grade, students should use a combination of direct and indirect citations.

4-5 Students continue with previous skills and reference comments made by speakers and peers. Students cite texts that they've directly quoted, paraphrased, or used for information. When writing, students will use the form of citation dictated by the instructor or the style guide referenced by the instructor.

	6-8 Students continue with previous skills and use a style guide to create a proper citation. 9-12 Students continue with previous skills and should be aware of existing style guides and the ways in which they differ.
ELA.K12.EE.2.1:	Read and comprehend grade-level complex texts proficiently. **Clarifications:** See Text Complexity for grade-level complexity bands and a text complexity rubric.
ELA.K12.EE.3.1:	Make inferences to support comprehension. **Clarifications:** Students will make inferences before the words infer or inference are introduced. Kindergarten students will answer questions like "Why is the girl smiling?" or make predictions about what will happen based on the title page. Students will use the terms and apply them in 2nd grade and beyond.
ELA.K12.EE.4.1:	Use appropriate collaborative techniques and active listening skills when engaging in discussions in a variety of situations. **Clarifications:** In kindergarten, students learn to listen to one another respectfully. In grades 1-2, students build upon these skills by justifying what they are thinking. For example: "I think _____ because _____." The collaborative conversations are becoming academic conversations. In grades 3-12, students engage in academic conversations discussing claims and justifying their reasoning, refining and applying skills. Students build on ideas, propel the conversation, and support claims and counterclaims with evidence.
ELA.K12.EE.5.1:	Use the accepted rules governing a specific format to create quality work. **Clarifications:** Students will incorporate skills learned into work products to produce quality work. For students to incorporate these skills appropriately, they must receive instruction. A 3rd grade student creating a poster board display must have instruction in how to effectively present information to do quality work.
ELA.K12.EE.6.1:	Use appropriate voice and tone when speaking or writing. **Clarifications:** In kindergarten and 1st grade, students learn the difference between formal and informal language. For example, the way we talk to our friends differs from the way we speak to adults. In 2nd grade and beyond, students practice appropriate social and academic language to discuss texts.
DA.912.F.3.8:	Demonstrate effective teamwork and accountability, using compromise, collaboration, and conflict resolution, to set and achieve goals as required in the work environment.
DA.912.S.2.1:	Sustain focused attention, respect, and discipline during class, rehearsal, and performance.
ELD.K12.ELL.SI.1:	English language learners communicate for social and instructional purposes within the school setting.

General Course Information and Notes

VERSION DESCRIPTION

Students with little or no experience in a vocal ensemble develop basic musicianship and ensemble performance skills through the study of basic, high-quality music in diverse styles. Student musicians focus on building foundational music techniques, music literacy, listening skills, and aesthetic awareness. Public performances may serve as a culmination of specific instructional goals. Students may be required to attend and/or participate in rehearsals and performances outside the school day to support, extend, and assess learning in the classroom.

GENERAL NOTES

Florida's Benchmarks for Excellent Student Thinking (B.E.S.T.) Standards
This course includes Florida's B.E.S.T. ELA Expectations (EE) and Mathematical Thinking and Reasoning Standards (MTRs) for students. Florida educators should intentionally embed these standards within the content and their instruction as applicable. For guidance on the implementation of the EEs and MTRs, please visit cpalms.org/Standards/BEST_Standards.aspx and select the appropriate B.E.S.T. Standards package.

English Language Development ELD Standards Special Notes Section:
Teachers are required to provide listening, speaking, reading and writing instruction that allows English language learners (ELL) to communicate for social and instructional purposes within the school setting. For the given level of English language proficiency and with visual, graphic, or interactive support, students will interact with grade level words, expressions, sentences and discourse to process or produce language necessary for academic success. The ELD standard should specify a relevant content area concept or topic of study chosen by curriculum developers and teachers which maximizes an ELL's need for communication and social skills. To access an ELL supporting document which delineates performance definitions and descriptors, please click on the following link: cpalms.org/uploads/docs/standards/eld/SI.pdf

GENERAL INFORMATION

Course Number: 1303440

Course Path: Section: Grades PreK to 12 Education Courses > **Grade Group:** Grades 9 to 12 and Adult Education Courses > **Subject:** Music Education > **SubSubject:** Choral Music >
Abbreviated Title: VOCAL ENS 1

Number of Credits: One (1) credit

Course Length: Year (Y)

Course Type: Core Academic Course
Course Level: 2
Course Status: Draft - Course Pending Approval
Grade Level(s): 9,10,11,12
Graduation Requirement: Performing/Fine Arts

Educator Certifications

Vocal Music (Elementary and Secondary Grades K-12)
Music (Elementary and Secondary Grades K-12)

Vocal Ensemble 2 (#1303450) 2022 - And Beyond

Course Standards

Name	Description
MU.912.C.1.1:	Apply listening strategies to promote appreciation and understanding of unfamiliar musical works. **Clarifications:** e.g., listening maps, active listening, checklists
MU.912.C.2.1:	Evaluate and make appropriate adjustments to personal performance in solo and ensembles.
MU.912.C.2.2:	Evaluate performance quality in recorded and/or live performances.
MU.912.C.3.1:	Make critical evaluations, based on exemplary models, of the quality and effectiveness of performances and apply the criteria to personal development in music.
MU.912.F.3.2:	Summarize copyright laws that govern printed, recorded, and on-line music to promote legal and responsible use of intellectual property and technology.
MU.912.H.1.5:	Analyze music within cultures to gain understanding of authentic performance practices.
MU.912.H.2.4:	Examine the effects of developing technology on composition, performance, and acquisition of music.
MU.912.O.1.1:	Evaluate the organizational principles and conventions in musical works and discuss their effect on structure. **Clarifications:** e.g., rhythm, melody, timbre, form, tonality, harmony, texture; solo, chamber ensemble, large ensemble
MU.912.O.3.1:	Analyze expressive elements in a musical work and describe how the choices and manipulations of the elements support, for the listener, the implied meaning of the composer/performer. **Clarifications:** e.g., tempo markings, expression markings, articulation markings, phrasing, scales, modes, harmonic structure, timbre choice, rhythm, orchestration
MU.912.O.3.2:	Interpret and perform expressive elements indicated by the musical score and/or conductor.
MU.912.S.1.3:	Arrange a musical work by manipulating two or more aspects of the composition. **Clarifications:** e.g., texture, mode, form, tempo, voicing
MU.912.S.2.1:	Apply the ability to memorize and internalize musical structure, accurate and expressive details, and processing skills to the creation or performance of music literature. **Clarifications:** e.g., memorization, sequential process
MU.912.S.2.2:	Transfer expressive elements and performance techniques from one piece of music to another.
MU.912.S.3.1:	Synthesize a broad range of musical skills by performing a varied repertoire with expression, appropriate stylistic interpretation, technical accuracy, and kinesthetic energy.
MU.912.S.3.2:	Sight-read music accurately and expressively to show synthesis of skills. **Clarifications:** e.g., musical elements, expressive qualities, performance technique
MU.912.S.3.5:	Develop and demonstrate proper vocal or instrumental technique. **Clarifications:** e.g., posture, breathing, fingering, embouchure, bow technique, tuning, strumming
MA.K12.MTR.1.1:	Mathematicians who participate in effortful learning both individually and with others: • Analyze the problem in a way that makes sense given the task. • Ask questions that will help with solving the task. • Build perseverance by modifying methods as needed while solving a challenging task. • Stay engaged and maintain a positive mindset when working to solve tasks. • Help and support each other when attempting a new method or approach. **Clarifications:** Teachers who encourage students to participate actively in effortful learning both individually and with others: • Cultivate a community of growth mindset learners. • Foster perseverance in students by choosing tasks that are challenging. • Develop students' ability to analyze and problem solve. • Recognize students' effort when solving challenging problems.
MA.K12.MTR.2.1:	Demonstrate understanding by representing problems in multiple ways. Mathematicians who demonstrate understanding by representing problems in multiple ways: • Build understanding through modeling and using manipulatives. • Represent solutions to problems in multiple ways using objects, drawings, tables, graphs and equations. • Progress from modeling problems with objects and drawings to using algorithms and equations. • Express connections between concepts and representations. • Choose a representation based on the given context or purpose. **Clarifications:** Teachers who encourage students to demonstrate understanding by representing problems in multiple ways:

- Help students make connections between concepts and representations.
- Provide opportunities for students to use manipulatives when investigating concepts.
- Guide students from concrete to pictorial to abstract representations as understanding progresses.
- Show students that various representations can have different purposes and can be useful in different situations.

MA.K12.MTR.3.1:

Complete tasks with mathematical fluency.
Mathematicians who complete tasks with mathematical fluency:

- Select efficient and appropriate methods for solving problems within the given context.
- Maintain flexibility and accuracy while performing procedures and mental calculations.
- Complete tasks accurately and with confidence.
- Adapt procedures to apply them to a new context.
- Use feedback to improve efficiency when performing calculations.

Clarifications:
Teachers who encourage students to complete tasks with mathematical fluency:

- Provide students with the flexibility to solve problems by selecting a procedure that allows them to solve efficiently and accurately.
- Offer multiple opportunities for students to practice efficient and generalizable methods.
- Provide opportunities for students to reflect on the method they used and determine if a more efficient method could have been used.

MA.K12.MTR.4.1:

Engage in discussions that reflect on the mathematical thinking of self and others.
Mathematicians who engage in discussions that reflect on the mathematical thinking of self and others:

- Communicate mathematical ideas, vocabulary and methods effectively.
- Analyze the mathematical thinking of others.
- Compare the efficiency of a method to those expressed by others.
- Recognize errors and suggest how to correctly solve the task.
- Justify results by explaining methods and processes.
- Construct possible arguments based on evidence.

Clarifications:
Teachers who encourage students to engage in discussions that reflect on the mathematical thinking of self and others:

- Establish a culture in which students ask questions of the teacher and their peers, and error is an opportunity for learning.
- Create opportunities for students to discuss their thinking with peers.
- Select, sequence and present student work to advance and deepen understanding of correct and increasingly efficient methods.
- Develop students' ability to justify methods and compare their responses to the responses of their peers.

MA.K12.MTR.5.1:

Use patterns and structure to help understand and connect mathematical concepts.
Mathematicians who use patterns and structure to help understand and connect mathematical concepts:

- Focus on relevant details within a problem.
- Create plans and procedures to logically order events, steps or ideas to solve problems.
- Decompose a complex problem into manageable parts.
- Relate previously learned concepts to new concepts.
- Look for similarities among problems.
- Connect solutions of problems to more complicated large-scale situations.

Clarifications:
Teachers who encourage students to use patterns and structure to help understand and connect mathematical concepts:

- Help students recognize the patterns in the world around them and connect these patterns to mathematical concepts.
- Support students to develop generalizations based on the similarities found among problems.
- Provide opportunities for students to create plans and procedures to solve problems.
- Develop students' ability to construct relationships between their current understanding and more sophisticated ways of thinking.

MA.K12.MTR.6.1:

Assess the reasonableness of solutions.
Mathematicians who assess the reasonableness of solutions:

- Estimate to discover possible solutions.
- Use benchmark quantities to determine if a solution makes sense.
- Check calculations when solving problems.
- Verify possible solutions by explaining the methods used.
- Evaluate results based on the given context.

Clarifications:
Teachers who encourage students to assess the reasonableness of solutions:

- Have students estimate or predict solutions prior to solving.
- Prompt students to continually ask, "Does this solution make sense? How do you know?"
- Reinforce that students check their work as they progress within and after a task.
- Strengthen students' ability to verify solutions through justifications.

MA.K12.MTR.7.1:

Apply mathematics to real-world contexts.
Mathematicians who apply mathematics to real-world contexts:

- Connect mathematical concepts to everyday experiences.
- Use models and methods to understand, represent and solve problems.
- Perform investigations to gather data or determine if a method is appropriate. • Redesign models and methods to improve accuracy or efficiency.

Clarifications:
Teachers who encourage students to apply mathematics to real-world contexts:

- Provide opportunities for students to create models, both concrete and abstract, and perform investigations.

	• Challenge students to question the accuracy of their models and methods. • Support students as they validate conclusions by comparing them to the given situation. • Indicate how various concepts can be applied to other disciplines.
ELA.K12.EE.1.1:	Cite evidence to explain and justify reasoning. **Clarifications:** K-1 Students include textual evidence in their oral communication with guidance and support from adults. The evidence can consist of details from the text without naming the text. During 1st grade, students learn how to incorporate the evidence in their writing. 2-3 Students include relevant textual evidence in their written and oral communication. Students should name the text when they refer to it. In 3rd grade, students should use a combination of direct and indirect citations. 4-5 Students continue with previous skills and reference comments made by speakers and peers. Students cite texts that they've directly quoted, paraphrased, or used for information. When writing, students will use the form of citation dictated by the instructor or the style guide referenced by the instructor. 6-8 Students continue with previous skills and use a style guide to create a proper citation. 9-12 Students continue with previous skills and should be aware of existing style guides and the ways in which they differ.
ELA.K12.EE.2.1:	Read and comprehend grade-level complex texts proficiently. **Clarifications:** See Text Complexity for grade-level complexity bands and a text complexity rubric.
ELA.K12.EE.3.1:	Make inferences to support comprehension. **Clarifications:** Students will make inferences before the words infer or inference are introduced. Kindergarten students will answer questions like "Why is the girl smiling?" or make predictions about what will happen based on the title page. Students will use the terms and apply them in 2nd grade and beyond.
ELA.K12.EE.4.1:	Use appropriate collaborative techniques and active listening skills when engaging in discussions in a variety of situations. **Clarifications:** In kindergarten, students learn to listen to one another respectfully. In grades 1-2, students build upon these skills by justifying what they are thinking. For example: "I think _____ because _____." The collaborative conversations are becoming academic conversations. In grades 3-12, students engage in academic conversations discussing claims and justifying their reasoning, refining and applying skills. Students build on ideas, propel the conversation, and support claims and counterclaims with evidence.
ELA.K12.EE.5.1:	Use the accepted rules governing a specific format to create quality work. **Clarifications:** Students will incorporate skills learned into work products to produce quality work. For students to incorporate these skills appropriately, they must receive instruction. A 3rd grade student creating a poster board display must have instruction in how to effectively present information to do quality work.
ELA.K12.EE.6.1:	Use appropriate voice and tone when speaking or writing. **Clarifications:** In kindergarten and 1st grade, students learn the difference between formal and informal language. For example, the way we talk to our friends differs from the way we speak to adults. In 2nd grade and beyond, students practice appropriate social and academic language to discuss texts.
DA.912.F.3.8:	Demonstrate effective teamwork and accountability, using compromise, collaboration, and conflict resolution, to set and achieve goals as required in the work environment.
DA.912.S.2.1:	Sustain focused attention, respect, and discipline during class, rehearsal, and performance.
ELD.K12.ELL.SI.1:	English language learners communicate for social and instructional purposes within the school setting.

General Course Information and Notes

VERSION DESCRIPTION

Students with previous vocal ensemble experience continue building musicianship and performance skills through the study of high-quality music in diverse styles. Student musicians learn to self-assess and collaborate as they rehearse, perform, and study relevant musical styles and time periods. Public performances may serve as a culmination of specific instructional goals. Students may be required to attend and/or participate in rehearsals and performances outside the school day to support, extend, and assess learning in the classroom.

GENERAL NOTES

Florida's Benchmarks for Excellent Student Thinking (B.E.S.T.) Standards
This course includes Florida's B.E.S.T. ELA Expectations (EE) and Mathematical Thinking and Reasoning Standards (MTRs) for students. Florida educators should intentionally embed these standards within the content and their instruction as applicable. For guidance on the implementation of the EEs and MTRs, please visit cpalms.org/Standards/BEST_Standards.aspx and select the appropriate B.E.S.T. Standards package.

English Language Development ELD Standards Special Notes Section:
Teachers are required to provide listening, speaking, reading and writing instruction that allows English language learners (ELL) to communicate for social and instructional purposes within the school setting. For the given level of English language proficiency and with visual, graphic, or interactive support, students will interact with grade level words, expressions, sentences and discourse to process or produce language necessary for academic success. The ELD standard should specify a relevant content area

concept or topic of study chosen by curriculum developers and teachers which maximizes an ELL's need for communication and social skills. To access an ELL supporting document which delineates performance definitions and descriptors, please click on the following link: cpalms.org/uploads/docs/standards/eld/SI.pdf

GENERAL INFORMATION

Course Number: 1303450

Course Path: Section: Grades PreK to 12 Education Courses > **Grade Group:** Grades 9 to 12 and Adult Education Courses > **Subject:** Music Education > **SubSubject:** Choral Music >

Abbreviated Title: VOCAL ENS 2

Number of Credits: One (1) credit

Course Length: Year (Y)

Course Type: Core Academic Course

Course Level: 2

Course Status: Draft - Course Pending Approval

Grade Level(s): 9,10,11,12

Graduation Requirement: Performing/Fine Arts

Educator Certifications

Vocal Music (Elementary and Secondary Grades K-12)
Music (Elementary and Secondary Grades K-12)

Vocal Ensemble 3 (#1303460) 2022 - And Beyond

Course Standards

Name	Description
MU.912.C.1.1:	Apply listening strategies to promote appreciation and understanding of unfamiliar musical works. **Clarifications:** e.g., listening maps, active listening, checklists
MU.912.C.1.2:	Compare, using correct music vocabulary, the aesthetic impact of two or more performances of a musical work to one's own hypothesis of the composer's intent. **Clarifications:** e.g., quality recordings, individual and peer-group performances, composer notes, instrumentation, expressive elements, title
MU.912.C.2.1:	Evaluate and make appropriate adjustments to personal performance in solo and ensembles.
MU.912.C.2.2:	Evaluate performance quality in recorded and/or live performances.
MU.912.C.3.1:	Make critical evaluations, based on exemplary models, of the quality and effectiveness of performances and apply the criteria to personal development in music.
MU.912.F.2.1:	Design or refine a résumé for application to higher education or the workforce that highlights marketable skills and knowledge gained through music training. **Clarifications:** e.g., repertoire lists, technology-based work, ability to research and analyze, and examples of leadership and collaborative skills
MU.912.F.2.3:	Compare the organizational structure of a professional orchestra, chorus, quintet, or other ensemble to that of a business. **Clarifications:** e.g., leadership, financial needs and structure, marketing, personnel matters, manager, travel
MU.912.F.3.1:	Analyze and describe how meeting one's responsibilities in music offers opportunities to develop leadership skills, and identify personal examples of leadership in school and/or non-school settings.
MU.912.F.3.2:	Summarize copyright laws that govern printed, recorded, and on-line music to promote legal and responsible use of intellectual property and technology.
MU.912.F.3.3:	Define, prioritize, monitor, and successfully complete tasks related to individual musical performance or project presentation, without direct oversight, demonstrating skills for use in the workplace.
MU.912.H.1.3:	Compare two or more works of a composer across performance media. **Clarifications:** e.g., orchestral and choral; guitar and string quartet; piano solo and piano concerto
MU.912.H.1.5:	Analyze music within cultures to gain understanding of authentic performance practices.
MU.912.H.2.4:	Examine the effects of developing technology on composition, performance, and acquisition of music.
MU.912.O.1.1:	Evaluate the organizational principles and conventions in musical works and discuss their effect on structure. **Clarifications:** e.g., rhythm, melody, timbre, form, tonality, harmony, texture; solo, chamber ensemble, large ensemble
MU.912.O.2.1:	Transfer accepted composition conventions and performance practices of a specific style to a contrasting style of music.
MU.912.O.3.1:	Analyze expressive elements in a musical work and describe how the choices and manipulations of the elements support, for the listener, the implied meaning of the composer/performer. **Clarifications:** e.g., tempo markings, expression markings, articulation markings, phrasing, scales, modes, harmonic structure, timbre choice, rhythm, orchestration
MU.912.O.3.2:	Interpret and perform expressive elements indicated by the musical score and/or conductor.
MU.912.S.1.3:	Arrange a musical work by manipulating two or more aspects of the composition. **Clarifications:** e.g., texture, mode, form, tempo, voicing
MU.912.S.1.4:	Perform and notate, independently and accurately, melodies by ear. **Clarifications:** e.g., singing, playing, writing
MU.912.S.2.1:	Apply the ability to memorize and internalize musical structure, accurate and expressive details, and processing skills to the creation or performance of music literature. **Clarifications:** e.g., memorization, sequential process
MU.912.S.2.2:	Transfer expressive elements and performance techniques from one piece of music to another.
MU.912.S.3.1:	Synthesize a broad range of musical skills by performing a varied repertoire with expression, appropriate stylistic interpretation, technical accuracy, and kinesthetic energy.
MU.912.S.3.2:	Sight-read music accurately and expressively to show synthesis of skills. **Clarifications:** e.g., musical elements, expressive qualities, performance technique
MU.912.S.3.4:	Analyze and describe the effect of rehearsal sessions and/or strategies on refinement of skills and techniques.

Develop and demonstrate proper vocal or instrumental technique.

MU.912.S.3.5:

Clarifications:
e.g., posture, breathing, fingering, embouchure, bow technique, tuning, strumming

Mathematicians who participate in effortful learning both individually and with others:

- Analyze the problem in a way that makes sense given the task.
- Ask questions that will help with solving the task.
- Build perseverance by modifying methods as needed while solving a challenging task.
- Stay engaged and maintain a positive mindset when working to solve tasks.
- Help and support each other when attempting a new method or approach.

MA.K12.MTR.1.1:

Clarifications:
Teachers who encourage students to participate actively in effortful learning both individually and with others:

- Cultivate a community of growth mindset learners.
- Foster perseverance in students by choosing tasks that are challenging.
- Develop students' ability to analyze and problem solve.
- Recognize students' effort when solving challenging problems.

Demonstrate understanding by representing problems in multiple ways.
Mathematicians who demonstrate understanding by representing problems in multiple ways:

- Build understanding through modeling and using manipulatives.
- Represent solutions to problems in multiple ways using objects, drawings, tables, graphs and equations.
- Progress from modeling problems with objects and drawings to using algorithms and equations.
- Express connections between concepts and representations.
- Choose a representation based on the given context or purpose.

MA.K12.MTR.2.1:

Clarifications:
Teachers who encourage students to demonstrate understanding by representing problems in multiple ways:

- Help students make connections between concepts and representations.
- Provide opportunities for students to use manipulatives when investigating concepts.
- Guide students from concrete to pictorial to abstract representations as understanding progresses.
- Show students that various representations can have different purposes and can be useful in different situations.

Complete tasks with mathematical fluency.
Mathematicians who complete tasks with mathematical fluency:

- Select efficient and appropriate methods for solving problems within the given context.
- Maintain flexibility and accuracy while performing procedures and mental calculations.
- Complete tasks accurately and with confidence.
- Adapt procedures to apply them to a new context.
- Use feedback to improve efficiency when performing calculations.

MA.K12.MTR.3.1:

Clarifications:
Teachers who encourage students to complete tasks with mathematical fluency:

- Provide students with the flexibility to solve problems by selecting a procedure that allows them to solve efficiently and accurately.
- Offer multiple opportunities for students to practice efficient and generalizable methods.
- Provide opportunities for students to reflect on the method they used and determine if a more efficient method could have been used.

Engage in discussions that reflect on the mathematical thinking of self and others.
Mathematicians who engage in discussions that reflect on the mathematical thinking of self and others:

- Communicate mathematical ideas, vocabulary and methods effectively.
- Analyze the mathematical thinking of others.
- Compare the efficiency of a method to those expressed by others.
- Recognize errors and suggest how to correctly solve the task.
- Justify results by explaining methods and processes.
- Construct possible arguments based on evidence.

MA.K12.MTR.4.1:

Clarifications:
Teachers who encourage students to engage in discussions that reflect on the mathematical thinking of self and others:

- Establish a culture in which students ask questions of the teacher and their peers, and error is an opportunity for learning.
- Create opportunities for students to discuss their thinking with peers.
- Select, sequence and present student work to advance and deepen understanding of correct and increasingly efficient methods.
- Develop students' ability to justify methods and compare their responses to the responses of their peers.

Use patterns and structure to help understand and connect mathematical concepts.
Mathematicians who use patterns and structure to help understand and connect mathematical concepts:

- Focus on relevant details within a problem.
- Create plans and procedures to logically order events, steps or ideas to solve problems.
- Decompose a complex problem into manageable parts.
- Relate previously learned concepts to new concepts.
- Look for similarities among problems.
- Connect solutions of problems to more complicated large-scale situations.

MA.K12.MTR.5.1:

Clarifications:
Teachers who encourage students to use patterns and structure to help understand and connect mathematical concepts:

- Help students recognize the patterns in the world around them and connect these patterns to mathematical concepts.
- Support students to develop generalizations based on the similarities found among problems.

	• Provide opportunities for students to create plans and procedures to solve problems. • Develop students' ability to construct relationships between their current understanding and more sophisticated ways of thinking.
MA.K12.MTR.6.1:	Assess the reasonableness of solutions. Mathematicians who assess the reasonableness of solutions: • Estimate to discover possible solutions. • Use benchmark quantities to determine if a solution makes sense. • Check calculations when solving problems. • Verify possible solutions by explaining the methods used. • Evaluate results based on the given context. **Clarifications:** Teachers who encourage students to assess the reasonableness of solutions: • Have students estimate or predict solutions prior to solving. • Prompt students to continually ask, "Does this solution make sense? How do you know?" • Reinforce that students check their work as they progress within and after a task. • Strengthen students' ability to verify solutions through justifications.
MA.K12.MTR.7.1:	Apply mathematics to real-world contexts. Mathematicians who apply mathematics to real-world contexts: • Connect mathematical concepts to everyday experiences. • Use models and methods to understand, represent and solve problems. • Perform investigations to gather data or determine if a method is appropriate. • Redesign models and methods to improve accuracy or efficiency. **Clarifications:** Teachers who encourage students to apply mathematics to real-world contexts: • Provide opportunities for students to create models, both concrete and abstract, and perform investigations. • Challenge students to question the accuracy of their models and methods. • Support students as they validate conclusions by comparing them to the given situation. • Indicate how various concepts can be applied to other disciplines.
ELA.K12.EE.1.1:	Cite evidence to explain and justify reasoning. **Clarifications:** K-1 Students include textual evidence in their oral communication with guidance and support from adults. The evidence can consist of details from the text without naming the text. During 1st grade, students learn how to incorporate the evidence in their writing. 2-3 Students include relevant textual evidence in their written and oral communication. Students should name the text when they refer to it. In 3rd grade, students should use a combination of direct and indirect citations. 4-5 Students continue with previous skills and reference comments made by speakers and peers. Students cite texts that they've directly quoted, paraphrased, or used for information. When writing, students will use the form of citation dictated by the instructor or the style guide referenced by the instructor. 6-8 Students continue with previous skills and use a style guide to create a proper citation. 9-12 Students continue with previous skills and should be aware of existing style guides and the ways in which they differ.
ELA.K12.EE.2.1:	Read and comprehend grade-level complex texts proficiently. **Clarifications:** See Text Complexity for grade-level complexity bands and a text complexity rubric.
ELA.K12.EE.3.1:	Make inferences to support comprehension. **Clarifications:** Students will make inferences before the words infer or inference are introduced. Kindergarten students will answer questions like "Why is the girl smiling?" or make predictions about what will happen based on the title page. Students will use the terms and apply them in 2nd grade and beyond.
ELA.K12.EE.4.1:	Use appropriate collaborative techniques and active listening skills when engaging in discussions in a variety of situations. **Clarifications:** In kindergarten, students learn to listen to one another respectfully. In grades 1-2, students build upon these skills by justifying what they are thinking. For example: "I think _____ because _____." The collaborative conversations are becoming academic conversations. In grades 3-12, students engage in academic conversations discussing claims and justifying their reasoning, refining and applying skills. Students build on ideas, propel the conversation, and support claims and counterclaims with evidence.
ELA.K12.EE.5.1:	Use the accepted rules governing a specific format to create quality work. **Clarifications:** Students will incorporate skills learned into work products to produce quality work. For students to incorporate these skills appropriately, they must receive instruction. A 3rd grade student creating a poster board display must have instruction in how to effectively present information to do quality work.
ELA.K12.EE.6.1:	Use appropriate voice and tone when speaking or writing. **Clarifications:** In kindergarten and 1st grade, students learn the difference between formal and informal language. For example, the way we talk to our friends differs from the way we speak to adults. In 2nd grade and beyond, students practice appropriate social and academic language to discuss texts.
DA.912.F.3.8:	Demonstrate effective teamwork and accountability, using compromise, collaboration, and conflict resolution, to set and achieve goals as required in the work environment.
DA.912.S.2.1:	Sustain focused attention, respect, and discipline during class, rehearsal, and performance.

General Course Information and Notes

VERSION DESCRIPTION

Students strengthen vocal ensemble performance skills, music literacy, and analytical skills through the study of high-quality music in diverse styles. Student musicians learn to self-assess and collaborate as they rehearse, perform, and study relevant history and cultures. Public performances may serve as a culmination of specific instructional goals. Students may be required to attend and/or participate in rehearsals and performances outside the school day to support, extend, and assess learning in the classroom.

GENERAL NOTES

Florida's Benchmarks for Excellent Student Thinking (B.E.S.T.) Standards
This course includes Florida's B.E.S.T. ELA Expectations (EE) and Mathematical Thinking and Reasoning Standards (MTRs) for students. Florida educators should intentionally embed these standards within the content and their instruction as applicable. For guidance on the implementation of the EEs and MTRs, please visit cpalms.org/Standards/BEST_Standards.aspx and select the appropriate B.E.S.T. Standards package.

English Language Development ELD Standards Special Notes Section:
Teachers are required to provide listening, speaking, reading and writing instruction that allows English language learners (ELL) to communicate for social and instructional purposes within the school setting. For the given level of English language proficiency and with visual, graphic, or interactive support, students will interact with grade level words, expressions, sentences and discourse to process or produce language necessary for academic success. The ELD standard should specify a relevant content area concept or topic of study chosen by curriculum developers and teachers which maximizes an ELL's need for communication and social skills. To access an ELL supporting document which delineates performance definitions and descriptors, please click on the following link: cpalms.org/uploads/docs/standards/eld/SI.pdf

GENERAL INFORMATION

Course Number: 1303460

Course Path: Section: Grades PreK to 12 Education Courses > **Grade Group:** Grades 9 to 12 and Adult Education Courses > **Subject:** Music Education > **SubSubject:** Choral Music >

Abbreviated Title: VOCAL ENS 3

Number of Credits: One (1) credit

Course Length: Year (Y)

Course Type: Core Academic Course

Course Level: 2

Course Status: Draft - Course Pending Approval

Grade Level(s): 9,10,11,12

Graduation Requirement: Performing/Fine Arts

Educator Certifications

Vocal Music (Elementary and Secondary Grades K-12)
Music (Elementary and Secondary Grades K-12)

Vocal Ensemble 4 Honors (#1303470) 2022 - And Beyond

Course Standards

Name	Description
MU.912.C.1.1:	Apply listening strategies to promote appreciation and understanding of unfamiliar musical works. **Clarifications:** e.g., listening maps, active listening, checklists
MU.912.C.1.2:	Compare, using correct music vocabulary, the aesthetic impact of two or more performances of a musical work to one's own hypothesis of the composer's intent. **Clarifications:** e.g., quality recordings, individual and peer-group performances, composer notes, instrumentation, expressive elements, title
MU.912.C.2.1:	Evaluate and make appropriate adjustments to personal performance in solo and ensembles.
MU.912.C.2.2:	Evaluate performance quality in recorded and/or live performances.
MU.912.C.3.1:	Make critical evaluations, based on exemplary models, of the quality and effectiveness of performances and apply the criteria to personal development in music.
MU.912.F.1.1:	Analyze and evaluate the effect of "traditional" and contemporary technologies on the development of music.
MU.912.F.2.1:	Design or refine a résumé for application to higher education or the workforce that highlights marketable skills and knowledge gained through music training. **Clarifications:** e.g., repertoire lists, technology-based work, ability to research and analyze, and examples of leadership and collaborative skills
MU.912.F.2.2:	Analyze the effect of the arts and entertainment industry on the economic and social health of communities and regions. **Clarifications:** e.g., community revitalization, industry choosing new locations, cultural and social enrichment
MU.912.F.2.3:	Compare the organizational structure of a professional orchestra, chorus, quintet, or other ensemble to that of a business. **Clarifications:** e.g., leadership, financial needs and structure, marketing, personnel matters, manager, travel
MU.912.F.3.1:	Analyze and describe how meeting one's responsibilities in music offers opportunities to develop leadership skills, and identify personal examples of leadership in school and/or non-school settings.
MU.912.F.3.2:	Summarize copyright laws that govern printed, recorded, and on-line music to promote legal and responsible use of intellectual property and technology.
MU.912.F.3.3:	Define, prioritize, monitor, and successfully complete tasks related to individual musical performance or project presentation, without direct oversight, demonstrating skills for use in the workplace.
MU.912.F.3.4:	Design and implement a personal learning plan, related to the study of music, which demonstrates self-assessment, brain-storming, decision-making, and initiative to advance skills and/or knowledge.
MU.912.H.1.2:	Compare the work of, and influences on, two or more exemplary composers in the performance medium studied in class. **Clarifications:** e.g., vocal, instrumental, guitar, keyboard, electronic, handbells
MU.912.H.1.3:	Compare two or more works of a composer across performance media. **Clarifications:** e.g., orchestral and choral; guitar and string quartet; piano solo and piano concerto
MU.912.H.1.5:	Analyze music within cultures to gain understanding of authentic performance practices.
MU.912.H.2.1:	Evaluate the social impact of music on specific historical periods.
MU.912.H.2.2:	Analyze current musical trends, including audience environments and music acquisition, to predict possible directions of music.
MU.912.H.2.4:	Examine the effects of developing technology on composition, performance, and acquisition of music.
MU.912.O.1.1:	Evaluate the organizational principles and conventions in musical works and discuss their effect on structure. **Clarifications:** e.g., rhythm, melody, timbre, form, tonality, harmony, texture; solo, chamber ensemble, large ensemble
MU.912.O.2.1:	Transfer accepted composition conventions and performance practices of a specific style to a contrasting style of music.
MU.912.O.3.1:	Analyze expressive elements in a musical work and describe how the choices and manipulations of the elements support, for the listener, the implied meaning of the composer/performer. **Clarifications:** e.g., tempo markings, expression markings, articulation markings, phrasing, scales, modes, harmonic structure, timbre choice, rhythm, orchestration
MU.912.O.3.2:	Interpret and perform expressive elements indicated by the musical score and/or conductor.
MU.912.S.1.3:	Arrange a musical work by manipulating two or more aspects of the composition. **Clarifications:** e.g., texture, mode, form, tempo, voicing
MU.912.S.1.4:	Perform and notate, independently and accurately, melodies by ear. **Clarifications:** e.g., singing, playing, writing

MU.912.S.2.1:	Apply the ability to memorize and internalize musical structure, accurate and expressive details, and processing skills to the creation or performance of music literature. **Clarifications:** e.g., memorization, sequential process
MU.912.S.2.2:	Transfer expressive elements and performance techniques from one piece of music to another.
MU.912.S.3.1:	Synthesize a broad range of musical skills by performing a varied repertoire with expression, appropriate stylistic interpretation, technical accuracy, and kinesthetic energy.
MU.912.S.3.2:	Sight-read music accurately and expressively to show synthesis of skills. **Clarifications:** e.g., musical elements, expressive qualities, performance technique
MU.912.S.3.4:	Analyze and describe the effect of rehearsal sessions and/or strategies on refinement of skills and techniques.
MU.912.S.3.5:	Develop and demonstrate proper vocal or instrumental technique. **Clarifications:** e.g., posture, breathing, fingering, embouchure, bow technique, tuning, strumming
MA.K12.MTR.1.1:	Mathematicians who participate in effortful learning both individually and with others: • Analyze the problem in a way that makes sense given the task. • Ask questions that will help with solving the task. • Build perseverance by modifying methods as needed while solving a challenging task. • Stay engaged and maintain a positive mindset when working to solve tasks. • Help and support each other when attempting a new method or approach. **Clarifications:** Teachers who encourage students to participate actively in effortful learning both individually and with others: • Cultivate a community of growth mindset learners. • Foster perseverance in students by choosing tasks that are challenging. • Develop students' ability to analyze and problem solve. • Recognize students' effort when solving challenging problems.
MA.K12.MTR.2.1:	Demonstrate understanding by representing problems in multiple ways. Mathematicians who demonstrate understanding by representing problems in multiple ways: • Build understanding through modeling and using manipulatives. • Represent solutions to problems in multiple ways using objects, drawings, tables, graphs and equations. • Progress from modeling problems with objects and drawings to using algorithms and equations. • Express connections between concepts and representations. • Choose a representation based on the given context or purpose. **Clarifications:** Teachers who encourage students to demonstrate understanding by representing problems in multiple ways: • Help students make connections between concepts and representations. • Provide opportunities for students to use manipulatives when investigating concepts. • Guide students from concrete to pictorial to abstract representations as understanding progresses. • Show students that various representations can have different purposes and can be useful in different situations.
MA.K12.MTR.3.1:	Complete tasks with mathematical fluency. Mathematicians who complete tasks with mathematical fluency: • Select efficient and appropriate methods for solving problems within the given context. • Maintain flexibility and accuracy while performing procedures and mental calculations. • Complete tasks accurately and with confidence. • Adapt procedures to apply them to a new context. • Use feedback to improve efficiency when performing calculations. **Clarifications:** Teachers who encourage students to complete tasks with mathematical fluency: • Provide students with the flexibility to solve problems by selecting a procedure that allows them to solve efficiently and accurately. • Offer multiple opportunities for students to practice efficient and generalizable methods. • Provide opportunities for students to reflect on the method they used and determine if a more efficient method could have been used.
MA.K12.MTR.4.1:	Engage in discussions that reflect on the mathematical thinking of self and others. Mathematicians who engage in discussions that reflect on the mathematical thinking of self and others: • Communicate mathematical ideas, vocabulary and methods effectively. • Analyze the mathematical thinking of others. • Compare the efficiency of a method to those expressed by others. • Recognize errors and suggest how to correctly solve the task. • Justify results by explaining methods and processes. • Construct possible arguments based on evidence. **Clarifications:** Teachers who encourage students to engage in discussions that reflect on the mathematical thinking of self and others: • Establish a culture in which students ask questions of the teacher and their peers, and error is an opportunity for learning. • Create opportunities for students to discuss their thinking with peers. • Select, sequence and present student work to advance and deepen understanding of correct and increasingly efficient methods. • Develop students' ability to justify methods and compare their responses to the responses of their peers.
	Use patterns and structure to help understand and connect mathematical concepts.

MA.K12.MTR.5.1:	Mathematicians who use patterns and structure to help understand and connect mathematical concepts: • Focus on relevant details within a problem. • Create plans and procedures to logically order events, steps or ideas to solve problems. • Decompose a complex problem into manageable parts. • Relate previously learned concepts to new concepts. • Look for similarities among problems. • Connect solutions of problems to more complicated large-scale situations. **Clarifications:** Teachers who encourage students to use patterns and structure to help understand and connect mathematical concepts: • Help students recognize the patterns in the world around them and connect these patterns to mathematical concepts. • Support students to develop generalizations based on the similarities found among problems. • Provide opportunities for students to create plans and procedures to solve problems. • Develop students' ability to construct relationships between their current understanding and more sophisticated ways of thinking.
MA.K12.MTR.6.1:	Assess the reasonableness of solutions. Mathematicians who assess the reasonableness of solutions: • Estimate to discover possible solutions. • Use benchmark quantities to determine if a solution makes sense. • Check calculations when solving problems. • Verify possible solutions by explaining the methods used. • Evaluate results based on the given context. **Clarifications:** Teachers who encourage students to assess the reasonableness of solutions: • Have students estimate or predict solutions prior to solving. • Prompt students to continually ask, "Does this solution make sense? How do you know?" • Reinforce that students check their work as they progress within and after a task. • Strengthen students' ability to verify solutions through justifications.
MA.K12.MTR.7.1:	Apply mathematics to real-world contexts. Mathematicians who apply mathematics to real-world contexts: • Connect mathematical concepts to everyday experiences. • Use models and methods to understand, represent and solve problems. • Perform investigations to gather data or determine if a method is appropriate. • Redesign models and methods to improve accuracy or efficiency. **Clarifications:** Teachers who encourage students to apply mathematics to real-world contexts: • Provide opportunities for students to create models, both concrete and abstract, and perform investigations. • Challenge students to question the accuracy of their models and methods. • Support students as they validate conclusions by comparing them to the given situation. • Indicate how various concepts can be applied to other disciplines.
ELA.K12.EE.1.1:	Cite evidence to explain and justify reasoning. **Clarifications:** K-1 Students include textual evidence in their oral communication with guidance and support from adults. The evidence can consist of details from the text without naming the text. During 1st grade, students learn how to incorporate the evidence in their writing. 2-3 Students include relevant textual evidence in their written and oral communication. Students should name the text when they refer to it. In 3rd grade, students should use a combination of direct and indirect citations. 4-5 Students continue with previous skills and reference comments made by speakers and peers. Students cite texts that they've directly quoted, paraphrased, or used for information. When writing, students will use the form of citation dictated by the instructor or the style guide referenced by the instructor. 6-8 Students continue with previous skills and use a style guide to create a proper citation. 9-12 Students continue with previous skills and should be aware of existing style guides and the ways in which they differ.
ELA.K12.EE.2.1:	Read and comprehend grade-level complex texts proficiently. **Clarifications:** See Text Complexity for grade-level complexity bands and a text complexity rubric.
ELA.K12.EE.3.1:	Make inferences to support comprehension. **Clarifications:** Students will make inferences before the words infer or inference are introduced. Kindergarten students will answer questions like "Why is the girl smiling?" or make predictions about what will happen based on the title page. Students will use the terms and apply them in 2nd grade and beyond.
ELA.K12.EE.4.1:	Use appropriate collaborative techniques and active listening skills when engaging in discussions in a variety of situations. **Clarifications:** In kindergarten, students learn to listen to one another respectfully. In grades 1-2, students build upon these skills by justifying what they are thinking. For example: "I think _____ because _____." The collaborative conversations are becoming academic conversations. In grades 3-12, students engage in academic conversations discussing claims and justifying their reasoning, refining and applying skills. Students build on ideas, propel the conversation, and support claims and counterclaims with evidence.
	Use the accepted rules governing a specific format to create quality work.

ELA.K12.EE.5.1:	**Clarifications:** Students will incorporate skills learned into work products to produce quality work. For students to incorporate these skills appropriately, they must receive instruction. A 3rd grade student creating a poster board display must have instruction in how to effectively present information to do quality work.
ELA.K12.EE.6.1:	Use appropriate voice and tone when speaking or writing. **Clarifications:** In kindergarten and 1st grade, students learn the difference between formal and informal language. For example, the way we talk to our friends differs from the way we speak to adults. In 2nd grade and beyond, students practice appropriate social and academic language to discuss texts.
DA.912.F.3.8:	Demonstrate effective teamwork and accountability, using compromise, collaboration, and conflict resolution, to set and achieve goals as required in the work environment.
DA.912.S.2.1:	Sustain focused attention, respect, and discipline during class, rehearsal, and performance.
ELD.K12.ELL.SI.1:	English language learners communicate for social and instructional purposes within the school setting.

General Course Information and Notes

VERSION DESCRIPTION

Students with extensive vocal ensemble experience refine their critical listening, music literacy, and ensemble skills through the study, rehearsal, and performance of high-quality, advanced literature. Students use reflection and problem-solving skills with increasing independence to improve their performance and musical expressivity. Public performances may serve as a culmination of specific instructional goals. Students may be required to attend and/or participate in rehearsals and performances outside the school day to support, extend, and assess learning in the classroom.

GENERAL NOTES

Honors and Advanced Level Course Note: Advanced courses require a greater demand on students through increased academic rigor. Academic rigor is obtained through the application, analysis, evaluation, and creation of complex ideas that are often abstract and multi-faceted. Students are challenged to think and collaborate critically on the content they are learning. Honors level rigor will be achieved by increasing text complexity through text selection, focus on high-level qualitative measures, and complexity of task. Instruction will be structured to give students a deeper understanding of conceptual themes and organization within and across disciplines. Academic rigor is more than simply assigning to students a greater quantity of work.

Florida's Benchmarks for Excellent Student Thinking (B.E.S.T.) Standards
This course includes Florida's B.E.S.T. ELA Expectations (EE) and Mathematical Thinking and Reasoning Standards (MTRs) for students. Florida educators should intentionally embed these standards within the content and their instruction as applicable. For guidance on the implementation of the EEs and MTRs, please visit cpalms.org/Standards/BEST_Standards.aspx and select the appropriate B.E.S.T. Standards package.

English Language Development ELD Standards Special Notes Section:
Teachers are required to provide listening, speaking, reading and writing instruction that allows English language learners (ELL) to communicate for social and instructional purposes within the school setting. For the given level of English language proficiency and with visual, graphic, or interactive support, students will interact with grade level words, expressions, sentences and discourse to process or produce language necessary for academic success. The ELD standard should specify a relevant content area concept or topic of study chosen by curriculum developers and teachers which maximizes an ELL's need for communication and social skills. To access an ELL supporting document which delineates performance definitions and descriptors, please click on the following link: cpalms.org/uploads/docs/standards/eld/SI.pdf

GENERAL INFORMATION

Course Number: 1303470

Course Path: Section: Grades PreK to 12 Education Courses > **Grade Group:** Grades 9 to 12 and Adult Education Courses > **Subject:** Music Education > **SubSubject:** Choral Music >
Abbreviated Title: VOCAL ENS 4 HON

Number of Credits: One (1) credit

Course Length: Year (Y)

Course Attributes:
- Honors

Course Type: Core Academic Course

Course Level: 3

Course Status: Draft - Course Pending Approval

Grade Level(s): 9,10,11,12

Graduation Requirement: Performing/Fine Arts

Educator Certifications

Vocal Music (Elementary and Secondary Grades K-12)
Music (Elementary and Secondary Grades K-12)

Music Technology and Sound Engineering 1 (#1304300) 2022 - And Beyond

Course Standards

Name	Description
MU.912.C.1.1:	Apply listening strategies to promote appreciation and understanding of unfamiliar musical works. **Clarifications:** e.g., listening maps, active listening, checklists
MU.912.C.2.2:	Evaluate performance quality in recorded and/or live performances.
MU.912.C.2.3:	Evaluate one's own or other's compositions and/or improvisations and generate improvements independently or cooperatively.
MU.912.C.3.1:	Make critical evaluations, based on exemplary models, of the quality and effectiveness of performances and apply the criteria to personal development in music.
MU.912.F.1.2:	Incorporate or adapt new, emerging, or previously unfamiliar technology to create an innovative composition, music project, or related product.
MU.912.F.3.2:	Summarize copyright laws that govern printed, recorded, and on-line music to promote legal and responsible use of intellectual property and technology.
MU.912.H.2.4:	Examine the effects of developing technology on composition, performance, and acquisition of music.
MU.912.H.3.1:	Apply knowledge of science, math, and music to demonstrate, through an acoustic or digital performance medium, how sound production affects musical performance. **Clarifications:** e.g., acoustics, sound amplification, materials, mechanics
MU.912.S.1.3:	Arrange a musical work by manipulating two or more aspects of the composition. **Clarifications:** e.g., texture, mode, form, tempo, voicing
MU.912.S.1.5:	Research and report on the impact of MIDI as an industry-standard protocol.
MU.912.S.1.7:	Combine and/or create virtual and audio instruments.
MU.912.S.1.8:	Record, mix, and edit a recorded performance.
MU.912.S.3.4:	Analyze and describe the effect of rehearsal sessions and/or strategies on refinement of skills and techniques.
MA.K12.MTR.1.1:	Mathematicians who participate in effortful learning both individually and with others: • Analyze the problem in a way that makes sense given the task. • Ask questions that will help with solving the task. • Build perseverance by modifying methods as needed while solving a challenging task. • Stay engaged and maintain a positive mindset when working to solve tasks. • Help and support each other when attempting a new method or approach. **Clarifications:** Teachers who encourage students to participate actively in effortful learning both individually and with others: • Cultivate a community of growth mindset learners. • Foster perseverance in students by choosing tasks that are challenging. • Develop students' ability to analyze and problem solve. • Recognize students' effort when solving challenging problems.
MA.K12.MTR.2.1:	Demonstrate understanding by representing problems in multiple ways. Mathematicians who demonstrate understanding by representing problems in multiple ways: • Build understanding through modeling and using manipulatives. • Represent solutions to problems in multiple ways using objects, drawings, tables, graphs and equations. • Progress from modeling problems with objects and drawings to using algorithms and equations. • Express connections between concepts and representations. • Choose a representation based on the given context or purpose. **Clarifications:** Teachers who encourage students to demonstrate understanding by representing problems in multiple ways: • Help students make connections between concepts and representations. • Provide opportunities for students to use manipulatives when investigating concepts. • Guide students from concrete to pictorial to abstract representations as understanding progresses. • Show students that various representations can have different purposes and can be useful in different situations.
MA.K12.MTR.3.1:	Complete tasks with mathematical fluency. Mathematicians who complete tasks with mathematical fluency: • Select efficient and appropriate methods for solving problems within the given context. • Maintain flexibility and accuracy while performing procedures and mental calculations. • Complete tasks accurately and with confidence. • Adapt procedures to apply them to a new context. • Use feedback to improve efficiency when performing calculations.

Clarifications:
Teachers who encourage students to complete tasks with mathematical fluency:

- Provide students with the flexibility to solve problems by selecting a procedure that allows them to solve efficiently and accurately.
- Offer multiple opportunities for students to practice efficient and generalizable methods.
- Provide opportunities for students to reflect on the method they used and determine if a more efficient method could have been used.

MA.K12.MTR.4.1:

Engage in discussions that reflect on the mathematical thinking of self and others.
Mathematicians who engage in discussions that reflect on the mathematical thinking of self and others:

- Communicate mathematical ideas, vocabulary and methods effectively.
- Analyze the mathematical thinking of others.
- Compare the efficiency of a method to those expressed by others.
- Recognize errors and suggest how to correctly solve the task.
- Justify results by explaining methods and processes.
- Construct possible arguments based on evidence.

Clarifications:
Teachers who encourage students to engage in discussions that reflect on the mathematical thinking of self and others:

- Establish a culture in which students ask questions of the teacher and their peers, and error is an opportunity for learning.
- Create opportunities for students to discuss their thinking with peers.
- Select, sequence and present student work to advance and deepen understanding of correct and increasingly efficient methods.
- Develop students' ability to justify methods and compare their responses to the responses of their peers.

MA.K12.MTR.5.1:

Use patterns and structure to help understand and connect mathematical concepts.
Mathematicians who use patterns and structure to help understand and connect mathematical concepts:

- Focus on relevant details within a problem.
- Create plans and procedures to logically order events, steps or ideas to solve problems.
- Decompose a complex problem into manageable parts.
- Relate previously learned concepts to new concepts.
- Look for similarities among problems.
- Connect solutions of problems to more complicated large-scale situations.

Clarifications:
Teachers who encourage students to use patterns and structure to help understand and connect mathematical concepts:

- Help students recognize the patterns in the world around them and connect these patterns to mathematical concepts.
- Support students to develop generalizations based on the similarities found among problems.
- Provide opportunities for students to create plans and procedures to solve problems.
- Develop students' ability to construct relationships between their current understanding and more sophisticated ways of thinking.

MA.K12.MTR.6.1:

Assess the reasonableness of solutions.
Mathematicians who assess the reasonableness of solutions:

- Estimate to discover possible solutions.
- Use benchmark quantities to determine if a solution makes sense.
- Check calculations when solving problems.
- Verify possible solutions by explaining the methods used.
- Evaluate results based on the given context.

Clarifications:
Teachers who encourage students to assess the reasonableness of solutions:

- Have students estimate or predict solutions prior to solving.
- Prompt students to continually ask, "Does this solution make sense? How do you know?"
- Reinforce that students check their work as they progress within and after a task.
- Strengthen students' ability to verify solutions through justifications.

MA.K12.MTR.7.1:

Apply mathematics to real-world contexts.
Mathematicians who apply mathematics to real-world contexts:

- Connect mathematical concepts to everyday experiences.
- Use models and methods to understand, represent and solve problems.
- Perform investigations to gather data or determine if a method is appropriate. • Redesign models and methods to improve accuracy or efficiency.

Clarifications:
Teachers who encourage students to apply mathematics to real-world contexts:

- Provide opportunities for students to create models, both concrete and abstract, and perform investigations.
- Challenge students to question the accuracy of their models and methods.
- Support students as they validate conclusions by comparing them to the given situation.
- Indicate how various concepts can be applied to other disciplines.

ELA.K12.EE.1.1:

Cite evidence to explain and justify reasoning.

Clarifications:
K-1 Students include textual evidence in their oral communication with guidance and support from adults. The evidence can consist of details from the text without naming the text. During 1st grade, students learn how to incorporate the evidence in their writing.
2-3 Students include relevant textual evidence in their written and oral communication. Students should name the text when they refer to it. In 3rd grade, students should use a combination of direct and indirect citations.

4-5 Students continue with previous skills and reference comments made by speakers and peers. Students cite texts that they've directly quoted, paraphrased, or used for information. When writing, students will use the form of citation dictated by the instructor or the style guide referenced by the instructor.

	6-8 Students continue with previous skills and use a style guide to create a proper citation. 9-12 Students continue with previous skills and should be aware of existing style guides and the ways in which they differ.
ELA.K12.EE.2.1:	Read and comprehend grade-level complex texts proficiently. **Clarifications:** See Text Complexity for grade-level complexity bands and a text complexity rubric.
ELA.K12.EE.3.1:	Make inferences to support comprehension. **Clarifications:** Students will make inferences before the words infer or inference are introduced. Kindergarten students will answer questions like "Why is the girl smiling?" or make predictions about what will happen based on the title page. Students will use the terms and apply them in 2nd grade and beyond.
ELA.K12.EE.4.1:	Use appropriate collaborative techniques and active listening skills when engaging in discussions in a variety of situations. **Clarifications:** In kindergarten, students learn to listen to one another respectfully. In grades 1-2, students build upon these skills by justifying what they are thinking. For example: "I think _____ because _____." The collaborative conversations are becoming academic conversations. In grades 3-12, students engage in academic conversations discussing claims and justifying their reasoning, refining and applying skills. Students build on ideas, propel the conversation, and support claims and counterclaims with evidence.
ELA.K12.EE.5.1:	Use the accepted rules governing a specific format to create quality work. **Clarifications:** Students will incorporate skills learned into work products to produce quality work. For students to incorporate these skills appropriately, they must receive instruction. A 3rd grade student creating a poster board display must have instruction in how to effectively present information to do quality work.
ELA.K12.EE.6.1:	Use appropriate voice and tone when speaking or writing. **Clarifications:** In kindergarten and 1st grade, students learn the difference between formal and informal language. For example, the way we talk to our friends differs from the way we speak to adults. In 2nd grade and beyond, students practice appropriate social and academic language to discuss texts.
DA.912.S.2.1:	Sustain focused attention, respect, and discipline during class, rehearsal, and performance.
ELD.K12.ELL.SI.1:	English language learners communicate for social and instructional purposes within the school setting.

General Course Information and Notes

VERSION DESCRIPTION

Students explore the fundamental applications and tools of music technology and sound engineering. As they create and learn its terminology, students also learn the history and aesthetic development of technology used to capture, create, and distribute music. Public performances may serve as a resource for specific instructional goals. Students may be required to attend one or more performances outside the school day to support, extend, and assess learning in the classroom.

GENERAL NOTES

Florida's Benchmarks for Excellent Student Thinking (B.E.S.T.) Standards
This course includes Florida's B.E.S.T. ELA Expectations (EE) and Mathematical Thinking and Reasoning Standards (MTRs) for students. Florida educators should intentionally embed these standards within the content and their instruction as applicable. For guidance on the implementation of the EEs and MTRs, please visit cpalms.org/Standards/BEST_Standards.aspx and select the appropriate B.E.S.T. Standards package.

English Language Development ELD Standards Special Notes Section:
Teachers are required to provide listening, speaking, reading and writing instruction that allows English language learners (ELL) to communicate for social and instructional purposes within the school setting. For the given level of English language proficiency and with visual, graphic, or interactive support, students will interact with grade level words, expressions, sentences and discourse to process or produce language necessary for academic success. The ELD standard should specify a relevant content area concept or topic of study chosen by curriculum developers and teachers which maximizes an ELL's need for communication and social skills. To access an ELL supporting document which delineates performance definitions and descriptors, please click on the following link: cpalms.org/uploads/docs/standards/eld/SI.pdf

GENERAL INFORMATION

Course Number: 1304300

Course Path: Section: Grades PreK to 12 Education Courses > **Grade Group:** Grades 9 to 12 and Adult Education Courses > **Subject:** Music Education > **SubSubject:** Music Technology > **Abbreviated Title:** MUS TECH & SO ENG 1

Number of Credits: One (1) credit

Course Length: Year (Y)

Course Type: Core Academic Course

Course Level: 2

Course Status: Draft - Course Pending Approval

Grade Level(s): 9,10,11,12

Graduation Requirement: Performing/Fine Arts

Educator Certifications

Instrumental Music (Secondary Grades 7-12)
Instrumental Music (Elementary and Secondary Grades K-12)
Vocal Music (Elementary and Secondary Grades K-12)
Music (Elementary and Secondary Grades K-12)

Music Technology and Sound Engineering 2 (#1304310) 2022 - And Beyond

Course Standards

Name	Description
MU.912.C.1.1:	Apply listening strategies to promote appreciation and understanding of unfamiliar musical works. **Clarifications:** e.g., listening maps, active listening, checklists
MU.912.C.2.2:	Evaluate performance quality in recorded and/or live performances.
MU.912.C.2.3:	Evaluate one's own or other's compositions and/or improvisations and generate improvements independently or cooperatively.
MU.912.C.3.1:	Make critical evaluations, based on exemplary models, of the quality and effectiveness of performances and apply the criteria to personal development in music.
MU.912.F.1.2:	Incorporate or adapt new, emerging, or previously unfamiliar technology to create an innovative composition, music project, or related product.
MU.912.F.3.2:	Summarize copyright laws that govern printed, recorded, and on-line music to promote legal and responsible use of intellectual property and technology.
MU.912.H.1.2:	Compare the work of, and influences on, two or more exemplary composers in the performance medium studied in class. **Clarifications:** e.g., vocal, instrumental, guitar, keyboard, electronic, handbells
MU.912.H.2.1:	Evaluate the social impact of music on specific historical periods.
MU.912.H.2.4:	Examine the effects of developing technology on composition, performance, and acquisition of music.
MU.912.H.3.1:	Apply knowledge of science, math, and music to demonstrate, through an acoustic or digital performance medium, how sound production affects musical performance. **Clarifications:** e.g., acoustics, sound amplification, materials, mechanics
MU.912.S.1.2:	Compose music for voices and/or acoustic, digital, or electronic instruments.
MU.912.S.1.3:	Arrange a musical work by manipulating two or more aspects of the composition. **Clarifications:** e.g., texture, mode, form, tempo, voicing
MU.912.S.1.5:	Research and report on the impact of MIDI as an industry-standard protocol.
MU.912.S.1.7:	Combine and/or create virtual and audio instruments.
MU.912.S.1.8:	Record, mix, and edit a recorded performance.
MU.912.S.2.2:	Transfer expressive elements and performance techniques from one piece of music to another.
MU.912.S.3.4:	Analyze and describe the effect of rehearsal sessions and/or strategies on refinement of skills and techniques.
MA.K12.MTR.1.1:	Mathematicians who participate in effortful learning both individually and with others: • Analyze the problem in a way that makes sense given the task. • Ask questions that will help with solving the task. • Build perseverance by modifying methods as needed while solving a challenging task. • Stay engaged and maintain a positive mindset when working to solve tasks. • Help and support each other when attempting a new method or approach. **Clarifications:** Teachers who encourage students to participate actively in effortful learning both individually and with others: • Cultivate a community of growth mindset learners. • Foster perseverance in students by choosing tasks that are challenging. • Develop students' ability to analyze and problem solve. • Recognize students' effort when solving challenging problems.
MA.K12.MTR.2.1:	Demonstrate understanding by representing problems in multiple ways. Mathematicians who demonstrate understanding by representing problems in multiple ways: • Build understanding through modeling and using manipulatives. • Represent solutions to problems in multiple ways using objects, drawings, tables, graphs and equations. • Progress from modeling problems with objects and drawings to using algorithms and equations. • Express connections between concepts and representations. • Choose a representation based on the given context or purpose. **Clarifications:** Teachers who encourage students to demonstrate understanding by representing problems in multiple ways: • Help students make connections between concepts and representations. • Provide opportunities for students to use manipulatives when investigating concepts. • Guide students from concrete to pictorial to abstract representations as understanding progresses. • Show students that various representations can have different purposes and can be useful in different situations.
	Complete tasks with mathematical fluency.

MA.K12.MTR.3.1:

Mathematicians who complete tasks with mathematical fluency:

- Select efficient and appropriate methods for solving problems within the given context.
- Maintain flexibility and accuracy while performing procedures and mental calculations.
- Complete tasks accurately and with confidence.
- Adapt procedures to apply them to a new context.
- Use feedback to improve efficiency when performing calculations.

Clarifications:
Teachers who encourage students to complete tasks with mathematical fluency:

- Provide students with the flexibility to solve problems by selecting a procedure that allows them to solve efficiently and accurately.
- Offer multiple opportunities for students to practice efficient and generalizable methods.
- Provide opportunities for students to reflect on the method they used and determine if a more efficient method could have been used.

MA.K12.MTR.4.1:

Engage in discussions that reflect on the mathematical thinking of self and others.
Mathematicians who engage in discussions that reflect on the mathematical thinking of self and others:

- Communicate mathematical ideas, vocabulary and methods effectively.
- Analyze the mathematical thinking of others.
- Compare the efficiency of a method to those expressed by others.
- Recognize errors and suggest how to correctly solve the task.
- Justify results by explaining methods and processes.
- Construct possible arguments based on evidence.

Clarifications:
Teachers who encourage students to engage in discussions that reflect on the mathematical thinking of self and others:

- Establish a culture in which students ask questions of the teacher and their peers, and error is an opportunity for learning.
- Create opportunities for students to discuss their thinking with peers.
- Select, sequence and present student work to advance and deepen understanding of correct and increasingly efficient methods.
- Develop students' ability to justify methods and compare their responses to the responses of their peers.

MA.K12.MTR.5.1:

Use patterns and structure to help understand and connect mathematical concepts.
Mathematicians who use patterns and structure to help understand and connect mathematical concepts:

- Focus on relevant details within a problem.
- Create plans and procedures to logically order events, steps or ideas to solve problems.
- Decompose a complex problem into manageable parts.
- Relate previously learned concepts to new concepts.
- Look for similarities among problems.
- Connect solutions of problems to more complicated large-scale situations.

Clarifications:
Teachers who encourage students to use patterns and structure to help understand and connect mathematical concepts:

- Help students recognize the patterns in the world around them and connect these patterns to mathematical concepts.
- Support students to develop generalizations based on the similarities found among problems.
- Provide opportunities for students to create plans and procedures to solve problems.
- Develop students' ability to construct relationships between their current understanding and more sophisticated ways of thinking.

MA.K12.MTR.6.1:

Assess the reasonableness of solutions.
Mathematicians who assess the reasonableness of solutions:

- Estimate to discover possible solutions.
- Use benchmark quantities to determine if a solution makes sense.
- Check calculations when solving problems.
- Verify possible solutions by explaining the methods used.
- Evaluate results based on the given context.

Clarifications:
Teachers who encourage students to assess the reasonableness of solutions:

- Have students estimate or predict solutions prior to solving.
- Prompt students to continually ask, "Does this solution make sense? How do you know?"
- Reinforce that students check their work as they progress within and after a task.
- Strengthen students' ability to verify solutions through justifications.

MA.K12.MTR.7.1:

Apply mathematics to real-world contexts.
Mathematicians who apply mathematics to real-world contexts:

- Connect mathematical concepts to everyday experiences.
- Use models and methods to understand, represent and solve problems.
- Perform investigations to gather data or determine if a method is appropriate. • Redesign models and methods to improve accuracy or efficiency.

Clarifications:
Teachers who encourage students to apply mathematics to real-world contexts:

- Provide opportunities for students to create models, both concrete and abstract, and perform investigations.
- Challenge students to question the accuracy of their models and methods.
- Support students as they validate conclusions by comparing them to the given situation.
- Indicate how various concepts can be applied to other disciplines.

Cite evidence to explain and justify reasoning.

Clarifications:

ELA.K12.EE.1.1:	K-1 Students include textual evidence in their oral communication with guidance and support from adults. The evidence can consist of details from the text without naming the text. During 1st grade, students learn how to incorporate the evidence in their writing. 2-3 Students include relevant textual evidence in their written and oral communication. Students should name the text when they refer to it. In 3rd grade, students should use a combination of direct and indirect citations. 4-5 Students continue with previous skills and reference comments made by speakers and peers. Students cite texts that they've directly quoted, paraphrased, or used for information. When writing, students will use the form of citation dictated by the instructor or the style guide referenced by the instructor. 6-8 Students continue with previous skills and use a style guide to create a proper citation. 9-12 Students continue with previous skills and should be aware of existing style guides and the ways in which they differ.
ELA.K12.EE.2.1:	Read and comprehend grade-level complex texts proficiently. **Clarifications:** See Text Complexity for grade-level complexity bands and a text complexity rubric.
ELA.K12.EE.3.1:	Make inferences to support comprehension. **Clarifications:** Students will make inferences before the words infer or inference are introduced. Kindergarten students will answer questions like "Why is the girl smiling?" or make predictions about what will happen based on the title page. Students will use the terms and apply them in 2nd grade and beyond.
ELA.K12.EE.4.1:	Use appropriate collaborative techniques and active listening skills when engaging in discussions in a variety of situations. **Clarifications:** In kindergarten, students learn to listen to one another respectfully. In grades 1-2, students build upon these skills by justifying what they are thinking. For example: "I think _____ because _____." The collaborative conversations are becoming academic conversations. In grades 3-12, students engage in academic conversations discussing claims and justifying their reasoning, refining and applying skills. Students build on ideas, propel the conversation, and support claims and counterclaims with evidence.
ELA.K12.EE.5.1:	Use the accepted rules governing a specific format to create quality work. **Clarifications:** Students will incorporate skills learned into work products to produce quality work. For students to incorporate these skills appropriately, they must receive instruction. A 3rd grade student creating a poster board display must have instruction in how to effectively present information to do quality work.
ELA.K12.EE.6.1:	Use appropriate voice and tone when speaking or writing. **Clarifications:** In kindergarten and 1st grade, students learn the difference between formal and informal language. For example, the way we talk to our friends differs from the way we speak to adults. In 2nd grade and beyond, students practice appropriate social and academic language to discuss texts.
DA.912.S.2.1:	Sustain focused attention, respect, and discipline during class, rehearsal, and performance.
ELD.K12.ELL.SI.1:	English language learners communicate for social and instructional purposes within the school setting.

General Course Information and Notes

VERSION DESCRIPTION

Students build on previous experience with the fundamentals of music technology and sound engineering to integrate their knowledge of traditional musical elements with past and current technologies used to capture, create, mix, and present music. They explore the creative and aesthetic implications of music technology and sound engineering through class work. Public performances may serve as a resource for specific instructional goals. Students may be required to attend one or more performances outside the school day to support, extend, and assess learning in the classroom.

GENERAL NOTES

Florida's Benchmarks for Excellent Student Thinking (B.E.S.T.) Standards
This course includes Florida's B.E.S.T. ELA Expectations (EE) and Mathematical Thinking and Reasoning Standards (MTRs) for students. Florida educators should intentionally embed these standards within the content and their instruction as applicable. For guidance on the implementation of the EEs and MTRs, please visit cpalms.org/Standards/BEST_Standards.aspx and select the appropriate B.E.S.T. Standards package.

English Language Development ELD Standards Special Notes Section:
Teachers are required to provide listening, speaking, reading and writing instruction that allows English language learners (ELL) to communicate for social and instructional purposes within the school setting. For the given level of English language proficiency and with visual, graphic, or interactive support, students will interact with grade level words, expressions, sentences and discourse to process or produce language necessary for academic success. The ELD standard should specify a relevant content area concept or topic of study chosen by curriculum developers and teachers which maximizes an ELL's need for communication and social skills. To access an ELL supporting document which delineates performance definitions and descriptors, please click on the following link: cpalms.org/uploads/docs/standards/eld/SI.pdf

GENERAL INFORMATION

Course Number: 1304310

Course Path: Section: Grades PreK to 12 Education Courses > **Grade Group:** Grades 9 to 12 and Adult Education Courses > **Subject:** Music Education > **SubSubject:** Music Technology >

Abbreviated Title: MUS TECH & SO ENG 2

Number of Credits: One (1) credit

Course Length: Year (Y)

Course Type: Core Academic Course

Course Level: 2

Course Status: Draft - Course Pending Approval

Grade Level(s): 9,10,11,12

Graduation Requirement: Performing/Fine Arts

Educator Certifications

Music (Elementary and Secondary Grades K-12)
Vocal Music (Elementary and Secondary Grades K-12)
Instrumental Music (Secondary Grades 7-12)
Instrumental Music (Elementary and Secondary Grades K-12)

Eurhythmics 1 (#1305300) 2022 - And Beyond

Course Standards

Name	Description
DA.912.C.1.2:	Apply replication, physical rehearsal, and cognitive rehearsal to aid in the mental and physical retention of patterns, complex steps, and sequences performed by another dancer. **Clarifications:** e.g., mind/body connection, watching, following, marking, visualizing, imagery, using rhythmic clues
DA.912.C.2.3:	Develop a plan to improve technique, performance quality, and/or compositional work with artistic intent.
DA.912.F.3.6:	Practice conditioning methods that complement the physical instrument, and determine the degree of personal improvement in established dance techniques. **Clarifications:** e.g., Feldenkrais, Bartenieff, Pilates, yoga, cardio routines
DA.912.F.3.8:	Demonstrate effective teamwork and accountability, using compromise, collaboration, and conflict resolution, to set and achieve goals as required in the work environment.
DA.912.O.1.2:	Apply standards of class and performance etiquette consistently to attain optimal working conditions. **Clarifications:** e.g., appropriate attire, professional respect, traditions, procedures
DA.912.O.3.1:	Perform dance pieces to express feelings, ideas, cultural identity, music, and other abstract concepts through movements, steps, pantomime, and gestures.
DA.912.O.3.2:	Use imagery, analogy, and metaphor to improve body alignment and/or enhance the quality of movements, steps, phrases, or dances.
DA.912.S.2.1:	Sustain focused attention, respect, and discipline during class, rehearsal, and performance.
DA.912.S.2.4:	Demonstrate retention of directions, corrections, and memorization of dance from previous rehearsals and classes.
DA.912.S.3.2:	Develop and maintain flexibility, strength, and stamina for wellness and performance.
DA.912.S.3.4:	Perform dance vocabulary with musicality and sensitivity. **Clarifications:** e.g., on the counts, fill the music, emulate musical nuance
MA.K12.MTR.1.1:	Mathematicians who participate in effortful learning both individually and with others: • Analyze the problem in a way that makes sense given the task. • Ask questions that will help with solving the task. • Build perseverance by modifying methods as needed while solving a challenging task. • Stay engaged and maintain a positive mindset when working to solve tasks. • Help and support each other when attempting a new method or approach. **Clarifications:** Teachers who encourage students to participate actively in effortful learning both individually and with others: • Cultivate a community of growth mindset learners. • Foster perseverance in students by choosing tasks that are challenging. • Develop students' ability to analyze and problem solve. • Recognize students' effort when solving challenging problems.
MA.K12.MTR.2.1:	Demonstrate understanding by representing problems in multiple ways. Mathematicians who demonstrate understanding by representing problems in multiple ways: • Build understanding through modeling and using manipulatives. • Represent solutions to problems in multiple ways using objects, drawings, tables, graphs and equations. • Progress from modeling problems with objects and drawings to using algorithms and equations. • Express connections between concepts and representations. • Choose a representation based on the given context or purpose. **Clarifications:** Teachers who encourage students to demonstrate understanding by representing problems in multiple ways: • Help students make connections between concepts and representations. • Provide opportunities for students to use manipulatives when investigating concepts. • Guide students from concrete to pictorial to abstract representations as understanding progresses. • Show students that various representations can have different purposes and can be useful in different situations.
MA.K12.MTR.3.1:	Complete tasks with mathematical fluency. Mathematicians who complete tasks with mathematical fluency: • Select efficient and appropriate methods for solving problems within the given context. • Maintain flexibility and accuracy while performing procedures and mental calculations. • Complete tasks accurately and with confidence. • Adapt procedures to apply them to a new context. • Use feedback to improve efficiency when performing calculations. **Clarifications:** Teachers who encourage students to complete tasks with mathematical fluency:

	• Provide students with the flexibility to solve problems by selecting a procedure that allows them to solve efficiently and accurately. • Offer multiple opportunities for students to practice efficient and generalizable methods. • Provide opportunities for students to reflect on the method they used and determine if a more efficient method could have been used.
MA.K12.MTR.4.1:	Engage in discussions that reflect on the mathematical thinking of self and others. Mathematicians who engage in discussions that reflect on the mathematical thinking of self and others: • Communicate mathematical ideas, vocabulary and methods effectively. • Analyze the mathematical thinking of others. • Compare the efficiency of a method to those expressed by others. • Recognize errors and suggest how to correctly solve the task. • Justify results by explaining methods and processes. • Construct possible arguments based on evidence. **Clarifications:** Teachers who encourage students to engage in discussions that reflect on the mathematical thinking of self and others: • Establish a culture in which students ask questions of the teacher and their peers, and error is an opportunity for learning. • Create opportunities for students to discuss their thinking with peers. • Select, sequence and present student work to advance and deepen understanding of correct and increasingly efficient methods. • Develop students' ability to justify methods and compare their responses to the responses of their peers.
MA.K12.MTR.5.1:	Use patterns and structure to help understand and connect mathematical concepts. Mathematicians who use patterns and structure to help understand and connect mathematical concepts: • Focus on relevant details within a problem. • Create plans and procedures to logically order events, steps or ideas to solve problems. • Decompose a complex problem into manageable parts. • Relate previously learned concepts to new concepts. • Look for similarities among problems. • Connect solutions of problems to more complicated large-scale situations. **Clarifications:** Teachers who encourage students to use patterns and structure to help understand and connect mathematical concepts: • Help students recognize the patterns in the world around them and connect these patterns to mathematical concepts. • Support students to develop generalizations based on the similarities found among problems. • Provide opportunities for students to create plans and procedures to solve problems. • Develop students' ability to construct relationships between their current understanding and more sophisticated ways of thinking.
MA.K12.MTR.6.1:	Assess the reasonableness of solutions. Mathematicians who assess the reasonableness of solutions: • Estimate to discover possible solutions. • Use benchmark quantities to determine if a solution makes sense. • Check calculations when solving problems. • Verify possible solutions by explaining the methods used. • Evaluate results based on the given context. **Clarifications:** Teachers who encourage students to assess the reasonableness of solutions: • Have students estimate or predict solutions prior to solving. • Prompt students to continually ask, "Does this solution make sense? How do you know?" • Reinforce that students check their work as they progress within and after a task. • Strengthen students' ability to verify solutions through justifications.
MA.K12.MTR.7.1:	Apply mathematics to real-world contexts. Mathematicians who apply mathematics to real-world contexts: • Connect mathematical concepts to everyday experiences. • Use models and methods to understand, represent and solve problems. • Perform investigations to gather data or determine if a method is appropriate. • Redesign models and methods to improve accuracy or efficiency. **Clarifications:** Teachers who encourage students to apply mathematics to real-world contexts: • Provide opportunities for students to create models, both concrete and abstract, and perform investigations. • Challenge students to question the accuracy of their models and methods. • Support students as they validate conclusions by comparing them to the given situation. • Indicate how various concepts can be applied to other disciplines.
MU.912.C.1.1:	Apply listening strategies to promote appreciation and understanding of unfamiliar musical works. **Clarifications:** e.g., listening maps, active listening, checklists
MU.912.C.2.2:	Evaluate performance quality in recorded and/or live performances.
MU.912.C.3.1:	Make critical evaluations, based on exemplary models, of the quality and effectiveness of performances and apply the criteria to personal development in music.
MU.912.F.3.2:	Summarize copyright laws that govern printed, recorded, and on-line music to promote legal and responsible use of intellectual property and technology.
MU.912.O.1.1:	Evaluate the organizational principles and conventions in musical works and discuss their effect on structure. **Clarifications:** e.g., rhythm, melody, timbre, form, tonality, harmony, texture; solo, chamber ensemble, large ensemble

MU.912.O.3.1:	Analyze expressive elements in a musical work and describe how the choices and manipulations of the elements support, for the listener, the implied meaning of the composer/performer. **Clarifications:** e.g., tempo markings, expression markings, articulation markings, phrasing, scales, modes, harmonic structure, timbre choice, rhythm, orchestration
MU.912.S.2.1:	Apply the ability to memorize and internalize musical structure, accurate and expressive details, and processing skills to the creation or performance of music literature. **Clarifications:** e.g., memorization, sequential process
ELA.K12.EE.1.1:	Cite evidence to explain and justify reasoning. **Clarifications:** K-1 Students include textual evidence in their oral communication with guidance and support from adults. The evidence can consist of details from the text without naming the text. During 1st grade, students learn how to incorporate the evidence in their writing. 2-3 Students include relevant textual evidence in their written and oral communication. Students should name the text when they refer to it. In 3rd grade, students should use a combination of direct and indirect citations. 4-5 Students continue with previous skills and reference comments made by speakers and peers. Students cite texts that they've directly quoted, paraphrased, or used for information. When writing, students will use the form of citation dictated by the instructor or the style guide referenced by the instructor. 6-8 Students continue with previous skills and use a style guide to create a proper citation. 9-12 Students continue with previous skills and should be aware of existing style guides and the ways in which they differ.
ELA.K12.EE.2.1:	Read and comprehend grade-level complex texts proficiently. **Clarifications:** See Text Complexity for grade-level complexity bands and a text complexity rubric.
ELA.K12.EE.3.1:	Make inferences to support comprehension. **Clarifications:** Students will make inferences before the words infer or inference are introduced. Kindergarten students will answer questions like "Why is the girl smiling?" or make predictions about what will happen based on the title page. Students will use the terms and apply them in 2nd grade and beyond.
ELA.K12.EE.4.1:	Use appropriate collaborative techniques and active listening skills when engaging in discussions in a variety of situations. **Clarifications:** In kindergarten, students learn to listen to one another respectfully. In grades 1-2, students build upon these skills by justifying what they are thinking. For example: "I think _____ because _____." The collaborative conversations are becoming academic conversations. In grades 3-12, students engage in academic conversations discussing claims and justifying their reasoning, refining and applying skills. Students build on ideas, propel the conversation, and support claims and counterclaims with evidence.
ELA.K12.EE.5.1:	Use the accepted rules governing a specific format to create quality work. **Clarifications:** Students will incorporate skills learned into work products to produce quality work. For students to incorporate these skills appropriately, they must receive instruction. A 3rd grade student creating a poster board display must have instruction in how to effectively present information to do quality work.
ELA.K12.EE.6.1:	Use appropriate voice and tone when speaking or writing. **Clarifications:** In kindergarten and 1st grade, students learn the difference between formal and informal language. For example, the way we talk to our friends differs from the way we speak to adults. In 2nd grade and beyond, students practice appropriate social and academic language to discuss texts.
PE.912.C.2.2:	Apply terminology and etiquette in dance.
PE.912.C.2.3:	Analyze the movement performance of self and others. **Clarifications:** Some examples are video analysis and checklist.
PE.912.C.2.5:	Analyze the relationship between music and dance.
ELD.K12.ELL.SI.1:	English language learners communicate for social and instructional purposes within the school setting.

General Course Information and Notes

VERSION DESCRIPTION

Student dancers develop basic skills in performing and evaluating choreographed performances as an independent ensemble and in cooperation with a music ensemble. Emphasis is placed on dance, equipment manipulation, precision, and the relationship between music and dance. Public performances may serve as a culmination of specific instructional goals. Students may be required to attend and/or participate in rehearsals and performances outside the school day to support, extend, and assess learning in the classroom.

GENERAL NOTES

Florida's Benchmarks for Excellent Student Thinking (B.E.S.T.) Standards
This course includes Florida's B.E.S.T. ELA Expectations (EE) and Mathematical Thinking and Reasoning Standards (MTRs) for students. Florida educators should intentionally embed these standards within the content and their instruction as applicable. For guidance on the implementation of the EEs and MTRs, please visit cpalms.org/Standards/BEST_Standards.aspx and select the appropriate B.E.S.T. Standards package.

English Language Development ELD Standards Special Notes Section:
Teachers are required to provide listening, speaking, reading and writing instruction that allows English language learners (ELL) to communicate for social and instructional purposes within the school setting. For the given level of English language proficiency and with visual, graphic, or interactive support, students will interact with grade level words, expressions, sentences and discourse to process or produce language necessary for academic success. The ELD standard should specify a relevant content area concept or topic of study chosen by curriculum developers and teachers which maximizes an ELL's need for communication and social skills. To access an ELL supporting document which delineates performance definitions and descriptors, please click on the following link: cpalms.org/uploads/docs/standards/eld/SI.pdf

QUALIFICATIONS

As well as any certification requirements listed on the course description, the following qualifications may also be acceptable for the course:

Any field when certification reflects a bachelor or higher degree.

GENERAL INFORMATION

Course Number: 1305300

Course Path: Section: Grades PreK to 12 Education Courses > **Grade Group:** Grades 9 to 12 and Adult Education Courses > **Subject:** Music Education > **SubSubject:** Eurythmics > **Abbreviated Title:** EURHY 1

Number of Credits: One (1) credit

Course Length: Year (Y)

Course Type: Core Academic Course

Course Level: 2

Course Status: Draft - Course Pending Approval

Grade Level(s): 9,10,11,12

Graduation Requirement: Performing/Fine Arts

Eurhythmics 2 (#1305310) 2022 - And Beyond

Course Standards

Name	Description
DA.912.C.1.2:	Apply replication, physical rehearsal, and cognitive rehearsal to aid in the mental and physical retention of patterns, complex steps, and sequences performed by another dancer. **Clarifications:** e.g., mind/body connection, watching, following, marking, visualizing, imagery, using rhythmic clues
DA.912.C.2.2:	Make informed critical assessments of the quality and effectiveness of one's own technique and performance quality, based on criteria developed from a variety of sources, to support personal competence and artistic growth. **Clarifications:** e.g., exemplary models, critical processes, background knowledge, experience, self-assessment, constructive criticism, comparison to other works
DA.912.C.2.3:	Develop a plan to improve technique, performance quality, and/or compositional work with artistic intent.
DA.912.F.3.6:	Practice conditioning methods that complement the physical instrument, and determine the degree of personal improvement in established dance techniques. **Clarifications:** e.g., Feldenkrais, Bartenieff, Pilates, yoga, cardio routines
DA.912.F.3.8:	Demonstrate effective teamwork and accountability, using compromise, collaboration, and conflict resolution, to set and achieve goals as required in the work environment.
DA.912.O.1.2:	Apply standards of class and performance etiquette consistently to attain optimal working conditions. **Clarifications:** e.g., appropriate attire, professional respect, traditions, procedures
DA.912.O.3.1:	Perform dance pieces to express feelings, ideas, cultural identity, music, and other abstract concepts through movements, steps, pantomime, and gestures.
DA.912.O.3.2:	Use imagery, analogy, and metaphor to improve body alignment and/or enhance the quality of movements, steps, phrases, or dances.
DA.912.S.1.2:	Generate choreographic ideas through improvisation and physical brainstorming.
DA.912.S.2.1:	Sustain focused attention, respect, and discipline during class, rehearsal, and performance.
DA.912.S.2.4:	Demonstrate retention of directions, corrections, and memorization of dance from previous rehearsals and classes.
DA.912.S.3.2:	Develop and maintain flexibility, strength, and stamina for wellness and performance.
DA.912.S.3.4:	Perform dance vocabulary with musicality and sensitivity. **Clarifications:** e.g., on the counts, fill the music, emulate musical nuance
MU.912.C.1.1:	Apply listening strategies to promote appreciation and understanding of unfamiliar musical works. **Clarifications:** e.g., listening maps, active listening, checklists
MU.912.C.2.2:	Evaluate performance quality in recorded and/or live performances.
MU.912.C.3.1:	Make critical evaluations, based on exemplary models, of the quality and effectiveness of performances and apply the criteria to personal development in music.
MU.912.F.3.1:	Analyze and describe how meeting one's responsibilities in music offers opportunities to develop leadership skills, and identify personal examples of leadership in school and/or non-school settings.
MU.912.F.3.2:	Summarize copyright laws that govern printed, recorded, and on-line music to promote legal and responsible use of intellectual property and technology.
MU.912.F.3.4:	Design and implement a personal learning plan, related to the study of music, which demonstrates self-assessment, brain-storming, decision-making, and initiative to advance skills and/or knowledge.
MU.912.H.2.1:	Evaluate the social impact of music on specific historical periods.
MU.912.O.1.1:	Evaluate the organizational principles and conventions in musical works and discuss their effect on structure. **Clarifications:** e.g., rhythm, melody, timbre, form, tonality, harmony, texture; solo, chamber ensemble, large ensemble
MU.912.O.3.1:	Analyze expressive elements in a musical work and describe how the choices and manipulations of the elements support, for the listener, the implied meaning of the composer/performer. **Clarifications:** e.g., tempo markings, expression markings, articulation markings, phrasing, scales, modes, harmonic structure, timbre choice, rhythm, orchestration
MU.912.S.2.1:	Apply the ability to memorize and internalize musical structure, accurate and expressive details, and processing skills to the creation or performance of music literature. **Clarifications:** e.g., memorization, sequential process
MU.912.S.2.2:	Transfer expressive elements and performance techniques from one piece of music to another.
MU.912.S.3.4:	Analyze and describe the effect of rehearsal sessions and/or strategies on refinement of skills and techniques.
	Mathematicians who participate in effortful learning both individually and with others: • Analyze the problem in a way that makes sense given the task.

- Ask questions that will help with solving the task.
- Build perseverance by modifying methods as needed while solving a challenging task.
- Stay engaged and maintain a positive mindset when working to solve tasks.
- Help and support each other when attempting a new method or approach.

MA.K12.MTR.1.1:

Clarifications:
Teachers who encourage students to participate actively in effortful learning both individually and with others:
- Cultivate a community of growth mindset learners.
- Foster perseverance in students by choosing tasks that are challenging.
- Develop students' ability to analyze and problem solve.
- Recognize students' effort when solving challenging problems.

Demonstrate understanding by representing problems in multiple ways.
Mathematicians who demonstrate understanding by representing problems in multiple ways:

- Build understanding through modeling and using manipulatives.
- Represent solutions to problems in multiple ways using objects, drawings, tables, graphs and equations.
- Progress from modeling problems with objects and drawings to using algorithms and equations.
- Express connections between concepts and representations.
- Choose a representation based on the given context or purpose.

MA.K12.MTR.2.1:

Clarifications:
Teachers who encourage students to demonstrate understanding by representing problems in multiple ways:
- Help students make connections between concepts and representations.
- Provide opportunities for students to use manipulatives when investigating concepts.
- Guide students from concrete to pictorial to abstract representations as understanding progresses.
- Show students that various representations can have different purposes and can be useful in different situations.

Complete tasks with mathematical fluency.
Mathematicians who complete tasks with mathematical fluency:

- Select efficient and appropriate methods for solving problems within the given context.
- Maintain flexibility and accuracy while performing procedures and mental calculations.
- Complete tasks accurately and with confidence.
- Adapt procedures to apply them to a new context.
- Use feedback to improve efficiency when performing calculations.

MA.K12.MTR.3.1:

Clarifications:
Teachers who encourage students to complete tasks with mathematical fluency:
- Provide students with the flexibility to solve problems by selecting a procedure that allows them to solve efficiently and accurately.
- Offer multiple opportunities for students to practice efficient and generalizable methods.
- Provide opportunities for students to reflect on the method they used and determine if a more efficient method could have been used.

Engage in discussions that reflect on the mathematical thinking of self and others.
Mathematicians who engage in discussions that reflect on the mathematical thinking of self and others:

- Communicate mathematical ideas, vocabulary and methods effectively.
- Analyze the mathematical thinking of others.
- Compare the efficiency of a method to those expressed by others.
- Recognize errors and suggest how to correctly solve the task.
- Justify results by explaining methods and processes.
- Construct possible arguments based on evidence.

MA.K12.MTR.4.1:

Clarifications:
Teachers who encourage students to engage in discussions that reflect on the mathematical thinking of self and others:
- Establish a culture in which students ask questions of the teacher and their peers, and error is an opportunity for learning.
- Create opportunities for students to discuss their thinking with peers.
- Select, sequence and present student work to advance and deepen understanding of correct and increasingly efficient methods.
- Develop students' ability to justify methods and compare their responses to the responses of their peers.

Use patterns and structure to help understand and connect mathematical concepts.
Mathematicians who use patterns and structure to help understand and connect mathematical concepts:

- Focus on relevant details within a problem.
- Create plans and procedures to logically order events, steps or ideas to solve problems.
- Decompose a complex problem into manageable parts.
- Relate previously learned concepts to new concepts.
- Look for similarities among problems.
- Connect solutions of problems to more complicated large-scale situations.

MA.K12.MTR.5.1:

Clarifications:
Teachers who encourage students to use patterns and structure to help understand and connect mathematical concepts:
- Help students recognize the patterns in the world around them and connect these patterns to mathematical concepts.
- Support students to develop generalizations based on the similarities found among problems.
- Provide opportunities for students to create plans and procedures to solve problems.
- Develop students' ability to construct relationships between their current understanding and more sophisticated ways of thinking.

Assess the reasonableness of solutions.
Mathematicians who assess the reasonableness of solutions:

MA.K12.MTR.6.1:	• Estimate to discover possible solutions. • Use benchmark quantities to determine if a solution makes sense. • Check calculations when solving problems. • Verify possible solutions by explaining the methods used. • Evaluate results based on the given context. **Clarifications:** Teachers who encourage students to assess the reasonableness of solutions: • Have students estimate or predict solutions prior to solving. • Prompt students to continually ask, "Does this solution make sense? How do you know?" • Reinforce that students check their work as they progress within and after a task. • Strengthen students' ability to verify solutions through justifications.
MA.K12.MTR.7.1:	Apply mathematics to real-world contexts. Mathematicians who apply mathematics to real-world contexts: • Connect mathematical concepts to everyday experiences. • Use models and methods to understand, represent and solve problems. • Perform investigations to gather data or determine if a method is appropriate. • Redesign models and methods to improve accuracy or efficiency. **Clarifications:** Teachers who encourage students to apply mathematics to real-world contexts: • Provide opportunities for students to create models, both concrete and abstract, and perform investigations. • Challenge students to question the accuracy of their models and methods. • Support students as they validate conclusions by comparing them to the given situation. • Indicate how various concepts can be applied to other disciplines.
ELA.K12.EE.1.1:	Cite evidence to explain and justify reasoning. **Clarifications:** K-1 Students include textual evidence in their oral communication with guidance and support from adults. The evidence can consist of details from the text without naming the text. During 1st grade, students learn how to incorporate the evidence in their writing. 2-3 Students include relevant textual evidence in their written and oral communication. Students should name the text when they refer to it. In 3rd grade, students should use a combination of direct and indirect citations. 4-5 Students continue with previous skills and reference comments made by speakers and peers. Students cite texts that they've directly quoted, paraphrased, or used for information. When writing, students will use the form of citation dictated by the instructor or the style guide referenced by the instructor. 6-8 Students continue with previous skills and use a style guide to create a proper citation. 9-12 Students continue with previous skills and should be aware of existing style guides and the ways in which they differ.
ELA.K12.EE.2.1:	Read and comprehend grade-level complex texts proficiently. **Clarifications:** See Text Complexity for grade-level complexity bands and a text complexity rubric.
ELA.K12.EE.3.1:	Make inferences to support comprehension. **Clarifications:** Students will make inferences before the words infer or inference are introduced. Kindergarten students will answer questions like "Why is the girl smiling?" or make predictions about what will happen based on the title page. Students will use the terms and apply them in 2nd grade and beyond.
ELA.K12.EE.4.1:	Use appropriate collaborative techniques and active listening skills when engaging in discussions in a variety of situations. **Clarifications:** In kindergarten, students learn to listen to one another respectfully. In grades 1-2, students build upon these skills by justifying what they are thinking. For example: "I think _____ because _____." The collaborative conversations are becoming academic conversations. In grades 3-12, students engage in academic conversations discussing claims and justifying their reasoning, refining and applying skills. Students build on ideas, propel the conversation, and support claims and counterclaims with evidence.
ELA.K12.EE.5.1:	Use the accepted rules governing a specific format to create quality work. **Clarifications:** Students will incorporate skills learned into work products to produce quality work. For students to incorporate these skills appropriately, they must receive instruction. A 3rd grade student creating a poster board display must have instruction in how to effectively present information to do quality work.
ELA.K12.EE.6.1:	Use appropriate voice and tone when speaking or writing. **Clarifications:** In kindergarten and 1st grade, students learn the difference between formal and informal language. For example, the way we talk to our friends differs from the way we speak to adults. In 2nd grade and beyond, students practice appropriate social and academic language to discuss texts.
PE.912.C.2.2:	Apply terminology and etiquette in dance.
PE.912.C.2.3:	Analyze the movement performance of self and others. **Clarifications:** Some examples are video analysis and checklist.
PE.912.C.2.5:	Analyze the relationship between music and dance.
ELD.K12.ELL.SI.1:	English language learners communicate for social and instructional purposes within the school setting.

General Course Information and Notes

VERSION DESCRIPTION

Student dancers build on previous experience to perform and evaluate choreographed performances as an independent ensemble and in cooperation with a music ensemble. Students focus on strengthening dance skills, equipment manipulation, precision, and the relationship between music and dance. Public performances may serve as a culmination of specific instructional goals. Students may be required to attend and/or participate in rehearsals and performances outside the school day to support, extend, and assess learning in the classroom.

GENERAL NOTES

Florida's Benchmarks for Excellent Student Thinking (B.E.S.T.) Standards
This course includes Florida's B.E.S.T. ELA Expectations (EE) and Mathematical Thinking and Reasoning Standards (MTRs) for students. Florida educators should intentionally embed these standards within the content and their instruction as applicable. For guidance on the implementation of the EEs and MTRs, please visit cpalms.org/Standards/BEST_Standards.aspx and select the appropriate B.E.S.T. Standards package.

English Language Development ELD Standards Special Notes Section:
Teachers are required to provide listening, speaking, reading and writing instruction that allows English language learners (ELL) to communicate for social and instructional purposes within the school setting. For the given level of English language proficiency and with visual, graphic, or interactive support, students will interact with grade level words, expressions, sentences and discourse to process or produce language necessary for academic success. The ELD standard should specify a relevant content area concept or topic of study chosen by curriculum developers and teachers which maximizes an ELL's need for communication and social skills. To access an ELL supporting document which delineates performance definitions and descriptors, please click on the following link: cpalms.org/uploads/docs/standards/eld/SI.pdf

QUALIFICATIONS

As well as any certification requirements listed on the course description, the following qualifications may also be acceptable for the course:

Any field when certification reflects a bachelor or higher degree.

GENERAL INFORMATION

Course Number: 1305310

Course Path: Section: Grades PreK to 12 Education Courses > **Grade Group:** Grades 9 to 12 and Adult Education Courses > **Subject:** Music Education > **SubSubject:** Eurythmics > **Abbreviated Title:** EURHY 2

Number of Credits: One (1) credit

Course Length: Year (Y)

Course Type: Core Academic Course

Course Level: 2

Course Status: Draft - Course Pending Approval

Grade Level(s): 9,10,11,12

Graduation Requirement: Performing/Fine Arts

Eurhythmics 3 (#1305320) 2022 - And Beyond

Course Standards

Name	Description
DA.912.C.1.2:	Apply replication, physical rehearsal, and cognitive rehearsal to aid in the mental and physical retention of patterns, complex steps, and sequences performed by another dancer. **Clarifications:** e.g., mind/body connection, watching, following, marking, visualizing, imagery, using rhythmic clues
DA.912.C.1.4:	Weigh and discuss the personal significance of using both physical and cognitive rehearsal over time to strengthen one's own retention of patterns, complex steps, and sequences for rehearsal and performance.
DA.912.C.2.2:	Make informed critical assessments of the quality and effectiveness of one's own technique and performance quality, based on criteria developed from a variety of sources, to support personal competence and artistic growth. **Clarifications:** e.g., exemplary models, critical processes, background knowledge, experience, self-assessment, constructive criticism, comparison to other works
DA.912.C.2.3:	Develop a plan to improve technique, performance quality, and/or compositional work with artistic intent.
DA.912.C.3.1:	Critique the quality and effectiveness of performances based on exemplary models and self-established criteria. **Clarifications:** e.g., use of movements, elements, principles of design, lighting, costumes, music
DA.912.C.3.2:	Assess artistic or personal challenges, holistically and in parts, to explore and weigh potential solutions to problems in technique or composition. **Clarifications:** e.g., time management, refining dance steps, research
DA.912.F.2.1:	Investigate and report potential careers, requirements for employment, markets, potential salaries, and the degree of competition in dance and dance-related fields. **Clarifications:** e.g., dancer, teacher, artistic director, stage manager, videographer, costumer, agent, Pilates teacher, dance therapist, nutritionist
DA.912.F.3.6:	Practice conditioning methods that complement the physical instrument, and determine the degree of personal improvement in established dance techniques. **Clarifications:** e.g., Feldenkrais, Bartenieff, Pilates, yoga, cardio routines
DA.912.F.3.8:	Demonstrate effective teamwork and accountability, using compromise, collaboration, and conflict resolution, to set and achieve goals as required in the work environment.
DA.912.H.1.1:	Explore and select music from a broad range of cultures to accompany, support, and/or inspire choreography.
DA.912.H.1.3:	Adhere to copyright laws for choreography and music licensing to show respect for the intellectual property of others.
DA.912.H.3.3:	Explain the importance of proper nutrition, injury prevention, and safe practices to optimal performance and the life-long health of a dancer.
DA.912.O.1.2:	Apply standards of class and performance etiquette consistently to attain optimal working conditions. **Clarifications:** e.g., appropriate attire, professional respect, traditions, procedures
DA.912.O.3.1:	Perform dance pieces to express feelings, ideas, cultural identity, music, and other abstract concepts through movements, steps, pantomime, and gestures.
DA.912.O.3.2:	Use imagery, analogy, and metaphor to improve body alignment and/or enhance the quality of movements, steps, phrases, or dances.
DA.912.S.1.2:	Generate choreographic ideas through improvisation and physical brainstorming.
DA.912.S.2.1:	Sustain focused attention, respect, and discipline during class, rehearsal, and performance.
DA.912.S.2.2:	Apply corrections and concepts from previously learned steps to different material to improve processing of new information. **Clarifications:** e.g., repetition, revision, refinement, focus
DA.912.S.2.4:	Demonstrate retention of directions, corrections, and memorization of dance from previous rehearsals and classes.
DA.912.S.3.2:	Develop and maintain flexibility, strength, and stamina for wellness and performance.
DA.912.S.3.4:	Perform dance vocabulary with musicality and sensitivity. **Clarifications:** e.g., on the counts, fill the music, emulate musical nuance
MU.912.C.1.1:	Apply listening strategies to promote appreciation and understanding of unfamiliar musical works. **Clarifications:** e.g., listening maps, active listening, checklists
MU.912.C.2.2:	Evaluate performance quality in recorded and/or live performances.
MU.912.C.3.1:	Make critical evaluations, based on exemplary models, of the quality and effectiveness of performances and apply the criteria to personal development in music.
MU.912.F.2.2:	Analyze the effect of the arts and entertainment industry on the economic and social health of communities and regions. **Clarifications:** e.g., community revitalization, industry choosing new locations, cultural and social enrichment

MU.912.F.3.1:	Analyze and describe how meeting one's responsibilities in music offers opportunities to develop leadership skills, and identify personal examples of leadership in school and/or non-school settings.
MU.912.F.3.2:	Summarize copyright laws that govern printed, recorded, and on-line music to promote legal and responsible use of intellectual property and technology.
MU.912.F.3.4:	Design and implement a personal learning plan, related to the study of music, which demonstrates self-assessment, brain-storming, decision-making, and initiative to advance skills and/or knowledge.
MU.912.H.1.1:	Investigate and discuss how a culture's traditions are reflected through its music. **Clarifications:** e.g., patriotic, folk, celebration, entertainment, spiritual
MU.912.H.2.1:	Evaluate the social impact of music on specific historical periods.
MU.912.H.2.2:	Analyze current musical trends, including audience environments and music acquisition, to predict possible directions of music.
MU.912.O.1.1:	Evaluate the organizational principles and conventions in musical works and discuss their effect on structure. **Clarifications:** e.g., rhythm, melody, timbre, form, tonality, harmony, texture; solo, chamber ensemble, large ensemble
MU.912.O.3.1:	Analyze expressive elements in a musical work and describe how the choices and manipulations of the elements support, for the listener, the implied meaning of the composer/performer. **Clarifications:** e.g., tempo markings, expression markings, articulation markings, phrasing, scales, modes, harmonic structure, timbre choice, rhythm, orchestration
MU.912.O.3.2:	Interpret and perform expressive elements indicated by the musical score and/or conductor.
MU.912.S.2.1:	Apply the ability to memorize and internalize musical structure, accurate and expressive details, and processing skills to the creation or performance of music literature. **Clarifications:** e.g., memorization, sequential process
MU.912.S.2.2:	Transfer expressive elements and performance techniques from one piece of music to another.
MU.912.S.3.4:	Analyze and describe the effect of rehearsal sessions and/or strategies on refinement of skills and techniques.
MA.K12.MTR.1.1:	Mathematicians who participate in effortful learning both individually and with others: • Analyze the problem in a way that makes sense given the task. • Ask questions that will help with solving the task. • Build perseverance by modifying methods as needed while solving a challenging task. • Stay engaged and maintain a positive mindset when working to solve tasks. • Help and support each other when attempting a new method or approach. **Clarifications:** Teachers who encourage students to participate actively in effortful learning both individually and with others: • Cultivate a community of growth mindset learners. • Foster perseverance in students by choosing tasks that are challenging. • Develop students' ability to analyze and problem solve. • Recognize students' effort when solving challenging problems.
MA.K12.MTR.2.1:	Demonstrate understanding by representing problems in multiple ways. Mathematicians who demonstrate understanding by representing problems in multiple ways: • Build understanding through modeling and using manipulatives. • Represent solutions to problems in multiple ways using objects, drawings, tables, graphs and equations. • Progress from modeling problems with objects and drawings to using algorithms and equations. • Express connections between concepts and representations. • Choose a representation based on the given context or purpose. **Clarifications:** Teachers who encourage students to demonstrate understanding by representing problems in multiple ways: • Help students make connections between concepts and representations. • Provide opportunities for students to use manipulatives when investigating concepts. • Guide students from concrete to pictorial to abstract representations as understanding progresses. • Show students that various representations can have different purposes and can be useful in different situations.
MA.K12.MTR.3.1:	Complete tasks with mathematical fluency. Mathematicians who complete tasks with mathematical fluency: • Select efficient and appropriate methods for solving problems within the given context. • Maintain flexibility and accuracy while performing procedures and mental calculations. • Complete tasks accurately and with confidence. • Adapt procedures to apply them to a new context. • Use feedback to improve efficiency when performing calculations. **Clarifications:** Teachers who encourage students to complete tasks with mathematical fluency: • Provide students with the flexibility to solve problems by selecting a procedure that allows them to solve efficiently and accurately. • Offer multiple opportunities for students to practice efficient and generalizable methods. • Provide opportunities for students to reflect on the method they used and determine if a more efficient method could have been used.
	Engage in discussions that reflect on the mathematical thinking of self and others. Mathematicians who engage in discussions that reflect on the mathematical thinking of self and others: • Communicate mathematical ideas, vocabulary and methods effectively.

MA.K12.MTR.4.1:	• Analyze the mathematical thinking of others. • Compare the efficiency of a method to those expressed by others. • Recognize errors and suggest how to correctly solve the task. • Justify results by explaining methods and processes. • Construct possible arguments based on evidence. **Clarifications:** Teachers who encourage students to engage in discussions that reflect on the mathematical thinking of self and others: • Establish a culture in which students ask questions of the teacher and their peers, and error is an opportunity for learning. • Create opportunities for students to discuss their thinking with peers. • Select, sequence and present student work to advance and deepen understanding of correct and increasingly efficient methods. • Develop students' ability to justify methods and compare their responses to the responses of their peers.
MA.K12.MTR.5.1:	Use patterns and structure to help understand and connect mathematical concepts. Mathematicians who use patterns and structure to help understand and connect mathematical concepts: • Focus on relevant details within a problem. • Create plans and procedures to logically order events, steps or ideas to solve problems. • Decompose a complex problem into manageable parts. • Relate previously learned concepts to new concepts. • Look for similarities among problems. • Connect solutions of problems to more complicated large-scale situations. **Clarifications:** Teachers who encourage students to use patterns and structure to help understand and connect mathematical concepts: • Help students recognize the patterns in the world around them and connect these patterns to mathematical concepts. • Support students to develop generalizations based on the similarities found among problems. • Provide opportunities for students to create plans and procedures to solve problems. • Develop students' ability to construct relationships between their current understanding and more sophisticated ways of thinking.
MA.K12.MTR.6.1:	Assess the reasonableness of solutions. Mathematicians who assess the reasonableness of solutions: • Estimate to discover possible solutions. • Use benchmark quantities to determine if a solution makes sense. • Check calculations when solving problems. • Verify possible solutions by explaining the methods used. • Evaluate results based on the given context. **Clarifications:** Teachers who encourage students to assess the reasonableness of solutions: • Have students estimate or predict solutions prior to solving. • Prompt students to continually ask, "Does this solution make sense? How do you know?" • Reinforce that students check their work as they progress within and after a task. • Strengthen students' ability to verify solutions through justifications.
MA.K12.MTR.7.1:	Apply mathematics to real-world contexts. Mathematicians who apply mathematics to real-world contexts: • Connect mathematical concepts to everyday experiences. • Use models and methods to understand, represent and solve problems. • Perform investigations to gather data or determine if a method is appropriate. • Redesign models and methods to improve accuracy or efficiency. **Clarifications:** Teachers who encourage students to apply mathematics to real-world contexts: • Provide opportunities for students to create models, both concrete and abstract, and perform investigations. • Challenge students to question the accuracy of their models and methods. • Support students as they validate conclusions by comparing them to the given situation. • Indicate how various concepts can be applied to other disciplines.
ELA.K12.EE.1.1:	Cite evidence to explain and justify reasoning. **Clarifications:** K-1 Students include textual evidence in their oral communication with guidance and support from adults. The evidence can consist of details from the text without naming the text. During 1st grade, students learn how to incorporate the evidence in their writing. 2-3 Students include relevant textual evidence in their written and oral communication. Students should name the text when they refer to it. In 3rd grade, students should use a combination of direct and indirect citations. 4-5 Students continue with previous skills and reference comments made by speakers and peers. Students cite texts that they've directly quoted, paraphrased, or used for information. When writing, students will use the form of citation dictated by the instructor or the style guide referenced by the instructor. 6-8 Students continue with previous skills and use a style guide to create a proper citation. 9-12 Students continue with previous skills and should be aware of existing style guides and the ways in which they differ.
ELA.K12.EE.2.1:	Read and comprehend grade-level complex texts proficiently. **Clarifications:** See Text Complexity for grade-level complexity bands and a text complexity rubric.
	Make inferences to support comprehension.

ELA.K12.EE.3.1:	**Clarifications:** Students will make inferences before the words infer or inference are introduced. Kindergarten students will answer questions like "Why is the girl smiling?" or make predictions about what will happen based on the title page. Students will use the terms and apply them in 2nd grade and beyond.
ELA.K12.EE.4.1:	Use appropriate collaborative techniques and active listening skills when engaging in discussions in a variety of situations. **Clarifications:** In kindergarten, students learn to listen to one another respectfully. In grades 1-2, students build upon these skills by justifying what they are thinking. For example: "I think _____ because _____." The collaborative conversations are becoming academic conversations. In grades 3-12, students engage in academic conversations discussing claims and justifying their reasoning, refining and applying skills. Students build on ideas, propel the conversation, and support claims and counterclaims with evidence.
ELA.K12.EE.5.1:	Use the accepted rules governing a specific format to create quality work. **Clarifications:** Students will incorporate skills learned into work products to produce quality work. For students to incorporate these skills appropriately, they must receive instruction. A 3rd grade student creating a poster board display must have instruction in how to effectively present information to do quality work.
ELA.K12.EE.6.1:	Use appropriate voice and tone when speaking or writing. **Clarifications:** In kindergarten and 1st grade, students learn the difference between formal and informal language. For example, the way we talk to our friends differs from the way we speak to adults. In 2nd grade and beyond, students practice appropriate social and academic language to discuss texts.
PE.912.C.2.2:	Apply terminology and etiquette in dance.
PE.912.C.2.3:	Analyze the movement performance of self and others. **Clarifications:** Some examples are video analysis and checklist.
PE.912.C.2.5:	Analyze the relationship between music and dance.
ELD.K12.ELL.SI.1:	English language learners communicate for social and instructional purposes within the school setting.

General Course Information and Notes

VERSION DESCRIPTION

Student dancers strengthen their performance and evaluative skills, and explore the basic processes of designing choreography for an independent ensemble or in cooperation with a music ensemble. Students develop more sophisticated dance skills and equipment manipulation. Public performances may serve as a culmination of specific instructional goals. Students may be required to attend and/or participate in rehearsals and performances outside the school day to support, extend, and assess learning in the classroom.

GENERAL NOTES

Florida's Benchmarks for Excellent Student Thinking (B.E.S.T.) Standards
This course includes Florida's B.E.S.T. ELA Expectations (EE) and Mathematical Thinking and Reasoning Standards (MTRs) for students. Florida educators should intentionally embed these standards within the content and their instruction as applicable. For guidance on the implementation of the EEs and MTRs, please visit cpalms.org/Standards/BEST_Standards.aspx and select the appropriate B.E.S.T. Standards package.

English Language Development ELD Standards Special Notes Section:
Teachers are required to provide listening, speaking, reading and writing instruction that allows English language learners (ELL) to communicate for social and instructional purposes within the school setting. For the given level of English language proficiency and with visual, graphic, or interactive support, students will interact with grade level words, expressions, sentences and discourse to process or produce language necessary for academic success. The ELD standard should specify a relevant content area concept or topic of study chosen by curriculum developers and teachers which maximizes an ELL's need for communication and social skills. To access an ELL supporting document which delineates performance definitions and descriptors, please click on the following link: cpalms.org/uploads/docs/standards/eld/SI.pdf

QUALIFICATIONS

As well as any certification requirements listed on the course description, the following qualifications may also be acceptable for the course:

Any field when certification reflects a bachelor or higher degree.

GENERAL INFORMATION

Course Number: 1305320

Course Path: Section: Grades PreK to 12 Education Courses > **Grade Group:** Grades 9 to 12 and Adult Education Courses > **Subject:** Music Education > **SubSubject:** Eurythmics >
Abbreviated Title: EURHY 3

Number of Credits: One (1) credit
Course Type: Core Academic Course
Course Status: Draft - Course Pending Approval
Grade Level(s): 9,10,11,12
Graduation Requirement: Performing/Fine Arts
Course Length: Year (Y)
Course Level: 2

Eurhythmics 4 (#1305330) 2022 - And Beyond

Course Standards

Name	Description
DA.912.C.1.2:	Apply replication, physical rehearsal, and cognitive rehearsal to aid in the mental and physical retention of patterns, complex steps, and sequences performed by another dancer. **Clarifications:** e.g., mind/body connection, watching, following, marking, visualizing, imagery, using rhythmic clues
DA.912.C.1.3:	Develop and articulate criteria for use in critiquing dance, drawing on background knowledge and personal experience, to show independence in one's response. **Clarifications:** e.g., journal entries, discussion
DA.912.C.1.4:	Weigh and discuss the personal significance of using both physical and cognitive rehearsal over time to strengthen one's own retention of patterns, complex steps, and sequences for rehearsal and performance.
DA.912.C.2.1:	Analyze movement from varying perspectives and experiment with a variety of creative solutions to solve technical or choreographic challenges. **Clarifications:** e.g., improvisation, trial and error, collaboration
DA.912.C.2.2:	Make informed critical assessments of the quality and effectiveness of one's own technique and performance quality, based on criteria developed from a variety of sources, to support personal competence and artistic growth. **Clarifications:** e.g., exemplary models, critical processes, background knowledge, experience, self-assessment, constructive criticism, comparison to other works
DA.912.C.2.3:	Develop a plan to improve technique, performance quality, and/or compositional work with artistic intent.
DA.912.C.2.4:	Evaluate nuances of movement and their relationship to style, choreographic elements, and/or other dancers, and apply this knowledge to alter personal performance.
DA.912.C.3.1:	Critique the quality and effectiveness of performances based on exemplary models and self-established criteria. **Clarifications:** e.g., use of movements, elements, principles of design, lighting, costumes, music
DA.912.C.3.2:	Assess artistic or personal challenges, holistically and in parts, to explore and weigh potential solutions to problems in technique or composition. **Clarifications:** e.g., time management, refining dance steps, research
DA.912.F.1.3:	Employ acquired knowledge to stimulate creative risk-taking and broaden one's own dance technique, performance, and choreography.
DA.912.F.2.1:	Investigate and report potential careers, requirements for employment, markets, potential salaries, and the degree of competition in dance and dance-related fields. **Clarifications:** e.g., dancer, teacher, artistic director, stage manager, videographer, costumer, agent, Pilates teacher, dance therapist, nutritionist
DA.912.F.3.1:	Demonstrate leadership and responsibility through designing choreography, planning rehearsals, or directing a dance piece.
DA.912.F.3.2:	Synthesize information and make use of a variety of experiences and resources from outside dance class to inform and inspire one's work as a dancer. **Clarifications:** e.g., private studio work, school subjects, athletics, outside interests, news, personal life, music, poetry, environment
DA.912.F.3.6:	Practice conditioning methods that complement the physical instrument, and determine the degree of personal improvement in established dance techniques. **Clarifications:** e.g., Feldenkrais, Bartenieff, Pilates, yoga, cardio routines
DA.912.F.3.8:	Demonstrate effective teamwork and accountability, using compromise, collaboration, and conflict resolution, to set and achieve goals as required in the work environment.
DA.912.H.1.1:	Explore and select music from a broad range of cultures to accompany, support, and/or inspire choreography.
DA.912.H.1.2:	Study dance works created by artists of diverse backgrounds, and use their work as inspiration for performance or creating new works.
DA.912.H.1.3:	Adhere to copyright laws for choreography and music licensing to show respect for the intellectual property of others.
DA.912.H.3.3:	Explain the importance of proper nutrition, injury prevention, and safe practices to optimal performance and the life-long health of a dancer.
DA.912.O.1.2:	Apply standards of class and performance etiquette consistently to attain optimal working conditions. **Clarifications:** e.g., appropriate attire, professional respect, traditions, procedures
DA.912.O.1.5:	Construct a dance that uses specific choreographic structures to express an idea and show understanding of continuity and framework. **Clarifications:** e.g., ABA, ABCA, ABACA, narrative, motif, beginning-middle-end, motif manipulation
DA.912.O.3.1:	Perform dance pieces to express feelings, ideas, cultural identity, music, and other abstract concepts through movements, steps, pantomime, and gestures.
DA.912.O.3.2:	Use imagery, analogy, and metaphor to improve body alignment and/or enhance the quality of movements, steps, phrases, or dances.
DA.912.S.1.1:	Synthesize a variety of choreographic principles and structures to create a dance. **Clarifications:**

	e.g., unity, variety, contrast, repetition, transition
DA.912.S.1.2:	Generate choreographic ideas through improvisation and physical brainstorming.
DA.912.S.2.1:	Sustain focused attention, respect, and discipline during class, rehearsal, and performance.
DA.912.S.2.2:	Apply corrections and concepts from previously learned steps to different material to improve processing of new information. **Clarifications:** e.g., repetition, revision, refinement, focus
DA.912.S.2.4:	Demonstrate retention of directions, corrections, and memorization of dance from previous rehearsals and classes.
DA.912.S.3.2:	Develop and maintain flexibility, strength, and stamina for wellness and performance.
DA.912.S.3.4:	Perform dance vocabulary with musicality and sensitivity. **Clarifications:** e.g., on the counts, fill the music, emulate musical nuance
MU.912.C.1.1:	Apply listening strategies to promote appreciation and understanding of unfamiliar musical works. **Clarifications:** e.g., listening maps, active listening, checklists
MU.912.C.2.2:	Evaluate performance quality in recorded and/or live performances.
MU.912.C.3.1:	Make critical evaluations, based on exemplary models, of the quality and effectiveness of performances and apply the criteria to personal development in music.
MU.912.F.1.2:	Incorporate or adapt new, emerging, or previously unfamiliar technology to create an innovative composition, music project, or related product.
MU.912.F.2.2:	Analyze the effect of the arts and entertainment industry on the economic and social health of communities and regions. **Clarifications:** e.g., community revitalization, industry choosing new locations, cultural and social enrichment
MU.912.F.3.1:	Analyze and describe how meeting one's responsibilities in music offers opportunities to develop leadership skills, and identify personal examples of leadership in school and/or non-school settings.
MU.912.F.3.2:	Summarize copyright laws that govern printed, recorded, and on-line music to promote legal and responsible use of intellectual property and technology.
MU.912.F.3.3:	Define, prioritize, monitor, and successfully complete tasks related to individual musical performance or project presentation, without direct oversight, demonstrating skills for use in the workplace.
MU.912.F.3.4:	Design and implement a personal learning plan, related to the study of music, which demonstrates self-assessment, brain-storming, decision-making, and initiative to advance skills and/or knowledge.
MU.912.H.1.1:	Investigate and discuss how a culture's traditions are reflected through its music. **Clarifications:** e.g., patriotic, folk, celebration, entertainment, spiritual
MU.912.H.2.1:	Evaluate the social impact of music on specific historical periods.
MU.912.H.2.2:	Analyze current musical trends, including audience environments and music acquisition, to predict possible directions of music.
MU.912.O.1.1:	Evaluate the organizational principles and conventions in musical works and discuss their effect on structure. **Clarifications:** e.g., rhythm, melody, timbre, form, tonality, harmony, texture; solo, chamber ensemble, large ensemble
MU.912.O.3.1:	Analyze expressive elements in a musical work and describe how the choices and manipulations of the elements support, for the listener, the implied meaning of the composer/performer. **Clarifications:** e.g., tempo markings, expression markings, articulation markings, phrasing, scales, modes, harmonic structure, timbre choice, rhythm, orchestration
MU.912.O.3.2:	Interpret and perform expressive elements indicated by the musical score and/or conductor.
MU.912.S.2.1:	Apply the ability to memorize and internalize musical structure, accurate and expressive details, and processing skills to the creation or performance of music literature. **Clarifications:** e.g., memorization, sequential process
MU.912.S.2.2:	Transfer expressive elements and performance techniques from one piece of music to another.
MU.912.S.3.4:	Analyze and describe the effect of rehearsal sessions and/or strategies on refinement of skills and techniques.
MA.K12.MTR.1.1:	Mathematicians who participate in effortful learning both individually and with others: • Analyze the problem in a way that makes sense given the task. • Ask questions that will help with solving the task. • Build perseverance by modifying methods as needed while solving a challenging task. • Stay engaged and maintain a positive mindset when working to solve tasks. • Help and support each other when attempting a new method or approach. **Clarifications:** Teachers who encourage students to participate actively in effortful learning both individually and with others: • Cultivate a community of growth mindset learners. • Foster perseverance in students by choosing tasks that are challenging. • Develop students' ability to analyze and problem solve. • Recognize students' effort when solving challenging problems.
	Demonstrate understanding by representing problems in multiple ways. Mathematicians who demonstrate understanding by representing problems in multiple ways: • Build understanding through modeling and using manipulatives. • Represent solutions to problems in multiple ways using objects, drawings, tables, graphs and equations. • Progress from modeling problems with objects and drawings to using algorithms and equations.

- Express connections between concepts and representations.

MA.K12.MTR.2.1:

- Choose a representation based on the given context or purpose.

Clarifications:
Teachers who encourage students to demonstrate understanding by representing problems in multiple ways:

- Help students make connections between concepts and representations.
- Provide opportunities for students to use manipulatives when investigating concepts.
- Guide students from concrete to pictorial to abstract representations as understanding progresses.
- Show students that various representations can have different purposes and can be useful in different situations.

Complete tasks with mathematical fluency.
Mathematicians who complete tasks with mathematical fluency:

- Select efficient and appropriate methods for solving problems within the given context.
- Maintain flexibility and accuracy while performing procedures and mental calculations.
- Complete tasks accurately and with confidence.
- Adapt procedures to apply them to a new context.

MA.K12.MTR.3.1:

- Use feedback to improve efficiency when performing calculations.

Clarifications:
Teachers who encourage students to complete tasks with mathematical fluency:

- Provide students with the flexibility to solve problems by selecting a procedure that allows them to solve efficiently and accurately.
- Offer multiple opportunities for students to practice efficient and generalizable methods.
- Provide opportunities for students to reflect on the method they used and determine if a more efficient method could have been used.

Engage in discussions that reflect on the mathematical thinking of self and others.
Mathematicians who engage in discussions that reflect on the mathematical thinking of self and others:

- Communicate mathematical ideas, vocabulary and methods effectively.
- Analyze the mathematical thinking of others.
- Compare the efficiency of a method to those expressed by others.
- Recognize errors and suggest how to correctly solve the task.
- Justify results by explaining methods and processes.

MA.K12.MTR.4.1:

- Construct possible arguments based on evidence.

Clarifications:
Teachers who encourage students to engage in discussions that reflect on the mathematical thinking of self and others:

- Establish a culture in which students ask questions of the teacher and their peers, and error is an opportunity for learning.
- Create opportunities for students to discuss their thinking with peers.
- Select, sequence and present student work to advance and deepen understanding of correct and increasingly efficient methods.
- Develop students' ability to justify methods and compare their responses to the responses of their peers.

Use patterns and structure to help understand and connect mathematical concepts.
Mathematicians who use patterns and structure to help understand and connect mathematical concepts:

- Focus on relevant details within a problem.
- Create plans and procedures to logically order events, steps or ideas to solve problems.
- Decompose a complex problem into manageable parts.
- Relate previously learned concepts to new concepts.
- Look for similarities among problems.

MA.K12.MTR.5.1:

- Connect solutions of problems to more complicated large-scale situations.

Clarifications:
Teachers who encourage students to use patterns and structure to help understand and connect mathematical concepts:

- Help students recognize the patterns in the world around them and connect these patterns to mathematical concepts.
- Support students to develop generalizations based on the similarities found among problems.
- Provide opportunities for students to create plans and procedures to solve problems.
- Develop students' ability to construct relationships between their current understanding and more sophisticated ways of thinking.

Assess the reasonableness of solutions.
Mathematicians who assess the reasonableness of solutions:

- Estimate to discover possible solutions.
- Use benchmark quantities to determine if a solution makes sense.
- Check calculations when solving problems.
- Verify possible solutions by explaining the methods used.

MA.K12.MTR.6.1:

- Evaluate results based on the given context.

Clarifications:
Teachers who encourage students to assess the reasonableness of solutions:

- Have students estimate or predict solutions prior to solving.
- Prompt students to continually ask, "Does this solution make sense? How do you know?"
- Reinforce that students check their work as they progress within and after a task.
- Strengthen students' ability to verify solutions through justifications.

Apply mathematics to real-world contexts.
Mathematicians who apply mathematics to real-world contexts:

- Connect mathematical concepts to everyday experiences.
- Use models and methods to understand, represent and solve problems.

MA.K12.MTR.7.1:	• Perform investigations to gather data or determine if a method is appropriate. • Redesign models and methods to improve accuracy or efficiency. **Clarifications:** Teachers who encourage students to apply mathematics to real-world contexts: • Provide opportunities for students to create models, both concrete and abstract, and perform investigations. • Challenge students to question the accuracy of their models and methods. • Support students as they validate conclusions by comparing them to the given situation. • Indicate how various concepts can be applied to other disciplines.
ELA.K12.EE.1.1:	Cite evidence to explain and justify reasoning. **Clarifications:** K-1 Students include textual evidence in their oral communication with guidance and support from adults. The evidence can consist of details from the text without naming the text. During 1st grade, students learn how to incorporate the evidence in their writing. 2-3 Students include relevant textual evidence in their written and oral communication. Students should name the text when they refer to it. In 3rd grade, students should use a combination of direct and indirect citations. 4-5 Students continue with previous skills and reference comments made by speakers and peers. Students cite texts that they've directly quoted, paraphrased, or used for information. When writing, students will use the form of citation dictated by the instructor or the style guide referenced by the instructor. 6-8 Students continue with previous skills and use a style guide to create a proper citation. 9-12 Students continue with previous skills and should be aware of existing style guides and the ways in which they differ.
ELA.K12.EE.2.1:	Read and comprehend grade-level complex texts proficiently. **Clarifications:** See Text Complexity for grade-level complexity bands and a text complexity rubric.
ELA.K12.EE.3.1:	Make inferences to support comprehension. **Clarifications:** Students will make inferences before the words infer or inference are introduced. Kindergarten students will answer questions like "Why is the girl smiling?" or make predictions about what will happen based on the title page. Students will use the terms and apply them in 2nd grade and beyond.
ELA.K12.EE.4.1:	Use appropriate collaborative techniques and active listening skills when engaging in discussions in a variety of situations. **Clarifications:** In kindergarten, students learn to listen to one another respectfully. In grades 1-2, students build upon these skills by justifying what they are thinking. For example: "I think _____ because _____." The collaborative conversations are becoming academic conversations. In grades 3-12, students engage in academic conversations discussing claims and justifying their reasoning, refining and applying skills. Students build on ideas, propel the conversation, and support claims and counterclaims with evidence.
ELA.K12.EE.5.1:	Use the accepted rules governing a specific format to create quality work. **Clarifications:** Students will incorporate skills learned into work products to produce quality work. For students to incorporate these skills appropriately, they must receive instruction. A 3rd grade student creating a poster board display must have instruction in how to effectively present information to do quality work.
ELA.K12.EE.6.1:	Use appropriate voice and tone when speaking or writing. **Clarifications:** In kindergarten and 1st grade, students learn the difference between formal and informal language. For example, the way we talk to our friends differs from the way we speak to adults. In 2nd grade and beyond, students practice appropriate social and academic language to discuss texts.
PE.912.C.2.2:	Apply terminology and etiquette in dance.
PE.912.C.2.3:	Analyze the movement performance of self and others. **Clarifications:** Some examples are video analysis and checklist.
PE.912.C.2.5:	Analyze the relationship between music and dance.
ELD.K12.ELL.SI.1:	English language learners communicate for social and instructional purposes within the school setting.

General Course Information and Notes

VERSION DESCRIPTION

Student dancers develop advanced skills in creating, performing, and evaluating choreographed performances as an independent ensemble and in cooperation with a music ensemble. Coursework focuses on dance, equipment manipulation, precision, and analysis of the relationship between music and dance. Public performances may serve as a culmination of specific instructional goals. Students may be required to attend and/or participate in rehearsals and performances outside the school day to support, extend, and assess learning in the classroom.

GENERAL NOTES

Florida's Benchmarks for Excellent Student Thinking (B.E.S.T.) Standards

This course includes Florida's B.E.S.T. ELA Expectations (EE) and Mathematical Thinking and Reasoning Standards (MTRs) for students. Florida educators should intentionally embed these standards within the content and their instruction as applicable. For guidance on the implementation of the EEs and MTRs, please visit cpalms.org/Standards/BEST_Standards.aspx and select the appropriate B.E.S.T. Standards package.

English Language Development ELD Standards Special Notes Section:
Teachers are required to provide listening, speaking, reading and writing instruction that allows English language learners (ELL) to communicate for social and instructional purposes within the school setting. For the given level of English language proficiency and with visual, graphic, or interactive support, students will interact with grade level words, expressions, sentences and discourse to process or produce language necessary for academic success. The ELD standard should specify a relevant content area concept or topic of study chosen by curriculum developers and teachers which maximizes an ELL's need for communication and social skills. To access an ELL supporting document which delineates performance definitions and descriptors, please click on the following link: cpalms.org/uploads/docs/standards/eld/SI.pdf

QUALIFICATIONS

As well as any certification requirements listed on the course description, the following qualifications may also be acceptable for the course:

Any field when certification reflects a bachelor or higher degree.

GENERAL INFORMATION

Course Number: 1305330

Course Path: Section: Grades PreK to 12 Education Courses > **Grade Group:** Grades 9 to 12 and Adult Education Courses > **Subject:** Music Education > **SubSubject:** Eurythmics >
Abbreviated Title: EURHY 4

Number of Credits: One (1) credit

Course Length: Year (Y)

Course Type: Core Academic Course

Course Level: 2

Course Status: Draft - Course Pending Approval

Grade Level(s): 9,10,11,12

Graduation Requirement: Performing/Fine Arts

Music Ensemble 1 (#1305400) 2022 - And Beyond

Course Standards

Name	Description
MU.912.C.1.1:	Apply listening strategies to promote appreciation and understanding of unfamiliar musical works. **Clarifications:** e.g., listening maps, active listening, checklists
MU.912.C.2.1:	Evaluate and make appropriate adjustments to personal performance in solo and ensembles.
MU.912.C.2.2:	Evaluate performance quality in recorded and/or live performances.
MU.912.C.3.1:	Make critical evaluations, based on exemplary models, of the quality and effectiveness of performances and apply the criteria to personal development in music.
MU.912.F.3.2:	Summarize copyright laws that govern printed, recorded, and on-line music to promote legal and responsible use of intellectual property and technology.
MU.912.H.1.5:	Analyze music within cultures to gain understanding of authentic performance practices.
MU.912.H.2.4:	Examine the effects of developing technology on composition, performance, and acquisition of music.
MU.912.O.3.2:	Interpret and perform expressive elements indicated by the musical score and/or conductor.
MU.912.S.1.3:	Arrange a musical work by manipulating two or more aspects of the composition. **Clarifications:** e.g., texture, mode, form, tempo, voicing
MU.912.S.2.2:	Transfer expressive elements and performance techniques from one piece of music to another.
MU.912.S.3.1:	Synthesize a broad range of musical skills by performing a varied repertoire with expression, appropriate stylistic interpretation, technical accuracy, and kinesthetic energy.
MU.912.S.3.2:	Sight-read music accurately and expressively to show synthesis of skills. **Clarifications:** e.g., musical elements, expressive qualities, performance technique
MU.912.S.3.5:	Develop and demonstrate proper vocal or instrumental technique. **Clarifications:** e.g., posture, breathing, fingering, embouchure, bow technique, tuning, strumming
MA.K12.MTR.1.1:	Mathematicians who participate in effortful learning both individually and with others: • Analyze the problem in a way that makes sense given the task. • Ask questions that will help with solving the task. • Build perseverance by modifying methods as needed while solving a challenging task. • Stay engaged and maintain a positive mindset when working to solve tasks. • Help and support each other when attempting a new method or approach. **Clarifications:** Teachers who encourage students to participate actively in effortful learning both individually and with others: • Cultivate a community of growth mindset learners. • Foster perseverance in students by choosing tasks that are challenging. • Develop students' ability to analyze and problem solve. • Recognize students' effort when solving challenging problems.
MA.K12.MTR.2.1:	Demonstrate understanding by representing problems in multiple ways. Mathematicians who demonstrate understanding by representing problems in multiple ways: • Build understanding through modeling and using manipulatives. • Represent solutions to problems in multiple ways using objects, drawings, tables, graphs and equations. • Progress from modeling problems with objects and drawings to using algorithms and equations. • Express connections between concepts and representations. • Choose a representation based on the given context or purpose. **Clarifications:** Teachers who encourage students to demonstrate understanding by representing problems in multiple ways: • Help students make connections between concepts and representations. • Provide opportunities for students to use manipulatives when investigating concepts. • Guide students from concrete to pictorial to abstract representations as understanding progresses. • Show students that various representations can have different purposes and can be useful in different situations.
MA.K12.MTR.3.1:	Complete tasks with mathematical fluency. Mathematicians who complete tasks with mathematical fluency: • Select efficient and appropriate methods for solving problems within the given context. • Maintain flexibility and accuracy while performing procedures and mental calculations. • Complete tasks accurately and with confidence. • Adapt procedures to apply them to a new context. • Use feedback to improve efficiency when performing calculations. **Clarifications:**

Teachers who encourage students to complete tasks with mathematical fluency:

- Provide students with the flexibility to solve problems by selecting a procedure that allows them to solve efficiently and accurately.
- Offer multiple opportunities for students to practice efficient and generalizable methods.
- Provide opportunities for students to reflect on the method they used and determine if a more efficient method could have been used.

MA.K12.MTR.4.1:

Engage in discussions that reflect on the mathematical thinking of self and others.
Mathematicians who engage in discussions that reflect on the mathematical thinking of self and others:

- Communicate mathematical ideas, vocabulary and methods effectively.
- Analyze the mathematical thinking of others.
- Compare the efficiency of a method to those expressed by others.
- Recognize errors and suggest how to correctly solve the task.
- Justify results by explaining methods and processes.
- Construct possible arguments based on evidence.

Clarifications:
Teachers who encourage students to engage in discussions that reflect on the mathematical thinking of self and others:

- Establish a culture in which students ask questions of the teacher and their peers, and error is an opportunity for learning.
- Create opportunities for students to discuss their thinking with peers.
- Select, sequence and present student work to advance and deepen understanding of correct and increasingly efficient methods.
- Develop students' ability to justify methods and compare their responses to the responses of their peers.

MA.K12.MTR.5.1:

Use patterns and structure to help understand and connect mathematical concepts.
Mathematicians who use patterns and structure to help understand and connect mathematical concepts:

- Focus on relevant details within a problem.
- Create plans and procedures to logically order events, steps or ideas to solve problems.
- Decompose a complex problem into manageable parts.
- Relate previously learned concepts to new concepts.
- Look for similarities among problems.
- Connect solutions of problems to more complicated large-scale situations.

Clarifications:
Teachers who encourage students to use patterns and structure to help understand and connect mathematical concepts:

- Help students recognize the patterns in the world around them and connect these patterns to mathematical concepts.
- Support students to develop generalizations based on the similarities found among problems.
- Provide opportunities for students to create plans and procedures to solve problems.
- Develop students' ability to construct relationships between their current understanding and more sophisticated ways of thinking.

MA.K12.MTR.6.1:

Assess the reasonableness of solutions.
Mathematicians who assess the reasonableness of solutions:

- Estimate to discover possible solutions.
- Use benchmark quantities to determine if a solution makes sense.
- Check calculations when solving problems.
- Verify possible solutions by explaining the methods used.
- Evaluate results based on the given context.

Clarifications:
Teachers who encourage students to assess the reasonableness of solutions:

- Have students estimate or predict solutions prior to solving.
- Prompt students to continually ask, "Does this solution make sense? How do you know?"
- Reinforce that students check their work as they progress within and after a task.
- Strengthen students' ability to verify solutions through justifications.

MA.K12.MTR.7.1:

Apply mathematics to real-world contexts.
Mathematicians who apply mathematics to real-world contexts:

- Connect mathematical concepts to everyday experiences.
- Use models and methods to understand, represent and solve problems.
- Perform investigations to gather data or determine if a method is appropriate. • Redesign models and methods to improve accuracy or efficiency.

Clarifications:
Teachers who encourage students to apply mathematics to real-world contexts:

- Provide opportunities for students to create models, both concrete and abstract, and perform investigations.
- Challenge students to question the accuracy of their models and methods.
- Support students as they validate conclusions by comparing them to the given situation.
- Indicate how various concepts can be applied to other disciplines.

ELA.K12.EE.1.1:

Cite evidence to explain and justify reasoning.

Clarifications:
K-1 Students include textual evidence in their oral communication with guidance and support from adults. The evidence can consist of details from the text without naming the text. During 1st grade, students learn how to incorporate the evidence in their writing.
2-3 Students include relevant textual evidence in their written and oral communication. Students should name the text when they refer to it. In 3rd grade, students should use a combination of direct and indirect citations.

4-5 Students continue with previous skills and reference comments made by speakers and peers. Students cite texts that they've directly quoted, paraphrased, or used for information. When writing, students will use the form of citation dictated by the instructor or the style guide referenced by the instructor.

	6-8 Students continue with previous skills and use a style guide to create a proper citation. 9-12 Students continue with previous skills and should be aware of existing style guides and the ways in which they differ.
ELA.K12.EE.2.1:	Read and comprehend grade-level complex texts proficiently. **Clarifications:** See Text Complexity for grade-level complexity bands and a text complexity rubric.
ELA.K12.EE.3.1:	Make inferences to support comprehension. **Clarifications:** Students will make inferences before the words infer or inference are introduced. Kindergarten students will answer questions like "Why is the girl smiling?" or make predictions about what will happen based on the title page. Students will use the terms and apply them in 2nd grade and beyond.
ELA.K12.EE.4.1:	Use appropriate collaborative techniques and active listening skills when engaging in discussions in a variety of situations. **Clarifications:** In kindergarten, students learn to listen to one another respectfully. In grades 1-2, students build upon these skills by justifying what they are thinking. For example: "I think _____ because _____." The collaborative conversations are becoming academic conversations. In grades 3-12, students engage in academic conversations discussing claims and justifying their reasoning, refining and applying skills. Students build on ideas, propel the conversation, and support claims and counterclaims with evidence.
ELA.K12.EE.5.1:	Use the accepted rules governing a specific format to create quality work. **Clarifications:** Students will incorporate skills learned into work products to produce quality work. For students to incorporate these skills appropriately, they must receive instruction. A 3rd grade student creating a poster board display must have instruction in how to effectively present information to do quality work.
ELA.K12.EE.6.1:	Use appropriate voice and tone when speaking or writing. **Clarifications:** In kindergarten and 1st grade, students learn the difference between formal and informal language. For example, the way we talk to our friends differs from the way we speak to adults. In 2nd grade and beyond, students practice appropriate social and academic language to discuss texts.
DA.912.F.3.8:	Demonstrate effective teamwork and accountability, using compromise, collaboration, and conflict resolution, to set and achieve goals as required in the work environment.
DA.912.S.2.1:	Sustain focused attention, respect, and discipline during class, rehearsal, and performance.
ELD.K12.ELL.SI.1:	English language learners communicate for social and instructional purposes within the school setting.

General Course Information and Notes

VERSION DESCRIPTION

Students with little or no experience in a vocal or instrumental ensemble develop basic musicianship and ensemble performance skills through the study of basic, high-quality music in diverse styles. Student musicians focus on building foundational music techniques, music literacy, listening skills, and aesthetic awareness. Public performances may serve as a culmination of specific instructional goals. Students may be required to attend and/or participate in rehearsals and performances outside the school day to support, extend, and assess learning in the classroom. This course, if used for an instrumental ensemble, may also require students to obtain a musical instrument (e.g., borrow, rent, purchase) from an outside source.

GENERAL NOTES

Florida's Benchmarks for Excellent Student Thinking (B.E.S.T.) Standards
This course includes Florida's B.E.S.T. ELA Expectations (EE) and Mathematical Thinking and Reasoning Standards (MTRs) for students. Florida educators should intentionally embed these standards within the content and their instruction as applicable. For guidance on the implementation of the EEs and MTRs, please visit cpalms.org/Standards/BEST_Standards.aspx and select the appropriate B.E.S.T. Standards package.

English Language Development ELD Standards Special Notes Section:
Teachers are required to provide listening, speaking, reading and writing instruction that allows English language learners (ELL) to communicate for social and instructional purposes within the school setting. For the given level of English language proficiency and with visual, graphic, or interactive support, students will interact with grade level words, expressions, sentences and discourse to process or produce language necessary for academic success. The ELD standard should specify a relevant content area concept or topic of study chosen by curriculum developers and teachers which maximizes an ELL's need for communication and social skills. To access an ELL supporting document which delineates performance definitions and descriptors, please click on the following link: cpalms.org/uploads/docs/standards/eld/SI.pdf

GENERAL INFORMATION

Course Number: 1305400

Course Path: Section: Grades PreK to 12 Education Courses > **Grade Group:** Grades 9 to 12 and Adult Education Courses > **Subject:** Music Education > **SubSubject:** General Music >
Abbreviated Title: MUSIC ENS 1

Number of Credits: One (1) credit
Course Length: Year (Y)
Course Type: Core Academic Course
Course Level: 2
Course Status: Draft - Course Pending Approval
Grade Level(s): 9,10,11,12
Graduation Requirement: Performing/Fine Arts

Educator Certifications

Music (Elementary and Secondary Grades K-12)
Vocal Music (Elementary and Secondary Grades K-12)
Instrumental Music (Secondary Grades 7-12)
Instrumental Music (Elementary and Secondary Grades K-12)

Music Ensemble 2 (#1305410) 2022 - And Beyond

Course Standards

Name	Description
MU.912.C.1.1:	Apply listening strategies to promote appreciation and understanding of unfamiliar musical works. **Clarifications:** e.g., listening maps, active listening, checklists
MU.912.C.2.1:	Evaluate and make appropriate adjustments to personal performance in solo and ensembles.
MU.912.C.2.2:	Evaluate performance quality in recorded and/or live performances.
MU.912.C.3.1:	Make critical evaluations, based on exemplary models, of the quality and effectiveness of performances and apply the criteria to personal development in music.
MU.912.F.3.2:	Summarize copyright laws that govern printed, recorded, and on-line music to promote legal and responsible use of intellectual property and technology.
MU.912.H.1.5:	Analyze music within cultures to gain understanding of authentic performance practices.
MU.912.H.2.4:	Examine the effects of developing technology on composition, performance, and acquisition of music.
MU.912.O.1.1:	Evaluate the organizational principles and conventions in musical works and discuss their effect on structure. **Clarifications:** e.g., rhythm, melody, timbre, form, tonality, harmony, texture; solo, chamber ensemble, large ensemble
MU.912.O.3.1:	Analyze expressive elements in a musical work and describe how the choices and manipulations of the elements support, for the listener, the implied meaning of the composer/performer. **Clarifications:** e.g., tempo markings, expression markings, articulation markings, phrasing, scales, modes, harmonic structure, timbre choice, rhythm, orchestration
MU.912.O.3.2:	Interpret and perform expressive elements indicated by the musical score and/or conductor.
MU.912.S.1.3:	Arrange a musical work by manipulating two or more aspects of the composition. **Clarifications:** e.g., texture, mode, form, tempo, voicing
MU.912.S.2.1:	Apply the ability to memorize and internalize musical structure, accurate and expressive details, and processing skills to the creation or performance of music literature. **Clarifications:** e.g., memorization, sequential process
MU.912.S.2.2:	Transfer expressive elements and performance techniques from one piece of music to another.
MU.912.S.3.1:	Synthesize a broad range of musical skills by performing a varied repertoire with expression, appropriate stylistic interpretation, technical accuracy, and kinesthetic energy.
MU.912.S.3.2:	Sight-read music accurately and expressively to show synthesis of skills. **Clarifications:** e.g., musical elements, expressive qualities, performance technique
MU.912.S.3.5:	Develop and demonstrate proper vocal or instrumental technique. **Clarifications:** e.g., posture, breathing, fingering, embouchure, bow technique, tuning, strumming
MA.K12.MTR.1.1:	Mathematicians who participate in effortful learning both individually and with others: • Analyze the problem in a way that makes sense given the task. • Ask questions that will help with solving the task. • Build perseverance by modifying methods as needed while solving a challenging task. • Stay engaged and maintain a positive mindset when working to solve tasks. • Help and support each other when attempting a new method or approach. **Clarifications:** Teachers who encourage students to participate actively in effortful learning both individually and with others: • Cultivate a community of growth mindset learners. • Foster perseverance in students by choosing tasks that are challenging. • Develop students' ability to analyze and problem solve. • Recognize students' effort when solving challenging problems.
MA.K12.MTR.2.1:	Demonstrate understanding by representing problems in multiple ways. Mathematicians who demonstrate understanding by representing problems in multiple ways: • Build understanding through modeling and using manipulatives. • Represent solutions to problems in multiple ways using objects, drawings, tables, graphs and equations. • Progress from modeling problems with objects and drawings to using algorithms and equations. • Express connections between concepts and representations. • Choose a representation based on the given context or purpose. **Clarifications:** Teachers who encourage students to demonstrate understanding by representing problems in multiple ways:

- Help students make connections between concepts and representations.
- Provide opportunities for students to use manipulatives when investigating concepts.
- Guide students from concrete to pictorial to abstract representations as understanding progresses.
- Show students that various representations can have different purposes and can be useful in different situations.

MA.K12.MTR.3.1:

Complete tasks with mathematical fluency.
Mathematicians who complete tasks with mathematical fluency:

- Select efficient and appropriate methods for solving problems within the given context.
- Maintain flexibility and accuracy while performing procedures and mental calculations.
- Complete tasks accurately and with confidence.
- Adapt procedures to apply them to a new context.
- Use feedback to improve efficiency when performing calculations.

Clarifications:
Teachers who encourage students to complete tasks with mathematical fluency:

- Provide students with the flexibility to solve problems by selecting a procedure that allows them to solve efficiently and accurately.
- Offer multiple opportunities for students to practice efficient and generalizable methods.
- Provide opportunities for students to reflect on the method they used and determine if a more efficient method could have been used.

MA.K12.MTR.4.1:

Engage in discussions that reflect on the mathematical thinking of self and others.
Mathematicians who engage in discussions that reflect on the mathematical thinking of self and others:

- Communicate mathematical ideas, vocabulary and methods effectively.
- Analyze the mathematical thinking of others.
- Compare the efficiency of a method to those expressed by others.
- Recognize errors and suggest how to correctly solve the task.
- Justify results by explaining methods and processes.
- Construct possible arguments based on evidence.

Clarifications:
Teachers who encourage students to engage in discussions that reflect on the mathematical thinking of self and others:

- Establish a culture in which students ask questions of the teacher and their peers, and error is an opportunity for learning.
- Create opportunities for students to discuss their thinking with peers.
- Select, sequence and present student work to advance and deepen understanding of correct and increasingly efficient methods.
- Develop students' ability to justify methods and compare their responses to the responses of their peers.

MA.K12.MTR.5.1:

Use patterns and structure to help understand and connect mathematical concepts.
Mathematicians who use patterns and structure to help understand and connect mathematical concepts:

- Focus on relevant details within a problem.
- Create plans and procedures to logically order events, steps or ideas to solve problems.
- Decompose a complex problem into manageable parts.
- Relate previously learned concepts to new concepts.
- Look for similarities among problems.
- Connect solutions of problems to more complicated large-scale situations.

Clarifications:
Teachers who encourage students to use patterns and structure to help understand and connect mathematical concepts:

- Help students recognize the patterns in the world around them and connect these patterns to mathematical concepts.
- Support students to develop generalizations based on the similarities found among problems.
- Provide opportunities for students to create plans and procedures to solve problems.
- Develop students' ability to construct relationships between their current understanding and more sophisticated ways of thinking.

MA.K12.MTR.6.1:

Assess the reasonableness of solutions.
Mathematicians who assess the reasonableness of solutions:

- Estimate to discover possible solutions.
- Use benchmark quantities to determine if a solution makes sense.
- Check calculations when solving problems.
- Verify possible solutions by explaining the methods used.
- Evaluate results based on the given context.

Clarifications:
Teachers who encourage students to assess the reasonableness of solutions:

- Have students estimate or predict solutions prior to solving.
- Prompt students to continually ask, "Does this solution make sense? How do you know?"
- Reinforce that students check their work as they progress within and after a task.
- Strengthen students' ability to verify solutions through justifications.

MA.K12.MTR.7.1:

Apply mathematics to real-world contexts.
Mathematicians who apply mathematics to real-world contexts:

- Connect mathematical concepts to everyday experiences.
- Use models and methods to understand, represent and solve problems.
- Perform investigations to gather data or determine if a method is appropriate. • Redesign models and methods to improve accuracy or efficiency.

Clarifications:
Teachers who encourage students to apply mathematics to real-world contexts:

- Provide opportunities for students to create models, both concrete and abstract, and perform investigations.

	• Challenge students to question the accuracy of their models and methods. • Support students as they validate conclusions by comparing them to the given situation. • Indicate how various concepts can be applied to other disciplines.
ELA.K12.EE.1.1:	Cite evidence to explain and justify reasoning. **Clarifications:** K-1 Students include textual evidence in their oral communication with guidance and support from adults. The evidence can consist of details from the text without naming the text. During 1st grade, students learn how to incorporate the evidence in their writing. 2-3 Students include relevant textual evidence in their written and oral communication. Students should name the text when they refer to it. In 3rd grade, students should use a combination of direct and indirect citations. 4-5 Students continue with previous skills and reference comments made by speakers and peers. Students cite texts that they've directly quoted, paraphrased, or used for information. When writing, students will use the form of citation dictated by the instructor or the style guide referenced by the instructor. 6-8 Students continue with previous skills and use a style guide to create a proper citation. 9-12 Students continue with previous skills and should be aware of existing style guides and the ways in which they differ.
ELA.K12.EE.2.1:	Read and comprehend grade-level complex texts proficiently. **Clarifications:** See Text Complexity for grade-level complexity bands and a text complexity rubric.
ELA.K12.EE.3.1:	Make inferences to support comprehension. **Clarifications:** Students will make inferences before the words infer or inference are introduced. Kindergarten students will answer questions like "Why is the girl smiling?" or make predictions about what will happen based on the title page. Students will use the terms and apply them in 2nd grade and beyond.
ELA.K12.EE.4.1:	Use appropriate collaborative techniques and active listening skills when engaging in discussions in a variety of situations. **Clarifications:** In kindergarten, students learn to listen to one another respectfully. In grades 1-2, students build upon these skills by justifying what they are thinking. For example: "I think _____ because _____." The collaborative conversations are becoming academic conversations. In grades 3-12, students engage in academic conversations discussing claims and justifying their reasoning, refining and applying skills. Students build on ideas, propel the conversation, and support claims and counterclaims with evidence.
ELA.K12.EE.5.1:	Use the accepted rules governing a specific format to create quality work. **Clarifications:** Students will incorporate skills learned into work products to produce quality work. For students to incorporate these skills appropriately, they must receive instruction. A 3rd grade student creating a poster board display must have instruction in how to effectively present information to do quality work.
ELA.K12.EE.6.1:	Use appropriate voice and tone when speaking or writing. **Clarifications:** In kindergarten and 1st grade, students learn the difference between formal and informal language. For example, the way we talk to our friends differs from the way we speak to adults. In 2nd grade and beyond, students practice appropriate social and academic language to discuss texts.
DA.912.S.2.1:	Sustain focused attention, respect, and discipline during class, rehearsal, and performance.
DA.912.S.3.8:	Articulate and apply a stylistically appropriate sense of line to enhance artistry in one or more dance forms. **Clarifications:** e.g., arabesque, lateral T, jazz hands
ELD.K12.ELL.SI.1:	English language learners communicate for social and instructional purposes within the school setting.

General Course Information and Notes

VERSION DESCRIPTION

Students with previous vocal or instrumental ensemble experience continue building musicianship and performance skills through the study of high-quality music in diverse styles. Student musicians learn to self-assess and collaborate as they rehearse, perform, and study relevant musical styles and time periods. Public performances may serve as a culmination of specific instructional goals. Students may be required to attend and/or participate in rehearsals and performances outside the school day to support, extend, and assess learning in the classroom. This course, if used for an instrumental ensemble, may also require students to obtain a musical instrument (e.g., borrow, rent, purchase) from an outside source.

GENERAL NOTES

Florida's Benchmarks for Excellent Student Thinking (B.E.S.T.) Standards
This course includes Florida's B.E.S.T. ELA Expectations (EE) and Mathematical Thinking and Reasoning Standards (MTRs) for students. Florida educators should intentionally embed these standards within the content and their instruction as applicable. For guidance on the implementation of the EEs and MTRs, please visit cpalms.org/Standards/BEST_Standards.aspx and select the appropriate B.E.S.T. Standards package.

English Language Development ELD Standards Special Notes Section:

Teachers are required to provide listening, speaking, reading and writing instruction that allows English language learners (ELL) to communicate for social and instructional purposes within the school setting. For the given level of English language proficiency and with visual, graphic, or interactive support, students will interact with grade level words, expressions, sentences and discourse to process or produce language necessary for academic success. The ELD standard should specify a relevant content area concept or topic of study chosen by curriculum developers and teachers which maximizes an ELL's need for communication and social skills. To access an ELL supporting document which delineates performance definitions and descriptors, please click on the following link: cpalms.org/uploads/docs/standards/eld/SI.pdf

GENERAL INFORMATION

Course Number: 1305410

Course Path: Section: Grades PreK to 12 Education Courses > **Grade Group:** Grades 9 to 12 and Adult Education Courses > **Subject:** Music Education > **SubSubject:** General Music >

Abbreviated Title: MUSIC ENS 2

Number of Credits: One (1) credit

Course Length: Year (Y)

Course Type: Core Academic Course

Course Level: 2

Course Status: Draft - Course Pending Approval

Grade Level(s): 9,10,11,12

Graduation Requirement: Performing/Fine Arts

Educator Certifications

Music (Elementary and Secondary Grades K-12)
Vocal Music (Elementary and Secondary Grades K-12)
Instrumental Music (Secondary Grades 7-12)
Instrumental Music (Elementary and Secondary Grades K-12)

Music Ensemble 3 (#1305420) 2022 - And Beyond

Course Standards

Name	Description
MU.912.C.1.1:	Apply listening strategies to promote appreciation and understanding of unfamiliar musical works. **Clarifications:** e.g., listening maps, active listening, checklists
MU.912.C.1.2:	Compare, using correct music vocabulary, the aesthetic impact of two or more performances of a musical work to one's own hypothesis of the composer's intent. **Clarifications:** e.g., quality recordings, individual and peer-group performances, composer notes, instrumentation, expressive elements, title
MU.912.C.2.1:	Evaluate and make appropriate adjustments to personal performance in solo and ensembles.
MU.912.C.2.2:	Evaluate performance quality in recorded and/or live performances.
MU.912.C.3.1:	Make critical evaluations, based on exemplary models, of the quality and effectiveness of performances and apply the criteria to personal development in music.
MU.912.F.2.1:	Design or refine a résumé for application to higher education or the workforce that highlights marketable skills and knowledge gained through music training. **Clarifications:** e.g., repertoire lists, technology-based work, ability to research and analyze, and examples of leadership and collaborative skills
MU.912.F.2.3:	Compare the organizational structure of a professional orchestra, chorus, quintet, or other ensemble to that of a business. **Clarifications:** e.g., leadership, financial needs and structure, marketing, personnel matters, manager, travel
MU.912.F.3.1:	Analyze and describe how meeting one's responsibilities in music offers opportunities to develop leadership skills, and identify personal examples of leadership in school and/or non-school settings.
MU.912.F.3.2:	Summarize copyright laws that govern printed, recorded, and on-line music to promote legal and responsible use of intellectual property and technology.
MU.912.F.3.3:	Define, prioritize, monitor, and successfully complete tasks related to individual musical performance or project presentation, without direct oversight, demonstrating skills for use in the workplace.
MU.912.H.1.3:	Compare two or more works of a composer across performance media. **Clarifications:** e.g., orchestral and choral; guitar and string quartet; piano solo and piano concerto
MU.912.H.1.5:	Analyze music within cultures to gain understanding of authentic performance practices.
MU.912.H.2.4:	Examine the effects of developing technology on composition, performance, and acquisition of music.
MU.912.O.1.1:	Evaluate the organizational principles and conventions in musical works and discuss their effect on structure. **Clarifications:** e.g., rhythm, melody, timbre, form, tonality, harmony, texture; solo, chamber ensemble, large ensemble
MU.912.O.2.1:	Transfer accepted composition conventions and performance practices of a specific style to a contrasting style of music.
MU.912.O.3.1:	Analyze expressive elements in a musical work and describe how the choices and manipulations of the elements support, for the listener, the implied meaning of the composer/performer. **Clarifications:** e.g., tempo markings, expression markings, articulation markings, phrasing, scales, modes, harmonic structure, timbre choice, rhythm, orchestration
MU.912.O.3.2:	Interpret and perform expressive elements indicated by the musical score and/or conductor.
MU.912.S.1.3:	Arrange a musical work by manipulating two or more aspects of the composition. **Clarifications:** e.g., texture, mode, form, tempo, voicing
MU.912.S.1.4:	Perform and notate, independently and accurately, melodies by ear. **Clarifications:** e.g., singing, playing, writing
MU.912.S.2.1:	Apply the ability to memorize and internalize musical structure, accurate and expressive details, and processing skills to the creation or performance of music literature. **Clarifications:** e.g., memorization, sequential process
MU.912.S.2.2:	Transfer expressive elements and performance techniques from one piece of music to another.
MU.912.S.3.1:	Synthesize a broad range of musical skills by performing a varied repertoire with expression, appropriate stylistic interpretation, technical accuracy, and kinesthetic energy.
MU.912.S.3.2:	Sight-read music accurately and expressively to show synthesis of skills. **Clarifications:** e.g., musical elements, expressive qualities, performance technique
MU.912.S.3.4:	Analyze and describe the effect of rehearsal sessions and/or strategies on refinement of skills and techniques.

	Develop and demonstrate proper vocal or instrumental technique.
MU.912.S.3.5:	**Clarifications:** e.g., posture, breathing, fingering, embouchure, bow technique, tuning, strumming
MA.K12.MTR.1.1:	Mathematicians who participate in effortful learning both individually and with others: • Analyze the problem in a way that makes sense given the task. • Ask questions that will help with solving the task. • Build perseverance by modifying methods as needed while solving a challenging task. • Stay engaged and maintain a positive mindset when working to solve tasks. • Help and support each other when attempting a new method or approach. **Clarifications:** Teachers who encourage students to participate actively in effortful learning both individually and with others: • Cultivate a community of growth mindset learners. • Foster perseverance in students by choosing tasks that are challenging. • Develop students' ability to analyze and problem solve. • Recognize students' effort when solving challenging problems.
MA.K12.MTR.2.1:	Demonstrate understanding by representing problems in multiple ways. Mathematicians who demonstrate understanding by representing problems in multiple ways: • Build understanding through modeling and using manipulatives. • Represent solutions to problems in multiple ways using objects, drawings, tables, graphs and equations. • Progress from modeling problems with objects and drawings to using algorithms and equations. • Express connections between concepts and representations. • Choose a representation based on the given context or purpose. **Clarifications:** Teachers who encourage students to demonstrate understanding by representing problems in multiple ways: • Help students make connections between concepts and representations. • Provide opportunities for students to use manipulatives when investigating concepts. • Guide students from concrete to pictorial to abstract representations as understanding progresses. • Show students that various representations can have different purposes and can be useful in different situations.
MA.K12.MTR.3.1:	Complete tasks with mathematical fluency. Mathematicians who complete tasks with mathematical fluency: • Select efficient and appropriate methods for solving problems within the given context. • Maintain flexibility and accuracy while performing procedures and mental calculations. • Complete tasks accurately and with confidence. • Adapt procedures to apply them to a new context. • Use feedback to improve efficiency when performing calculations. **Clarifications:** Teachers who encourage students to complete tasks with mathematical fluency: • Provide students with the flexibility to solve problems by selecting a procedure that allows them to solve efficiently and accurately. • Offer multiple opportunities for students to practice efficient and generalizable methods. • Provide opportunities for students to reflect on the method they used and determine if a more efficient method could have been used.
MA.K12.MTR.4.1:	Engage in discussions that reflect on the mathematical thinking of self and others. Mathematicians who engage in discussions that reflect on the mathematical thinking of self and others: • Communicate mathematical ideas, vocabulary and methods effectively. • Analyze the mathematical thinking of others. • Compare the efficiency of a method to those expressed by others. • Recognize errors and suggest how to correctly solve the task. • Justify results by explaining methods and processes. • Construct possible arguments based on evidence. **Clarifications:** Teachers who encourage students to engage in discussions that reflect on the mathematical thinking of self and others: • Establish a culture in which students ask questions of the teacher and their peers, and error is an opportunity for learning. • Create opportunities for students to discuss their thinking with peers. • Select, sequence and present student work to advance and deepen understanding of correct and increasingly efficient methods. • Develop students' ability to justify methods and compare their responses to the responses of their peers.
MA.K12.MTR.5.1:	Use patterns and structure to help understand and connect mathematical concepts. Mathematicians who use patterns and structure to help understand and connect mathematical concepts: • Focus on relevant details within a problem. • Create plans and procedures to logically order events, steps or ideas to solve problems. • Decompose a complex problem into manageable parts. • Relate previously learned concepts to new concepts. • Look for similarities among problems. • Connect solutions of problems to more complicated large-scale situations. **Clarifications:** Teachers who encourage students to use patterns and structure to help understand and connect mathematical concepts: • Help students recognize the patterns in the world around them and connect these patterns to mathematical concepts. • Support students to develop generalizations based on the similarities found among problems.

	• Provide opportunities for students to create plans and procedures to solve problems. • Develop students' ability to construct relationships between their current understanding and more sophisticated ways of thinking.
MA.K12.MTR.6.1:	Assess the reasonableness of solutions. Mathematicians who assess the reasonableness of solutions: • Estimate to discover possible solutions. • Use benchmark quantities to determine if a solution makes sense. • Check calculations when solving problems. • Verify possible solutions by explaining the methods used. • Evaluate results based on the given context. **Clarifications:** Teachers who encourage students to assess the reasonableness of solutions: • Have students estimate or predict solutions prior to solving. • Prompt students to continually ask, "Does this solution make sense? How do you know?" • Reinforce that students check their work as they progress within and after a task. • Strengthen students' ability to verify solutions through justifications.
MA.K12.MTR.7.1:	Apply mathematics to real-world contexts. Mathematicians who apply mathematics to real-world contexts: • Connect mathematical concepts to everyday experiences. • Use models and methods to understand, represent and solve problems. • Perform investigations to gather data or determine if a method is appropriate. • Redesign models and methods to improve accuracy or efficiency. **Clarifications:** Teachers who encourage students to apply mathematics to real-world contexts: • Provide opportunities for students to create models, both concrete and abstract, and perform investigations. • Challenge students to question the accuracy of their models and methods. • Support students as they validate conclusions by comparing them to the given situation. • Indicate how various concepts can be applied to other disciplines.
ELA.K12.EE.1.1:	Cite evidence to explain and justify reasoning. **Clarifications:** K-1 Students include textual evidence in their oral communication with guidance and support from adults. The evidence can consist of details from the text without naming the text. During 1st grade, students learn how to incorporate the evidence in their writing. 2-3 Students include relevant textual evidence in their written and oral communication. Students should name the text when they refer to it. In 3rd grade, students should use a combination of direct and indirect citations. 4-5 Students continue with previous skills and reference comments made by speakers and peers. Students cite texts that they've directly quoted, paraphrased, or used for information. When writing, students will use the form of citation dictated by the instructor or the style guide referenced by the instructor. 6-8 Students continue with previous skills and use a style guide to create a proper citation. 9-12 Students continue with previous skills and should be aware of existing style guides and the ways in which they differ.
ELA.K12.EE.2.1:	Read and comprehend grade-level complex texts proficiently. **Clarifications:** See Text Complexity for grade-level complexity bands and a text complexity rubric.
ELA.K12.EE.3.1:	Make inferences to support comprehension. **Clarifications:** Students will make inferences before the words infer or inference are introduced. Kindergarten students will answer questions like "Why is the girl smiling?" or make predictions about what will happen based on the title page. Students will use the terms and apply them in 2nd grade and beyond.
ELA.K12.EE.4.1:	Use appropriate collaborative techniques and active listening skills when engaging in discussions in a variety of situations. **Clarifications:** In kindergarten, students learn to listen to one another respectfully. In grades 1-2, students build upon these skills by justifying what they are thinking. For example: "I think _____ because _____." The collaborative conversations are becoming academic conversations. In grades 3-12, students engage in academic conversations discussing claims and justifying their reasoning, refining and applying skills. Students build on ideas, propel the conversation, and support claims and counterclaims with evidence.
ELA.K12.EE.5.1:	Use the accepted rules governing a specific format to create quality work. **Clarifications:** Students will incorporate skills learned into work products to produce quality work. For students to incorporate these skills appropriately, they must receive instruction. A 3rd grade student creating a poster board display must have instruction in how to effectively present information to do quality work.
ELA.K12.EE.6.1:	Use appropriate voice and tone when speaking or writing. **Clarifications:** In kindergarten and 1st grade, students learn the difference between formal and informal language. For example, the way we talk to our friends differs from the way we speak to adults. In 2nd grade and beyond, students practice appropriate social and academic language to discuss texts.
DA.912.F.3.8:	Demonstrate effective teamwork and accountability, using compromise, collaboration, and conflict resolution, to set and achieve goals as required in the work environment.
DA.912.S.2.1:	Sustain focused attention, respect, and discipline during class, rehearsal, and performance.

General Course Information and Notes

VERSION DESCRIPTION

Students strengthen vocal or instrumental ensemble performance skills, music literacy, and analytical skills through the study of high-quality music in diverse styles. Student musicians learn to self-assess and collaborate as they rehearse, perform, and study relevant history and cultures. Public performances may serve as a culmination of specific instructional goals. Students may be required to attend and/or participate in rehearsals and performances outside the school day to support, extend, and assess learning in the classroom. This course, if used for an instrumental ensemble, may also require students to obtain a musical instrument (e.g., borrow, rent, purchase) from an outside source.

GENERAL NOTES

Florida's Benchmarks for Excellent Student Thinking (B.E.S.T.) Standards
This course includes Florida's B.E.S.T. ELA Expectations (EE) and Mathematical Thinking and Reasoning Standards (MTRs) for students. Florida educators should intentionally embed these standards within the content and their instruction as applicable. For guidance on the implementation of the EEs and MTRs, please visit cpalms.org/Standards/BEST_Standards.aspx and select the appropriate B.E.S.T. Standards package.

English Language Development ELD Standards Special Notes Section:
Teachers are required to provide listening, speaking, reading and writing instruction that allows English language learners (ELL) to communicate for social and instructional purposes within the school setting. For the given level of English language proficiency and with visual, graphic, or interactive support, students will interact with grade level words, expressions, sentences and discourse to process or produce language necessary for academic success. The ELD standard should specify a relevant content area concept or topic of study chosen by curriculum developers and teachers which maximizes an ELL's need for communication and social skills. To access an ELL supporting document which delineates performance definitions and descriptors, please click on the following link: cpalms.org/uploads/docs/standards/eld/SI.pdf

GENERAL INFORMATION

Course Number: 1305420

Course Path: Section: Grades PreK to 12 Education Courses > **Grade Group:** Grades 9 to 12 and Adult Education Courses > **Subject:** Music Education > **SubSubject:** General Music >

Abbreviated Title: MUSIC ENS 3

Number of Credits: One (1) credit

Course Length: Year (Y)

Course Type: Core Academic Course

Course Level: 2

Course Status: Draft - Course Pending Approval

Grade Level(s): 9,10,11,12

Graduation Requirement: Performing/Fine Arts

Educator Certifications

Music (Elementary and Secondary Grades K-12)
Vocal Music (Elementary and Secondary Grades K-12)
Instrumental Music (Secondary Grades 7-12)
Instrumental Music (Elementary and Secondary Grades K-12)

Music Ensemble 4 Honors (#1305430) 2022 - And Beyond

Course Standards

Name	Description
MU.912.C.1.1:	Apply listening strategies to promote appreciation and understanding of unfamiliar musical works. **Clarifications:** e.g., listening maps, active listening, checklists
MU.912.C.1.2:	Compare, using correct music vocabulary, the aesthetic impact of two or more performances of a musical work to one's own hypothesis of the composer's intent. **Clarifications:** e.g., quality recordings, individual and peer-group performances, composer notes, instrumentation, expressive elements, title
MU.912.C.2.1:	Evaluate and make appropriate adjustments to personal performance in solo and ensembles.
MU.912.C.2.2:	Evaluate performance quality in recorded and/or live performances.
MU.912.C.3.1:	Make critical evaluations, based on exemplary models, of the quality and effectiveness of performances and apply the criteria to personal development in music.
MU.912.F.1.1:	Analyze and evaluate the effect of "traditional" and contemporary technologies on the development of music.
MU.912.F.2.1:	Design or refine a résumé for application to higher education or the workforce that highlights marketable skills and knowledge gained through music training. **Clarifications:** e.g., repertoire lists, technology-based work, ability to research and analyze, and examples of leadership and collaborative skills
MU.912.F.2.2:	Analyze the effect of the arts and entertainment industry on the economic and social health of communities and regions. **Clarifications:** e.g., community revitalization, industry choosing new locations, cultural and social enrichment
MU.912.F.2.3:	Compare the organizational structure of a professional orchestra, chorus, quintet, or other ensemble to that of a business. **Clarifications:** e.g., leadership, financial needs and structure, marketing, personnel matters, manager, travel
MU.912.F.3.1:	Analyze and describe how meeting one's responsibilities in music offers opportunities to develop leadership skills, and identify personal examples of leadership in school and/or non-school settings.
MU.912.F.3.2:	Summarize copyright laws that govern printed, recorded, and on-line music to promote legal and responsible use of intellectual property and technology.
MU.912.F.3.3:	Define, prioritize, monitor, and successfully complete tasks related to individual musical performance or project presentation, without direct oversight, demonstrating skills for use in the workplace.
MU.912.F.3.4:	Design and implement a personal learning plan, related to the study of music, which demonstrates self-assessment, brain-storming, decision-making, and initiative to advance skills and/or knowledge.
MU.912.H.1.2:	Compare the work of, and influences on, two or more exemplary composers in the performance medium studied in class. **Clarifications:** e.g., vocal, instrumental, guitar, keyboard, electronic, handbells
MU.912.H.1.3:	Compare two or more works of a composer across performance media. **Clarifications:** e.g., orchestral and choral; guitar and string quartet; piano solo and piano concerto
MU.912.H.1.5:	Analyze music within cultures to gain understanding of authentic performance practices.
MU.912.H.2.1:	Evaluate the social impact of music on specific historical periods.
MU.912.H.2.2:	Analyze current musical trends, including audience environments and music acquisition, to predict possible directions of music.
MU.912.H.2.4:	Examine the effects of developing technology on composition, performance, and acquisition of music.
MU.912.O.1.1:	Evaluate the organizational principles and conventions in musical works and discuss their effect on structure. **Clarifications:** e.g., rhythm, melody, timbre, form, tonality, harmony, texture; solo, chamber ensemble, large ensemble
MU.912.O.2.1:	Transfer accepted composition conventions and performance practices of a specific style to a contrasting style of music.
MU.912.O.3.1:	Analyze expressive elements in a musical work and describe how the choices and manipulations of the elements support, for the listener, the implied meaning of the composer/performer. **Clarifications:** e.g., tempo markings, expression markings, articulation markings, phrasing, scales, modes, harmonic structure, timbre choice, rhythm, orchestration
MU.912.O.3.2:	Interpret and perform expressive elements indicated by the musical score and/or conductor.
MU.912.S.1.3:	Arrange a musical work by manipulating two or more aspects of the composition. **Clarifications:** e.g., texture, mode, form, tempo, voicing
MU.912.S.1.4:	Perform and notate, independently and accurately, melodies by ear. **Clarifications:** e.g., singing, playing, writing

MU.912.S.2.1:	Apply the ability to memorize and internalize musical structure, accurate and expressive details, and processing skills to the creation or performance of music literature. **Clarifications:** e.g., memorization, sequential process
MU.912.S.2.2:	Transfer expressive elements and performance techniques from one piece of music to another.
MU.912.S.3.1:	Synthesize a broad range of musical skills by performing a varied repertoire with expression, appropriate stylistic interpretation, technical accuracy, and kinesthetic energy.
MU.912.S.3.2:	Sight-read music accurately and expressively to show synthesis of skills. **Clarifications:** e.g., musical elements, expressive qualities, performance technique
MU.912.S.3.4:	Analyze and describe the effect of rehearsal sessions and/or strategies on refinement of skills and techniques.
MU.912.S.3.5:	Develop and demonstrate proper vocal or instrumental technique. **Clarifications:** e.g., posture, breathing, fingering, embouchure, bow technique, tuning, strumming
MA.K12.MTR.1.1:	Mathematicians who participate in effortful learning both individually and with others: • Analyze the problem in a way that makes sense given the task. • Ask questions that will help with solving the task. • Build perseverance by modifying methods as needed while solving a challenging task. • Stay engaged and maintain a positive mindset when working to solve tasks. • Help and support each other when attempting a new method or approach. **Clarifications:** Teachers who encourage students to participate actively in effortful learning both individually and with others: • Cultivate a community of growth mindset learners. • Foster perseverance in students by choosing tasks that are challenging. • Develop students' ability to analyze and problem solve. • Recognize students' effort when solving challenging problems.
MA.K12.MTR.2.1:	Demonstrate understanding by representing problems in multiple ways. Mathematicians who demonstrate understanding by representing problems in multiple ways: • Build understanding through modeling and using manipulatives. • Represent solutions to problems in multiple ways using objects, drawings, tables, graphs and equations. • Progress from modeling problems with objects and drawings to using algorithms and equations. • Express connections between concepts and representations. • Choose a representation based on the given context or purpose. **Clarifications:** Teachers who encourage students to demonstrate understanding by representing problems in multiple ways: • Help students make connections between concepts and representations. • Provide opportunities for students to use manipulatives when investigating concepts. • Guide students from concrete to pictorial to abstract representations as understanding progresses. • Show students that various representations can have different purposes and can be useful in different situations.
MA.K12.MTR.3.1:	Complete tasks with mathematical fluency. Mathematicians who complete tasks with mathematical fluency: • Select efficient and appropriate methods for solving problems within the given context. • Maintain flexibility and accuracy while performing procedures and mental calculations. • Complete tasks accurately and with confidence. • Adapt procedures to apply them to a new context. • Use feedback to improve efficiency when performing calculations. **Clarifications:** Teachers who encourage students to complete tasks with mathematical fluency: • Provide students with the flexibility to solve problems by selecting a procedure that allows them to solve efficiently and accurately. • Offer multiple opportunities for students to practice efficient and generalizable methods. • Provide opportunities for students to reflect on the method they used and determine if a more efficient method could have been used.
MA.K12.MTR.4.1:	Engage in discussions that reflect on the mathematical thinking of self and others. Mathematicians who engage in discussions that reflect on the mathematical thinking of self and others: • Communicate mathematical ideas, vocabulary and methods effectively. • Analyze the mathematical thinking of others. • Compare the efficiency of a method to those expressed by others. • Recognize errors and suggest how to correctly solve the task. • Justify results by explaining methods and processes. • Construct possible arguments based on evidence. **Clarifications:** Teachers who encourage students to engage in discussions that reflect on the mathematical thinking of self and others: • Establish a culture in which students ask questions of the teacher and their peers, and error is an opportunity for learning. • Create opportunities for students to discuss their thinking with peers. • Select, sequence and present student work to advance and deepen understanding of correct and increasingly efficient methods. • Develop students' ability to justify methods and compare their responses to the responses of their peers.
	Use patterns and structure to help understand and connect mathematical concepts.

MA.K12.MTR.5.1:	Mathematicians who use patterns and structure to help understand and connect mathematical concepts: • Focus on relevant details within a problem. • Create plans and procedures to logically order events, steps or ideas to solve problems. • Decompose a complex problem into manageable parts. • Relate previously learned concepts to new concepts. • Look for similarities among problems. • Connect solutions of problems to more complicated large-scale situations. **Clarifications:** Teachers who encourage students to use patterns and structure to help understand and connect mathematical concepts: • Help students recognize the patterns in the world around them and connect these patterns to mathematical concepts. • Support students to develop generalizations based on the similarities found among problems. • Provide opportunities for students to create plans and procedures to solve problems. • Develop students' ability to construct relationships between their current understanding and more sophisticated ways of thinking.
MA.K12.MTR.6.1:	Assess the reasonableness of solutions. Mathematicians who assess the reasonableness of solutions: • Estimate to discover possible solutions. • Use benchmark quantities to determine if a solution makes sense. • Check calculations when solving problems. • Verify possible solutions by explaining the methods used. • Evaluate results based on the given context. **Clarifications:** Teachers who encourage students to assess the reasonableness of solutions: • Have students estimate or predict solutions prior to solving. • Prompt students to continually ask, "Does this solution make sense? How do you know?" • Reinforce that students check their work as they progress within and after a task. • Strengthen students' ability to verify solutions through justifications.
MA.K12.MTR.7.1:	Apply mathematics to real-world contexts. Mathematicians who apply mathematics to real-world contexts: • Connect mathematical concepts to everyday experiences. • Use models and methods to understand, represent and solve problems. • Perform investigations to gather data or determine if a method is appropriate. • Redesign models and methods to improve accuracy or efficiency. **Clarifications:** Teachers who encourage students to apply mathematics to real-world contexts: • Provide opportunities for students to create models, both concrete and abstract, and perform investigations. • Challenge students to question the accuracy of their models and methods. • Support students as they validate conclusions by comparing them to the given situation. • Indicate how various concepts can be applied to other disciplines.
ELA.K12.EE.1.1:	Cite evidence to explain and justify reasoning. **Clarifications:** K-1 Students include textual evidence in their oral communication with guidance and support from adults. The evidence can consist of details from the text without naming the text. During 1st grade, students learn how to incorporate the evidence in their writing. 2-3 Students include relevant textual evidence in their written and oral communication. Students should name the text when they refer to it. In 3rd grade, students should use a combination of direct and indirect citations. 4-5 Students continue with previous skills and reference comments made by speakers and peers. Students cite texts that they've directly quoted, paraphrased, or used for information. When writing, students will use the form of citation dictated by the instructor or the style guide referenced by the instructor. 6-8 Students continue with previous skills and use a style guide to create a proper citation. 9-12 Students continue with previous skills and should be aware of existing style guides and the ways in which they differ.
ELA.K12.EE.2.1:	Read and comprehend grade-level complex texts proficiently. **Clarifications:** See Text Complexity for grade-level complexity bands and a text complexity rubric.
ELA.K12.EE.3.1:	Make inferences to support comprehension. **Clarifications:** Students will make inferences before the words infer or inference are introduced. Kindergarten students will answer questions like "Why is the girl smiling?" or make predictions about what will happen based on the title page. Students will use the terms and apply them in 2nd grade and beyond.
ELA.K12.EE.4.1:	Use appropriate collaborative techniques and active listening skills when engaging in discussions in a variety of situations. **Clarifications:** In kindergarten, students learn to listen to one another respectfully. In grades 1-2, students build upon these skills by justifying what they are thinking. For example: "I think _____ because _____." The collaborative conversations are becoming academic conversations. In grades 3-12, students engage in academic conversations discussing claims and justifying their reasoning, refining and applying skills. Students build on ideas, propel the conversation, and support claims and counterclaims with evidence.
	Use the accepted rules governing a specific format to create quality work.

ELA.K12.EE.5.1:	**Clarifications:** Students will incorporate skills learned into work products to produce quality work. For students to incorporate these skills appropriately, they must receive instruction. A 3rd grade student creating a poster board display must have instruction in how to effectively present information to do quality work.
ELA.K12.EE.6.1:	Use appropriate voice and tone when speaking or writing. **Clarifications:** In kindergarten and 1st grade, students learn the difference between formal and informal language. For example, the way we talk to our friends differs from the way we speak to adults. In 2nd grade and beyond, students practice appropriate social and academic language to discuss texts.
DA.912.F.3.8:	Demonstrate effective teamwork and accountability, using compromise, collaboration, and conflict resolution, to set and achieve goals as required in the work environment.
DA.912.S.2.1:	Sustain focused attention, respect, and discipline during class, rehearsal, and performance.
ELD.K12.ELL.SI.1:	English language learners communicate for social and instructional purposes within the school setting.

General Course Information and Notes

VERSION DESCRIPTION

Students with extensive vocal or instrumental ensemble experience refine their critical listening, music literacy, and ensemble skills through the study, rehearsal, and performance of high-quality, advanced literature. Students use reflection and problem-solving skills with increasing independence to improve their performance and musical expression. Public performances may serve as a culmination of specific instructional goals. Students may be required to attend and/or participate in rehearsals and performances outside the school day to support, extend, and assess learning in the classroom. This course, if used for an instrumental ensemble, may also require students to obtain a musical instrument (e.g., borrow, rent, purchase) from an outside source.

GENERAL NOTES

Honors and Advanced Level Course Note: Advanced courses require a greater demand on students through increased academic rigor. Academic rigor is obtained through the application, analysis, evaluation, and creation of complex ideas that are often abstract and multi-faceted. Students are challenged to think and collaborate critically on the content they are learning. Honors level rigor will be achieved by increasing text complexity through text selection, focus on high-level qualitative measures, and complexity of task. Instruction will be structured to give students a deeper understanding of conceptual themes and organization within and across disciplines. Academic rigor is more than simply assigning to students a greater quantity of work.

Florida's Benchmarks for Excellent Student Thinking (B.E.S.T.) Standards
This course includes Florida's B.E.S.T. ELA Expectations (EE) and Mathematical Thinking and Reasoning Standards (MTRs) for students. Florida educators should intentionally embed these standards within the content and their instruction as applicable. For guidance on the implementation of the EEs and MTRs, please visit cpalms.org/Standards/BEST_Standards.aspx and select the appropriate B.E.S.T. Standards package.

English Language Development ELD Standards Special Notes Section:
Teachers are required to provide listening, speaking, reading and writing instruction that allows English language learners (ELL) to communicate for social and instructional purposes within the school setting. For the given level of English language proficiency and with visual, graphic, or interactive support, students will interact with grade level words, expressions, sentences and discourse to process or produce language necessary for academic success. The ELD standard should specify a relevant content area concept or topic of study chosen by curriculum developers and teachers which maximizes an ELL's need for communication and social skills. To access an ELL supporting document which delineates performance definitions and descriptors, please click on the following link: cpalms.org/uploads/docs/standards/eld/SI.pdf

GENERAL INFORMATION

Course Number: 1305430

Course Path: Section: Grades PreK to 12 Education Courses > **Grade Group:** Grades 9 to 12 and Adult Education Courses > **Subject:** Music Education > **SubSubject:** General Music >

Abbreviated Title: MUSIC ENS 4 HON

Number of Credits: One (1) credit

Course Length: Year (Y)

Course Attributes:

- Honors

Course Type: Core Academic Course

Course Level: 3

Course Status: Draft - Course Pending Approval

Grade Level(s): 9,10,11,12

Graduation Requirement: Performing/Fine Arts

Educator Certifications

Music (Elementary and Secondary Grades K-12)
Vocal Music (Elementary and Secondary Grades K-12)
Instrumental Music (Secondary Grades 7-12)

Music Techniques 1 (#1305500) 2022 - And Beyond

Course Standards

Name	Description
MU.912.C.1.1:	Apply listening strategies to promote appreciation and understanding of unfamiliar musical works. **Clarifications:** e.g., listening maps, active listening, checklists
MU.912.C.2.1:	Evaluate and make appropriate adjustments to personal performance in solo and ensembles.
MU.912.C.2.2:	Evaluate performance quality in recorded and/or live performances.
MU.912.C.3.1:	Make critical evaluations, based on exemplary models, of the quality and effectiveness of performances and apply the criteria to personal development in music.
MU.912.F.3.3:	Define, prioritize, monitor, and successfully complete tasks related to individual musical performance or project presentation, without direct oversight, demonstrating skills for use in the workplace.
MU.912.O.2.1:	Transfer accepted composition conventions and performance practices of a specific style to a contrasting style of music.
MU.912.O.3.2:	Interpret and perform expressive elements indicated by the musical score and/or conductor.
MU.912.S.2.2:	Transfer expressive elements and performance techniques from one piece of music to another.
MU.912.S.3.1:	Synthesize a broad range of musical skills by performing a varied repertoire with expression, appropriate stylistic interpretation, technical accuracy, and kinesthetic energy.
MU.912.S.3.4:	Analyze and describe the effect of rehearsal sessions and/or strategies on refinement of skills and techniques.
MU.912.S.3.5:	Develop and demonstrate proper vocal or instrumental technique. **Clarifications:** e.g., posture, breathing, fingering, embouchure, bow technique, tuning, strumming
MA.K12.MTR.1.1:	Mathematicians who participate in effortful learning both individually and with others: • Analyze the problem in a way that makes sense given the task. • Ask questions that will help with solving the task. • Build perseverance by modifying methods as needed while solving a challenging task. • Stay engaged and maintain a positive mindset when working to solve tasks. • Help and support each other when attempting a new method or approach. **Clarifications:** Teachers who encourage students to participate actively in effortful learning both individually and with others: • Cultivate a community of growth mindset learners. • Foster perseverance in students by choosing tasks that are challenging. • Develop students' ability to analyze and problem solve. • Recognize students' effort when solving challenging problems.
MA.K12.MTR.2.1:	Demonstrate understanding by representing problems in multiple ways. Mathematicians who demonstrate understanding by representing problems in multiple ways: • Build understanding through modeling and using manipulatives. • Represent solutions to problems in multiple ways using objects, drawings, tables, graphs and equations. • Progress from modeling problems with objects and drawings to using algorithms and equations. • Express connections between concepts and representations. • Choose a representation based on the given context or purpose. **Clarifications:** Teachers who encourage students to demonstrate understanding by representing problems in multiple ways: • Help students make connections between concepts and representations. • Provide opportunities for students to use manipulatives when investigating concepts. • Guide students from concrete to pictorial to abstract representations as understanding progresses. • Show students that various representations can have different purposes and can be useful in different situations.
MA.K12.MTR.3.1:	Complete tasks with mathematical fluency. Mathematicians who complete tasks with mathematical fluency: • Select efficient and appropriate methods for solving problems within the given context. • Maintain flexibility and accuracy while performing procedures and mental calculations. • Complete tasks accurately and with confidence. • Adapt procedures to apply them to a new context. • Use feedback to improve efficiency when performing calculations. **Clarifications:** Teachers who encourage students to complete tasks with mathematical fluency: • Provide students with the flexibility to solve problems by selecting a procedure that allows them to solve efficiently and accurately. • Offer multiple opportunities for students to practice efficient and generalizable methods. • Provide opportunities for students to reflect on the method they used and determine if a more efficient method could have been used.
	Engage in discussions that reflect on the mathematical thinking of self and others. Mathematicians who engage in discussions that reflect on the mathematical thinking of self and others:

MA.K12.MTR.4.1:	• Communicate mathematical ideas, vocabulary and methods effectively. • Analyze the mathematical thinking of others. • Compare the efficiency of a method to those expressed by others. • Recognize errors and suggest how to correctly solve the task. • Justify results by explaining methods and processes. • Construct possible arguments based on evidence. **Clarifications:** Teachers who encourage students to engage in discussions that reflect on the mathematical thinking of self and others: • Establish a culture in which students ask questions of the teacher and their peers, and error is an opportunity for learning. • Create opportunities for students to discuss their thinking with peers. • Select, sequence and present student work to advance and deepen understanding of correct and increasingly efficient methods. • Develop students' ability to justify methods and compare their responses to the responses of their peers.
MA.K12.MTR.5.1:	Use patterns and structure to help understand and connect mathematical concepts. Mathematicians who use patterns and structure to help understand and connect mathematical concepts: • Focus on relevant details within a problem. • Create plans and procedures to logically order events, steps or ideas to solve problems. • Decompose a complex problem into manageable parts. • Relate previously learned concepts to new concepts. • Look for similarities among problems. • Connect solutions of problems to more complicated large-scale situations. **Clarifications:** Teachers who encourage students to use patterns and structure to help understand and connect mathematical concepts: • Help students recognize the patterns in the world around them and connect these patterns to mathematical concepts. • Support students to develop generalizations based on the similarities found among problems. • Provide opportunities for students to create plans and procedures to solve problems. • Develop students' ability to construct relationships between their current understanding and more sophisticated ways of thinking.
MA.K12.MTR.6.1:	Assess the reasonableness of solutions. Mathematicians who assess the reasonableness of solutions: • Estimate to discover possible solutions. • Use benchmark quantities to determine if a solution makes sense. • Check calculations when solving problems. • Verify possible solutions by explaining the methods used. • Evaluate results based on the given context. **Clarifications:** Teachers who encourage students to assess the reasonableness of solutions: • Have students estimate or predict solutions prior to solving. • Prompt students to continually ask, "Does this solution make sense? How do you know?" • Reinforce that students check their work as they progress within and after a task. • Strengthen students' ability to verify solutions through justifications.
MA.K12.MTR.7.1:	Apply mathematics to real-world contexts. Mathematicians who apply mathematics to real-world contexts: • Connect mathematical concepts to everyday experiences. • Use models and methods to understand, represent and solve problems. • Perform investigations to gather data or determine if a method is appropriate. • Redesign models and methods to improve accuracy or efficiency. **Clarifications:** Teachers who encourage students to apply mathematics to real-world contexts: • Provide opportunities for students to create models, both concrete and abstract, and perform investigations. • Challenge students to question the accuracy of their models and methods. • Support students as they validate conclusions by comparing them to the given situation. • Indicate how various concepts can be applied to other disciplines.
ELA.K12.EE.1.1:	Cite evidence to explain and justify reasoning. **Clarifications:** K-1 Students include textual evidence in their oral communication with guidance and support from adults. The evidence can consist of details from the text without naming the text. During 1st grade, students learn how to incorporate the evidence in their writing. 2-3 Students include relevant textual evidence in their written and oral communication. Students should name the text when they refer to it. In 3rd grade, students should use a combination of direct and indirect citations. 4-5 Students continue with previous skills and reference comments made by speakers and peers. Students cite texts that they've directly quoted, paraphrased, or used for information. When writing, students will use the form of citation dictated by the instructor or the style guide referenced by the instructor. 6-8 Students continue with previous skills and use a style guide to create a proper citation. 9-12 Students continue with previous skills and should be aware of existing style guides and the ways in which they differ.
ELA.K12.EE.2.1:	Read and comprehend grade-level complex texts proficiently. **Clarifications:** See Text Complexity for grade-level complexity bands and a text complexity rubric.
	Make inferences to support comprehension.

ELA.K12.EE.3.1:	**Clarifications:** Students will make inferences before the words infer or inference are introduced. Kindergarten students will answer questions like "Why is the girl smiling?" or make predictions about what will happen based on the title page. Students will use the terms and apply them in 2nd grade and beyond.
ELA.K12.EE.4.1:	Use appropriate collaborative techniques and active listening skills when engaging in discussions in a variety of situations. **Clarifications:** In kindergarten, students learn to listen to one another respectfully. In grades 1-2, students build upon these skills by justifying what they are thinking. For example: "I think _____ because _____." The collaborative conversations are becoming academic conversations. In grades 3-12, students engage in academic conversations discussing claims and justifying their reasoning, refining and applying skills. Students build on ideas, propel the conversation, and support claims and counterclaims with evidence.
ELA.K12.EE.5.1:	Use the accepted rules governing a specific format to create quality work. **Clarifications:** Students will incorporate skills learned into work products to produce quality work. For students to incorporate these skills appropriately, they must receive instruction. A 3rd grade student creating a poster board display must have instruction in how to effectively present information to do quality work.
ELA.K12.EE.6.1:	Use appropriate voice and tone when speaking or writing. **Clarifications:** In kindergarten and 1st grade, students learn the difference between formal and informal language. For example, the way we talk to our friends differs from the way we speak to adults. In 2nd grade and beyond, students practice appropriate social and academic language to discuss texts.
DA.912.S.2.1:	Sustain focused attention, respect, and discipline during class, rehearsal, and performance.
ELD.K12.ELL.SI.1:	English language learners communicate for social and instructional purposes within the school setting.

General Course Information and Notes

VERSION DESCRIPTION

Students in this entry-level class focus on the development of musical and technical skills on a specific instrument or voice through etudes, scales, and selected music literature. Through problem-solving, critical thinking, and reflection, students develop the physical and cognitive skills to be more disciplined performers. Public performances may serve as a culmination of specific instructional goals. Students may be required to attend and/or participate in rehearsals and performances outside the school day to support, extend, and assess learning in the classroom. This course, if used for an instrumental class, may also require students to obtain a musical instrument (e.g., borrow, rent, purchase) from an outside source.

GENERAL NOTES

Florida's Benchmarks for Excellent Student Thinking (B.E.S.T.) Standards
This course includes Florida's B.E.S.T. ELA Expectations (EE) and Mathematical Thinking and Reasoning Standards (MTRs) for students. Florida educators should intentionally embed these standards within the content and their instruction as applicable. For guidance on the implementation of the EEs and MTRs, please visit cpalms.org/Standards/BEST_Standards.aspx and select the appropriate B.E.S.T. Standards package.

English Language Development ELD Standards Special Notes Section:
Teachers are required to provide listening, speaking, reading and writing instruction that allows English language learners (ELL) to communicate for social and instructional purposes within the school setting. For the given level of English language proficiency and with visual, graphic, or interactive support, students will interact with grade level words, expressions, sentences and discourse to process or produce language necessary for academic success. The ELD standard should specify a relevant content area concept or topic of study chosen by curriculum developers and teachers which maximizes an ELL's need for communication and social skills. To access an ELL supporting document which delineates performance definitions and descriptors, please click on the following link: cpalms.org/uploads/docs/standards/eld/SI.pdf

GENERAL INFORMATION

Course Number: 1305500

Course Path: Section: Grades PreK to 12 Education Courses > **Grade Group:** Grades 9 to 12 and Adult Education Courses > **Subject:** Music Education > **SubSubject:** General Music > **Abbreviated Title:** MUSIC TECNQS 1

Number of Credits: One (1) credit

Course Length: Year (Y)

Course Type: Core Academic Course

Course Level: 2

Course Status: Draft - Course Pending Approval

Grade Level(s): 9,10,11,12

Graduation Requirement: Performing/Fine Arts

Educator Certifications

Music (Elementary and Secondary Grades K-12)
Vocal Music (Elementary and Secondary Grades K-12)
Instrumental Music (Secondary Grades 7-12)
Instrumental Music (Elementary and Secondary Grades K-12)

Elementary Chorus (#5013010) 2022 - And Beyond

Course Standards

Name	Description
MU.3.C.1.1:	Describe listening skills and how they support appreciation of musical works. **Clarifications:** e.g., focus: form, instrumentation, tempo, dynamics; organize: listening maps, active listening, checklists
MU.3.C.1.2:	Respond to a musical work in a variety of ways and compare individual interpretations. **Clarifications:** e.g., move, draw, sing, play, gesture, conduct
MU.3.C.1.4:	Discriminate between unison and two-part singing.
MU.3.C.2.1:	Evaluate performances of familiar music using teacher-established criteria.
MU.3.C.3.1:	Identify musical characteristics and elements within a piece of music when discussing the value of the work. **Clarifications:** e.g., tempo, rhythm, timbre, form, instrumentation, texture
MU.3.F.2.1:	Identify musicians in the school, community, and media. **Clarifications:** e.g., band, chorus, and/or orchestra member; music teacher; cantor, choir director, or song leader in religious services
MU.3.F.2.2:	Describe opportunities for personal music-making. **Clarifications:** e.g., performing ensembles, individual lessons, community and church music groups, family, playground, computer-generated music
MU.3.F.3.1:	Collaborate with others to create a musical presentation and acknowledge individual contributions as an integral part of the whole. **Clarifications:** e.g., work together, communicate effectively, share tasks and responsibilities, work well in cooperative learning groups
MU.3.H.1.2:	Identify significant information about specified composers and one or more of their musical works.
MU.3.H.3.1:	Experience and discuss, using correct music and other relevant content-area vocabulary, similarities in the use of pattern, line, and form in music and other teacher-selected contexts. **Clarifications:** e.g., in dance, visual art, language arts, pulse, rhythm, fluency
MU.3.O.1.1:	Identify, using correct music vocabulary, the elements in a musical work. **Clarifications:** e.g., rhythm, pitch, timbre, form
MU.3.O.1.2:	Identify and describe the musical form of a familiar song. **Clarifications:** e.g., AB, ABA, ABABA, call-and-response, verse/refrain, rondo, intro, coda
MU.3.O.3.1:	Describe how tempo and dynamics can change the mood or emotion of a piece of music.
MU.3.S.2.1:	Identify patterns in songs to aid the development of sequencing and memorization skills. **Clarifications:** e.g., parts of a round, parts of a layered work
MU.3.S.3.1:	Sing rounds, canons, or ostinati in an appropriate range, using head voice and maintaining pitch.
MU.3.S.3.3:	Sing simple la-sol-mi-re-do patterns at sight. **Clarifications:** e.g., reading from hand signs; reading from nontraditional or traditional notation
MU.4.C.1.1:	Develop effective listening strategies and describe how they can support appreciation of musical works. **Clarifications:** e.g., listen for form, instrumentation, tempo, dynamics, melodic line, rhythm patterns; organize thoughts using listening maps, active listening, checklists
MU.4.C.1.2:	Describe, using correct music vocabulary, what is heard in a specific musical work. **Clarifications:** e.g., movement of melodic line, tempo, repeated and contrasting patterns
MU.4.C.1.4:	Identify and describe the four primary voice parts, i.e., soprano, alto, tenor, bass.
MU.4.C.2.1:	Identify and describe basic music performance techniques to provide a foundation for critiquing one's self and others. **Clarifications:** e.g., intonation, balance, blend, timbre, posture, breath support
MU.4.C.2.2:	Critique specific techniques in one's own and others performances using teacher-established criteria.
MU.4.C.3.1:	Describe characteristics that make various musical works appealing. **Clarifications:** e.g., tempo, rhythm, dynamics, blend, timbre, form, texture, instrumentation

MU.4.F.2.1:	Describe roles and careers of selected musicians. **Clarifications:** e.g., teacher, conductor, composer, studio musician, recording technician, sound engineer, entertainer
MU.4.F.3.1:	Identify the characteristics and behaviors displayed by successful student musicians, and discuss how these qualities will contribute to success beyond the music classroom. **Clarifications:** e.g., punctual, prepared, dependable, self-disciplined, solutions-oriented, shows initiative, uses time wisely
MU.4.H.1.2:	Describe the influence of selected composers on the musical works and practices or traditions of their time.
MU.4.H.3.1:	Identify connections among music and other contexts, using correct music and other relevant content-area vocabulary, and explore how learning in one academic area can help with knowledge or skill acquisition in a different academic area. **Clarifications:** e.g., movement, form, repetition, rhythmic patterns/numeric patterns, fractions, vibrations/sound waves
MU.4.O.1.1:	Compare musical elements in different types of music, using correct music vocabulary, as a foundation for understanding the structural conventions of specific styles. **Clarifications:** e.g., rules of rhythm, melody, timbre, form, tonality, harmony, meter; styles: Classical, Baroque
MU.4.O.3.1:	Identify how expressive elements and lyrics affect the mood or emotion of a song. **Clarifications:** e.g., tempo, dynamics, phrasing, articulation
MU.4.O.3.2:	Apply expressive elements to a vocal or instrumental piece and, using correct music vocabulary, explain one's choices.
MU.4.S.1.3:	Arrange a familiar song for voices or instruments by manipulating form. **Clarifications:** e.g., introduction, interlude/bridge, coda, ABA, rondo
MU.4.S.2.1:	Apply knowledge of musical structure to aid in sequencing and memorization and to internalize details of rehearsal and performance.
MU.4.S.3.1:	Sing rounds, canons, and/or partner songs in an appropriate range, using proper vocal technique and maintaining pitch.
MU.4.S.3.3:	Perform extended pentatonic melodies at sight. **Clarifications:** e.g., high do, low sol, low la; vocal and/or instrumental
MU.5.C.1.1:	Discuss and apply listening strategies to support appreciation of musical works. **Clarifications:** e.g., focus: structure, instrumentation, tempo, dynamics, melodic line, rhythm patterns, style/genre; organize: listening maps, active listening, checklists
MU.5.C.1.2:	Hypothesize and discuss, using correct music vocabulary, the composer's intent for a specific musical work. **Clarifications:** e.g., title, historical notes, quality recordings, instrumentation, expressive elements
MU.5.C.1.4:	Identify, aurally, the four primary voice parts, i.e., soprano, alto, tenor, bass, of a mixed choir.
MU.5.C.2.1:	Define criteria, using correct music vocabulary, to critique one's own and others performance. **Clarifications:** e.g., intonation, balance, blend, timbre
MU.5.C.2.2:	Describe changes, using correct music vocabulary, in one's own and/or others performance over time.
MU.5.C.3.1:	Develop criteria to evaluate an exemplary musical work from a specific period or genre.
MU.5.F.2.1:	Describe jobs associated with various types of concert venues and performing arts centers. **Clarifications:** e.g., music merchant, ticket agent, marketer, agent, security guard, food-and-beverage merchant
MU.5.F.2.2:	Explain why live performances are important to the career of the artist and the success of performance venues.
MU.5.F.3.1:	Examine and discuss the characteristics and behaviors displayed by successful student musicians that can be applied outside the music classroom. **Clarifications:** e.g., dedicated, works toward mastery, punctual, prepared, dependable, self-disciplined, solutions-oriented
MU.5.H.1.2:	Compare and describe the compositional characteristics used by two or more composers whose works are studied in class.
MU.5.H.3.1:	Examine critical-thinking processes in music and describe how they can be transferred to other disciplines. **Clarifications:** e.g., reading, writing, observing, listening, evaluating, embellishing, revising
MU.5.O.1.1:	Analyze, using correct music vocabulary, the use of musical elements in various styles of music as a foundation for understanding the creative process. **Clarifications:** e.g., rhythm patterns, melody, timbre, form, tonality, harmony, meter, key; styles: Classical, Baroque, Romantic, nationalistic, jazz
MU.5.O.3.1:	Examine and explain how expressive elements, when used in a selected musical work, affect personal response. **Clarifications:** e.g., tempo, dynamics, timbre, texture, phrasing, articulation
MU.5.O.3.2:	Perform expressive elements in a vocal or instrumental piece as indicated by the score and/or conductor.
MU.5.S.1.3:	Arrange a familiar song by manipulating specified aspects of music. **Clarifications:** e.g., dynamics, tempo, lyrics, form, rhythm, instrumentation
MU.5.S.1.4:	Sing or play simple melodic patterns by ear with support from the teacher.

MU.5.S.2.1:	Use expressive elements and knowledge of musical structure to aid in sequencing and memorization and to internalize details of rehearsals and performance.
MU.5.S.2.2:	Apply performance techniques to familiar music.
MU.5.S.3.1:	Sing part songs in an appropriate range, using proper vocal technique and maintaining pitch.
MU.5.S.3.3:	Perform simple diatonic melodies at sight. **Clarifications:** e.g., vocal and/or instrumental
MA.K12.MTR.1.1:	Mathematicians who participate in effortful learning both individually and with others: • Analyze the problem in a way that makes sense given the task. • Ask questions that will help with solving the task. • Build perseverance by modifying methods as needed while solving a challenging task. • Stay engaged and maintain a positive mindset when working to solve tasks. • Help and support each other when attempting a new method or approach. **Clarifications:** Teachers who encourage students to participate actively in effortful learning both individually and with others: • Cultivate a community of growth mindset learners. • Foster perseverance in students by choosing tasks that are challenging. • Develop students' ability to analyze and problem solve. • Recognize students' effort when solving challenging problems.
MA.K12.MTR.2.1:	Demonstrate understanding by representing problems in multiple ways. Mathematicians who demonstrate understanding by representing problems in multiple ways: • Build understanding through modeling and using manipulatives. • Represent solutions to problems in multiple ways using objects, drawings, tables, graphs and equations. • Progress from modeling problems with objects and drawings to using algorithms and equations. • Express connections between concepts and representations. • Choose a representation based on the given context or purpose. **Clarifications:** Teachers who encourage students to demonstrate understanding by representing problems in multiple ways: • Help students make connections between concepts and representations. • Provide opportunities for students to use manipulatives when investigating concepts. • Guide students from concrete to pictorial to abstract representations as understanding progresses. • Show students that various representations can have different purposes and can be useful in different situations.
MA.K12.MTR.3.1:	Complete tasks with mathematical fluency. Mathematicians who complete tasks with mathematical fluency: • Select efficient and appropriate methods for solving problems within the given context. • Maintain flexibility and accuracy while performing procedures and mental calculations. • Complete tasks accurately and with confidence. • Adapt procedures to apply them to a new context. • Use feedback to improve efficiency when performing calculations. **Clarifications:** Teachers who encourage students to complete tasks with mathematical fluency: • Provide students with the flexibility to solve problems by selecting a procedure that allows them to solve efficiently and accurately. • Offer multiple opportunities for students to practice efficient and generalizable methods. • Provide opportunities for students to reflect on the method they used and determine if a more efficient method could have been used.
MA.K12.MTR.4.1:	Engage in discussions that reflect on the mathematical thinking of self and others. Mathematicians who engage in discussions that reflect on the mathematical thinking of self and others: • Communicate mathematical ideas, vocabulary and methods effectively. • Analyze the mathematical thinking of others. • Compare the efficiency of a method to those expressed by others. • Recognize errors and suggest how to correctly solve the task. • Justify results by explaining methods and processes. • Construct possible arguments based on evidence. **Clarifications:** Teachers who encourage students to engage in discussions that reflect on the mathematical thinking of self and others: • Establish a culture in which students ask questions of the teacher and their peers, and error is an opportunity for learning. • Create opportunities for students to discuss their thinking with peers. • Select, sequence and present student work to advance and deepen understanding of correct and increasingly efficient methods. • Develop students' ability to justify methods and compare their responses to the responses of their peers.
MA.K12.MTR.5.1:	Use patterns and structure to help understand and connect mathematical concepts. Mathematicians who use patterns and structure to help understand and connect mathematical concepts: • Focus on relevant details within a problem. • Create plans and procedures to logically order events, steps or ideas to solve problems. • Decompose a complex problem into manageable parts. • Relate previously learned concepts to new concepts. • Look for similarities among problems. • Connect solutions of problems to more complicated large-scale situations.

	Clarifications: Teachers who encourage students to use patterns and structure to help understand and connect mathematical concepts: • Help students recognize the patterns in the world around them and connect these patterns to mathematical concepts. • Support students to develop generalizations based on the similarities found among problems. • Provide opportunities for students to create plans and procedures to solve problems. • Develop students' ability to construct relationships between their current understanding and more sophisticated ways of thinking.
MA.K12.MTR.6.1:	Assess the reasonableness of solutions. Mathematicians who assess the reasonableness of solutions: • Estimate to discover possible solutions. • Use benchmark quantities to determine if a solution makes sense. • Check calculations when solving problems. • Verify possible solutions by explaining the methods used. • Evaluate results based on the given context. **Clarifications:** Teachers who encourage students to assess the reasonableness of solutions: • Have students estimate or predict solutions prior to solving. • Prompt students to continually ask, "Does this solution make sense? How do you know?" • Reinforce that students check their work as they progress within and after a task. • Strengthen students' ability to verify solutions through justifications.
MA.K12.MTR.7.1:	Apply mathematics to real-world contexts. Mathematicians who apply mathematics to real-world contexts: • Connect mathematical concepts to everyday experiences. • Use models and methods to understand, represent and solve problems. • Perform investigations to gather data or determine if a method is appropriate. • Redesign models and methods to improve accuracy or efficiency. **Clarifications:** Teachers who encourage students to apply mathematics to real-world contexts: • Provide opportunities for students to create models, both concrete and abstract, and perform investigations. • Challenge students to question the accuracy of their models and methods. • Support students as they validate conclusions by comparing them to the given situation. • Indicate how various concepts can be applied to other disciplines.
ELA.K12.EE.1.1:	Cite evidence to explain and justify reasoning. **Clarifications:** K-1 Students include textual evidence in their oral communication with guidance and support from adults. The evidence can consist of details from the text without naming the text. During 1st grade, students learn how to incorporate the evidence in their writing. 2-3 Students include relevant textual evidence in their written and oral communication. Students should name the text when they refer to it. In 3rd grade, students should use a combination of direct and indirect citations. 4-5 Students continue with previous skills and reference comments made by speakers and peers. Students cite texts that they've directly quoted, paraphrased, or used for information. When writing, students will use the form of citation dictated by the instructor or the style guide referenced by the instructor. 6-8 Students continue with previous skills and use a style guide to create a proper citation. 9-12 Students continue with previous skills and should be aware of existing style guides and the ways in which they differ.
ELA.K12.EE.2.1:	Read and comprehend grade-level complex texts proficiently. **Clarifications:** See Text Complexity for grade-level complexity bands and a text complexity rubric.
ELA.K12.EE.3.1:	Make inferences to support comprehension. **Clarifications:** Students will make inferences before the words infer or inference are introduced. Kindergarten students will answer questions like "Why is the girl smiling?" or make predictions about what will happen based on the title page. Students will use the terms and apply them in 2nd grade and beyond.
ELA.K12.EE.4.1:	Use appropriate collaborative techniques and active listening skills when engaging in discussions in a variety of situations. **Clarifications:** In kindergarten, students learn to listen to one another respectfully. In grades 1-2, students build upon these skills by justifying what they are thinking. For example: "I think _____ because _____." The collaborative conversations are becoming academic conversations. In grades 3-12, students engage in academic conversations discussing claims and justifying their reasoning, refining and applying skills. Students build on ideas, propel the conversation, and support claims and counterclaims with evidence.
ELA.K12.EE.5.1:	Use the accepted rules governing a specific format to create quality work. **Clarifications:** Students will incorporate skills learned into work products to produce quality work. For students to incorporate these skills appropriately, they must receive instruction. A 3rd grade student creating a poster board display must have instruction in how to effectively present information to do quality work.
ELA.K12.EE.6.1:	Use appropriate voice and tone when speaking or writing. **Clarifications:** In kindergarten and 1st grade, students learn the difference between formal and informal language. For example, the way we talk to our friends

	differs from the way we speak to adults. In 2nd grade and beyond, students practice appropriate social and academic language to discuss texts.
ELD.K12.ELL.SI.1:	English language learners communicate for social and instructional purposes within the school setting.

General Course Information and Notes

VERSION DESCRIPTION

Students who have varying levels of experience in chorus develop beginning vocal technique and skills, notational literacy and fluency, expressive and stylistic interpretation, part-singing, critical and creative thinking skills, and an appreciation of music from around the world and throughout history. Public performances may serve as a culmination of specific instructional goals. Students may be required to attend and/or participate in rehearsals and performances outside the school day to support, extend, and assess learning in the classroom.

GENERAL NOTES

The course descriptions for Elementary Music Electives have been designed to accommodate the mixing of grade levels, experience, and abilities within the same ensemble. Music teachers for elementary music electives should select the most appropriate set of grade-specific benchmarks based on each student's experience, music literacy, and available instruction time. Once an elementary student has entered a course at a specific level of benchmarks, he or she should progress to the next set of grade-specific benchmarks in the sequence for purposes of assessment. If a student reaches the Grade 5 level prior to 5th grade, he or she may continue to participate in the ensemble; the teacher is responsible for designating an appropriate means of increasing the rigor for the student in each subsequent year.

Examples:

- A 3rd grade student beginning in Elementary Band may receive instruction and be assessed according to the Grade 3 benchmarks.
- A 2nd grade student who has taken violin lessons for several years and who is musically literate may receive instruction in Elementary Orchestra and be assessed according to the Grade 5 benchmarks, repeating use of these benchmarks with increased rigor in each subsequent year.
- A 5th grader singing in Elementary Chorus for the first time may receive instruction and be assessed according to the Grade 3 benchmarks.
- A 4th grader in Handbell Ensemble (Special Ensemble) for the first time may receive instruction and be assessed according to the Grade 3 benchmarks. The same student, in Orff Ensemble (Special Ensemble) for the second year, may receive instruction and be assessed according to the Grade 4 benchmarks.

Florida's Benchmarks for Excellent Student Thinking (B.E.S.T.) Standards
This course includes Florida's B.E.S.T. ELA Expectations (EE) and Mathematical Thinking and Reasoning Standards (MTRs) for students. Florida educators should intentionally embed these standards within the content and their instruction as applicable. For guidance on the implementation of the EEs and MTRs, please visit cpalms.org/Standards/BEST_Standards.aspx and select the appropriate B.E.S.T. Standards package.

English Language Development ELD Standards Special Notes Section:
Teachers are required to provide listening, speaking, reading and writing instruction that allows English language learners (ELL) to communicate for social and instructional purposes within the school setting. For the given level of English language proficiency and with visual, graphic, or interactive support, students will interact with grade level words, expressions, sentences and discourse to process or produce language necessary for academic success. The ELD standard should specify a relevant content area concept or topic of study chosen by curriculum developers and teachers which maximizes an ELL's need for communication and social skills. To access an ELL supporting document which delineates performance definitions and descriptors, please click on the following link: cpalms.org/uploads/docs/standards/eld/SI.pdf

GENERAL INFORMATION

Course Number: 5013010

Course Path: Section: Grades PreK to 12 Education Courses > **Grade Group:** Grades PreK to 5 Education Courses > **Subject:** Music Education > **SubSubject:** General >
Abbreviated Title: ELEM CHORUS
Course Length: Year (Y)

Course Status: Draft - Course Pending Approval

Grade Level(s): K,1,2,3,4,5,PreK

Educator Certifications

Music Education (Elementary Grades 1-6)
Music (Elementary and Secondary Grades K-12)
Vocal Music (Elementary and Secondary Grades K-12)

Elementary Band (#5013020) 2022 - And Beyond

Course Standards

Name	Description
MU.3.C.1.1:	Describe listening skills and how they support appreciation of musical works. **Clarifications:** e.g., focus: form, instrumentation, tempo, dynamics; organize: listening maps, active listening, checklists
MU.3.C.1.2:	Respond to a musical work in a variety of ways and compare individual interpretations. **Clarifications:** e.g., move, draw, sing, play, gesture, conduct
MU.3.C.1.3:	Identify families of orchestral and band instruments. **Clarifications:** e.g., strings, woodwinds, brass, percussion, keyboards
MU.3.C.2.1:	Evaluate performances of familiar music using teacher-established criteria.
MU.3.C.3.1:	Identify musical characteristics and elements within a piece of music when discussing the value of the work. **Clarifications:** e.g., tempo, rhythm, timbre, form, instrumentation, texture
MU.3.F.2.1:	Identify musicians in the school, community, and media. **Clarifications:** e.g., band, chorus, and/or orchestra member; music teacher; cantor, choir director, or song leader in religious services
MU.3.F.2.2:	Describe opportunities for personal music-making. **Clarifications:** e.g., performing ensembles, individual lessons, community and church music groups, family, playground, computer-generated music
MU.3.F.3.1:	Collaborate with others to create a musical presentation and acknowledge individual contributions as an integral part of the whole. **Clarifications:** e.g., work together, communicate effectively, share tasks and responsibilities, work well in cooperative learning groups
MU.3.H.1.2:	Identify significant information about specified composers and one or more of their musical works.
MU.3.H.3.1:	Experience and discuss, using correct music and other relevant content-area vocabulary, similarities in the use of pattern, line, and form in music and other teacher-selected contexts. **Clarifications:** e.g., in dance, visual art, language arts, pulse, rhythm, fluency
MU.3.O.1.1:	Identify, using correct music vocabulary, the elements in a musical work. **Clarifications:** e.g., rhythm, pitch, timbre, form
MU.3.O.1.2:	Identify and describe the musical form of a familiar song. **Clarifications:** e.g., AB, ABA, ABABA, call-and-response, verse/refrain, rondo, intro, coda
MU.3.O.3.1:	Describe how tempo and dynamics can change the mood or emotion of a piece of music.
MU.3.S.2.1:	Identify patterns in songs to aid the development of sequencing and memorization skills. **Clarifications:** e.g., parts of a round, parts of a layered work
MU.3.S.3.3:	Sing simple la-sol-mi-re-do patterns at sight. **Clarifications:** e.g., reading from hand signs; reading from nontraditional or traditional notation
MU.4.C.1.1:	Develop effective listening strategies and describe how they can support appreciation of musical works. **Clarifications:** e.g., listen for form, instrumentation, tempo, dynamics, melodic line, rhythm patterns; organize thoughts using listening maps, active listening, checklists
MU.4.C.1.2:	Describe, using correct music vocabulary, what is heard in a specific musical work. **Clarifications:** e.g., movement of melodic line, tempo, repeated and contrasting patterns
MU.4.C.1.3:	Classify orchestral and band instruments as strings, woodwinds, brass, percussion, or keyboard.
MU.4.C.2.1:	Identify and describe basic music performance techniques to provide a foundation for critiquing one's self and others. **Clarifications:** e.g., intonation, balance, blend, timbre, posture, breath support
MU.4.C.2.2:	Critique specific techniques in one's own and others performances using teacher-established criteria.
MU.4.C.3.1:	Describe characteristics that make various musical works appealing. **Clarifications:**

	e.g., tempo, rhythm, dynamics, blend, timbre, form, texture, instrumentation
MU.4.F.2.1:	Describe roles and careers of selected musicians. **Clarifications:** e.g., teacher, conductor, composer, studio musician, recording technician, sound engineer, entertainer
MU.4.F.3.1:	Identify the characteristics and behaviors displayed by successful student musicians, and discuss how these qualities will contribute to success beyond the music classroom. **Clarifications:** e.g., punctual, prepared, dependable, self-disciplined, solutions-oriented, shows initiative, uses time wisely
MU.4.F.3.2:	Discuss the safe, legal way to download songs and other media. **Clarifications:** e.g., sharing personal and financial information, copying and sharing music
MU.4.H.1.2:	Describe the influence of selected composers on the musical works and practices or traditions of their time.
MU.4.H.3.1:	Identify connections among music and other contexts, using correct music and other relevant content-area vocabulary, and explore how learning in one academic area can help with knowledge or skill acquisition in a different academic area. **Clarifications:** e.g., movement, form, repetition, rhythmic patterns/numeric patterns, fractions, vibrations/sound waves
MU.4.O.1.1:	Compare musical elements in different types of music, using correct music vocabulary, as a foundation for understanding the structural conventions of specific styles. **Clarifications:** e.g., rules of rhythm, melody, timbre, form, tonality, harmony, meter; styles: Classical, Baroque
MU.4.O.3.1:	Identify how expressive elements and lyrics affect the mood or emotion of a song. **Clarifications:** e.g., tempo, dynamics, phrasing, articulation
MU.4.O.3.2:	Apply expressive elements to a vocal or instrumental piece and, using correct music vocabulary, explain one's choices.
MU.4.S.1.3:	Arrange a familiar song for voices or instruments by manipulating form. **Clarifications:** e.g., introduction, interlude/bridge, coda, ABA, rondo
MU.4.S.2.1:	Apply knowledge of musical structure to aid in sequencing and memorization and to internalize details of rehearsal and performance.
MU.4.S.3.3:	Perform extended pentatonic melodies at sight. **Clarifications:** e.g., high do, low sol, low la; vocal and/or instrumental
MU.5.C.1.1:	Discuss and apply listening strategies to support appreciation of musical works. **Clarifications:** e.g., focus: structure, instrumentation, tempo, dynamics, melodic line, rhythm patterns, style/genre; organize: listening maps, active listening, checklists
MU.5.C.1.2:	Hypothesize and discuss, using correct music vocabulary, the composer's intent for a specific musical work. **Clarifications:** e.g., title, historical notes, quality recordings, instrumentation, expressive elements
MU.5.C.1.3:	Identify, aurally, selected instruments of the band and orchestra. **Clarifications:** e.g., violin, cello, string bass, flute, clarinet, oboe, bassoon, trumpet, trombone, tuba, French horn, bass drum, snare drum, xylophone, chimes, piano, harpsichord
MU.5.C.2.1:	Define criteria, using correct music vocabulary, to critique one's own and others performance. **Clarifications:** e.g., intonation, balance, blend, timbre
MU.5.C.2.2:	Describe changes, using correct music vocabulary, in one's own and/or others performance over time.
MU.5.C.3.1:	Develop criteria to evaluate an exemplary musical work from a specific period or genre.
MU.5.F.2.1:	Describe jobs associated with various types of concert venues and performing arts centers. **Clarifications:** e.g., music merchant, ticket agent, marketer, agent, security guard, food-and-beverage merchant
MU.5.F.2.2:	Explain why live performances are important to the career of the artist and the success of performance venues.
MU.5.F.3.1:	Examine and discuss the characteristics and behaviors displayed by successful student musicians that can be applied outside the music classroom. **Clarifications:** e.g., dedicated, works toward mastery, punctual, prepared, dependable, self-disciplined, solutions-oriented
MU.5.F.3.2:	Practice safe, legal, and responsible acquisition and use of music media, and describe why it is important to do so. **Clarifications:** e.g., downloading music and other digital media, sharing personal and financial information, copying music
MU.5.H.1.2:	Compare and describe the compositional characteristics used by two or more composers whose works are studied in class.
MU.5.H.3.1:	Examine critical-thinking processes in music and describe how they can be transferred to other disciplines. **Clarifications:** e.g., reading, writing, observing, listening, evaluating, embellishing, revising
MU.5.O.1.1:	Analyze, using correct music vocabulary, the use of musical elements in various styles of music as a foundation for understanding the creative process. **Clarifications:**

	e.g., rhythm patterns, melody, timbre, form, tonality, harmony, meter, key; styles: Classical, Baroque, Romantic, nationalistic, jazz
MU.5.O.3.1:	Examine and explain how expressive elements, when used in a selected musical work, affect personal response. **Clarifications:** e.g., tempo, dynamics, timbre, texture, phrasing, articulation
MU.5.O.3.2:	Perform expressive elements in a vocal or instrumental piece as indicated by the score and/or conductor.
MU.5.S.1.3:	Arrange a familiar song by manipulating specified aspects of music. **Clarifications:** e.g., dynamics, tempo, lyrics, form, rhythm, instrumentation
MU.5.S.1.4:	Sing or play simple melodic patterns by ear with support from the teacher.
MU.5.S.2.1:	Use expressive elements and knowledge of musical structure to aid in sequencing and memorization and to internalize details of rehearsals and performance.
MU.5.S.2.2:	Apply performance techniques to familiar music.
MU.5.S.3.3:	Perform simple diatonic melodies at sight. **Clarifications:** e.g., vocal and/or instrumental
MA.K12.MTR.1.1:	Mathematicians who participate in effortful learning both individually and with others: • Analyze the problem in a way that makes sense given the task. • Ask questions that will help with solving the task. • Build perseverance by modifying methods as needed while solving a challenging task. • Stay engaged and maintain a positive mindset when working to solve tasks. • Help and support each other when attempting a new method or approach. **Clarifications:** Teachers who encourage students to participate actively in effortful learning both individually and with others: • Cultivate a community of growth mindset learners. • Foster perseverance in students by choosing tasks that are challenging. • Develop students' ability to analyze and problem solve. • Recognize students' effort when solving challenging problems.
MA.K12.MTR.2.1:	Demonstrate understanding by representing problems in multiple ways. Mathematicians who demonstrate understanding by representing problems in multiple ways: • Build understanding through modeling and using manipulatives. • Represent solutions to problems in multiple ways using objects, drawings, tables, graphs and equations. • Progress from modeling problems with objects and drawings to using algorithms and equations. • Express connections between concepts and representations. • Choose a representation based on the given context or purpose. **Clarifications:** Teachers who encourage students to demonstrate understanding by representing problems in multiple ways: • Help students make connections between concepts and representations. • Provide opportunities for students to use manipulatives when investigating concepts. • Guide students from concrete to pictorial to abstract representations as understanding progresses. • Show students that various representations can have different purposes and can be useful in different situations.
MA.K12.MTR.3.1:	Complete tasks with mathematical fluency. Mathematicians who complete tasks with mathematical fluency: • Select efficient and appropriate methods for solving problems within the given context. • Maintain flexibility and accuracy while performing procedures and mental calculations. • Complete tasks accurately and with confidence. • Adapt procedures to apply them to a new context. • Use feedback to improve efficiency when performing calculations. **Clarifications:** Teachers who encourage students to complete tasks with mathematical fluency: • Provide students with the flexibility to solve problems by selecting a procedure that allows them to solve efficiently and accurately. • Offer multiple opportunities for students to practice efficient and generalizable methods. • Provide opportunities for students to reflect on the method they used and determine if a more efficient method could have been used.
MA.K12.MTR.4.1:	Engage in discussions that reflect on the mathematical thinking of self and others. Mathematicians who engage in discussions that reflect on the mathematical thinking of self and others: • Communicate mathematical ideas, vocabulary and methods effectively. • Analyze the mathematical thinking of others. • Compare the efficiency of a method to those expressed by others. • Recognize errors and suggest how to correctly solve the task. • Justify results by explaining methods and processes. • Construct possible arguments based on evidence. **Clarifications:** Teachers who encourage students to engage in discussions that reflect on the mathematical thinking of self and others: • Establish a culture in which students ask questions of the teacher and their peers, and error is an opportunity for learning. • Create opportunities for students to discuss their thinking with peers. • Select, sequence and present student work to advance and deepen understanding of correct and increasingly efficient methods. • Develop students' ability to justify methods and compare their responses to the responses of their peers.

MA.K12.MTR.5.1:	Use patterns and structure to help understand and connect mathematical concepts. Mathematicians who use patterns and structure to help understand and connect mathematical concepts: • Focus on relevant details within a problem. • Create plans and procedures to logically order events, steps or ideas to solve problems. • Decompose a complex problem into manageable parts. • Relate previously learned concepts to new concepts. • Look for similarities among problems. • Connect solutions of problems to more complicated large-scale situations. **Clarifications:** Teachers who encourage students to use patterns and structure to help understand and connect mathematical concepts: • Help students recognize the patterns in the world around them and connect these patterns to mathematical concepts. • Support students to develop generalizations based on the similarities found among problems. • Provide opportunities for students to create plans and procedures to solve problems. • Develop students' ability to construct relationships between their current understanding and more sophisticated ways of thinking.
MA.K12.MTR.6.1:	Assess the reasonableness of solutions. Mathematicians who assess the reasonableness of solutions: • Estimate to discover possible solutions. • Use benchmark quantities to determine if a solution makes sense. • Check calculations when solving problems. • Verify possible solutions by explaining the methods used. • Evaluate results based on the given context. **Clarifications:** Teachers who encourage students to assess the reasonableness of solutions: • Have students estimate or predict solutions prior to solving. • Prompt students to continually ask, "Does this solution make sense? How do you know?" • Reinforce that students check their work as they progress within and after a task. • Strengthen students' ability to verify solutions through justifications.
MA.K12.MTR.7.1:	Apply mathematics to real-world contexts. Mathematicians who apply mathematics to real-world contexts: • Connect mathematical concepts to everyday experiences. • Use models and methods to understand, represent and solve problems. • Perform investigations to gather data or determine if a method is appropriate. • Redesign models and methods to improve accuracy or efficiency. **Clarifications:** Teachers who encourage students to apply mathematics to real-world contexts: • Provide opportunities for students to create models, both concrete and abstract, and perform investigations. • Challenge students to question the accuracy of their models and methods. • Support students as they validate conclusions by comparing them to the given situation. • Indicate how various concepts can be applied to other disciplines.
ELA.K12.EE.1.1:	Cite evidence to explain and justify reasoning. **Clarifications:** K-1 Students include textual evidence in their oral communication with guidance and support from adults. The evidence can consist of details from the text without naming the text. During 1st grade, students learn how to incorporate the evidence in their writing. 2-3 Students include relevant textual evidence in their written and oral communication. Students should name the text when they refer to it. In 3rd grade, students should use a combination of direct and indirect citations. 4-5 Students continue with previous skills and reference comments made by speakers and peers. Students cite texts that they've directly quoted, paraphrased, or used for information. When writing, students will use the form of citation dictated by the instructor or the style guide referenced by the instructor. 6-8 Students continue with previous skills and use a style guide to create a proper citation. 9-12 Students continue with previous skills and should be aware of existing style guides and the ways in which they differ.
ELA.K12.EE.2.1:	Read and comprehend grade-level complex texts proficiently. **Clarifications:** See Text Complexity for grade-level complexity bands and a text complexity rubric.
ELA.K12.EE.3.1:	Make inferences to support comprehension. **Clarifications:** Students will make inferences before the words infer or inference are introduced. Kindergarten students will answer questions like "Why is the girl smiling?" or make predictions about what will happen based on the title page. Students will use the terms and apply them in 2nd grade and beyond.
ELA.K12.EE.4.1:	Use appropriate collaborative techniques and active listening skills when engaging in discussions in a variety of situations. **Clarifications:** In kindergarten, students learn to listen to one another respectfully. In grades 1-2, students build upon these skills by justifying what they are thinking. For example: "I think _____ because _____." The collaborative conversations are becoming academic conversations. In grades 3-12, students engage in academic conversations discussing claims and justifying their reasoning, refining and applying skills. Students build on ideas, propel the conversation, and support claims and counterclaims with evidence.

ELA.K12.EE.5.1:	Use the accepted rules governing a specific format to create quality work. **Clarifications:** Students will incorporate skills learned into work products to produce quality work. For students to incorporate these skills appropriately, they must receive instruction. A 3rd grade student creating a poster board display must have instruction in how to effectively present information to do quality work.
ELA.K12.EE.6.1:	Use appropriate voice and tone when speaking or writing. **Clarifications:** In kindergarten and 1st grade, students learn the difference between formal and informal language. For example, the way we talk to our friends differs from the way we speak to adults. In 2nd grade and beyond, students practice appropriate social and academic language to discuss texts.
ELD.K12.ELL.SI.1:	English language learners communicate for social and instructional purposes within the school setting.

General Course Information and Notes

VERSION DESCRIPTION

Students who have varying levels of experience on a band instrument to explore high-quality beginning band music. They develop foundational instrumental techniques, skills, and music literacy. Public performances may serve as a culmination of specific instructional goals. Students may be required to attend and/or participate in rehearsals and performances outside the school day to support, extend, and assess learning in the classroom. This course may also require students to obtain a musical instrument (e.g., borrow, rent, purchase) from an outside source.

GENERAL NOTES

The course descriptions for Elementary Music Electives have been designed to accommodate the mixing of grade levels, experience, and abilities within the same ensemble. Music teachers for elementary music electives should select the most appropriate set of grade-specific benchmarks based on each student's experience, music literacy, and available instruction time. Once an elementary student has entered a course at a specific level of benchmarks, he or she should progress to the next set of grade-specific benchmarks in the sequence for purposes of assessment. If a student reaches the Grade 5 level prior to 5th grade, he or she may continue to participate in the ensemble; the teacher is responsible for designating an appropriate means of increasing the rigor for the student in each subsequent year.

Examples:

- A 3rd grade student beginning in Elementary Band may receive instruction and be assessed according to the Grade 3 benchmarks.
- A 2nd grade student who has taken violin lessons for several years and who is musically literate may receive instruction in Elementary Orchestra and be assessed according to the Grade 5 benchmarks, repeating use of these benchmarks with increased rigor in each subsequent year.
- A 5th grader singing in Elementary Chorus for the first time may receive instruction and be assessed according to the Grade 3 benchmarks.
- A 4th grader in Handbell Ensemble (Special Ensemble) for the first time may receive instruction and be assessed according to the Grade 3 benchmarks. The same student, in Orff Ensemble (Special Ensemble) for the second year, may receive instruction and be assessed according to the Grade 4 benchmarks.

Florida's Benchmarks for Excellent Student Thinking (B.E.S.T.) Standards
This course includes Florida's B.E.S.T. ELA Expectations (EE) and Mathematical Thinking and Reasoning Standards (MTRs) for students. Florida educators should intentionally embed these standards within the content and their instruction as applicable. For guidance on the implementation of the EEs and MTRs, please visit cpalms.org/Standards/BEST_Standards.aspx and select the appropriate B.E.S.T. Standards package.

English Language Development ELD Standards Special Notes Section:
Teachers are required to provide listening, speaking, reading and writing instruction that allows English language learners (ELL) to communicate for social and instructional purposes within the school setting. For the given level of English language proficiency and with visual, graphic, or interactive support, students will interact with grade level words, expressions, sentences and discourse to process or produce language necessary for academic success. The ELD standard should specify a relevant content area concept or topic of study chosen by curriculum developers and teachers which maximizes an ELL's need for communication and social skills. To access an ELL supporting document which delineates performance definitions and descriptors, please click on the following link: cpalms.org/uploads/docs/standards/eld/SI.pdf

GENERAL INFORMATION

Course Number: 5013020

Course Path: Section: Grades PreK to 12 Education Courses > **Grade Group:** Grades PreK to 5 Education Courses > **Subject:** Music Education > **SubSubject:** General >
Abbreviated Title: ELEM BAND
Course Length: Year (Y)

Course Status: Draft - Course Pending Approval

Grade Level(s): K,1,2,3,4,5,PreK

Educator Certifications

Music Education (Elementary Grades 1-6)
Music (Elementary and Secondary Grades K-12)
Instrumental Music (Elementary and Secondary Grades K-12)

Elementary Orchestra (#5013030) 2022 - And Beyond

Course Standards

Name	Description
MU.3.C.1.1:	Describe listening skills and how they support appreciation of musical works. **Clarifications:** e.g., focus: form, instrumentation, tempo, dynamics; organize: listening maps, active listening, checklists
MU.3.C.1.2:	Respond to a musical work in a variety of ways and compare individual interpretations. **Clarifications:** e.g., move, draw, sing, play, gesture, conduct
MU.3.C.1.3:	Identify families of orchestral and band instruments. **Clarifications:** e.g., strings, woodwinds, brass, percussion, keyboards
MU.3.C.2.1:	Evaluate performances of familiar music using teacher-established criteria.
MU.3.C.3.1:	Identify musical characteristics and elements within a piece of music when discussing the value of the work. **Clarifications:** e.g., tempo, rhythm, timbre, form, instrumentation, texture
MU.3.F.2.1:	Identify musicians in the school, community, and media. **Clarifications:** e.g., band, chorus, and/or orchestra member; music teacher; cantor, choir director, or song leader in religious services
MU.3.F.2.2:	Describe opportunities for personal music-making. **Clarifications:** e.g., performing ensembles, individual lessons, community and church music groups, family, playground, computer-generated music
MU.3.F.3.1:	Collaborate with others to create a musical presentation and acknowledge individual contributions as an integral part of the whole. **Clarifications:** e.g., work together, communicate effectively, share tasks and responsibilities, work well in cooperative learning groups
MU.3.H.1.2:	Identify significant information about specified composers and one or more of their musical works.
MU.3.H.3.1:	Experience and discuss, using correct music and other relevant content-area vocabulary, similarities in the use of pattern, line, and form in music and other teacher-selected contexts. **Clarifications:** e.g., in dance, visual art, language arts, pulse, rhythm, fluency
MU.3.O.1.1:	Identify, using correct music vocabulary, the elements in a musical work. **Clarifications:** e.g., rhythm, pitch, timbre, form
MU.3.O.1.2:	Identify and describe the musical form of a familiar song. **Clarifications:** e.g., AB, ABA, ABABA, call-and-response, verse/refrain, rondo, intro, coda
MU.3.O.3.1:	Describe how tempo and dynamics can change the mood or emotion of a piece of music.
MU.3.S.2.1:	Identify patterns in songs to aid the development of sequencing and memorization skills. **Clarifications:** e.g., parts of a round, parts of a layered work
MU.3.S.3.3:	Sing simple la-sol-mi-re-do patterns at sight. **Clarifications:** e.g., reading from hand signs; reading from nontraditional or traditional notation
MU.4.C.1.1:	Develop effective listening strategies and describe how they can support appreciation of musical works. **Clarifications:** e.g., listen for form, instrumentation, tempo, dynamics, melodic line, rhythm patterns; organize thoughts using listening maps, active listening, checklists
MU.4.C.1.2:	Describe, using correct music vocabulary, what is heard in a specific musical work. **Clarifications:** e.g., movement of melodic line, tempo, repeated and contrasting patterns
MU.4.C.1.3:	Classify orchestral and band instruments as strings, woodwinds, brass, percussion, or keyboard.
MU.4.C.2.1:	Identify and describe basic music performance techniques to provide a foundation for critiquing one's self and others. **Clarifications:** e.g., intonation, balance, blend, timbre, posture, breath support
MU.4.C.2.2:	Critique specific techniques in one's own and others performances using teacher-established criteria.
MU.4.C.3.1:	Describe characteristics that make various musical works appealing. **Clarifications:**

	e.g., tempo, rhythm, dynamics, blend, timbre, form, texture, instrumentation
MU.4.F.2.1:	Describe roles and careers of selected musicians. **Clarifications:** e.g., teacher, conductor, composer, studio musician, recording technician, sound engineer, entertainer
MU.4.F.3.1:	Identify the characteristics and behaviors displayed by successful student musicians, and discuss how these qualities will contribute to success beyond the music classroom. **Clarifications:** e.g., punctual, prepared, dependable, self-disciplined, solutions-oriented, shows initiative, uses time wisely
MU.4.F.3.2:	Discuss the safe, legal way to download songs and other media. **Clarifications:** e.g., sharing personal and financial information, copying and sharing music
MU.4.H.1.2:	Describe the influence of selected composers on the musical works and practices or traditions of their time.
MU.4.H.3.1:	Identify connections among music and other contexts, using correct music and other relevant content-area vocabulary, and explore how learning in one academic area can help with knowledge or skill acquisition in a different academic area. **Clarifications:** e.g., movement, form, repetition, rhythmic patterns/numeric patterns, fractions, vibrations/sound waves
MU.4.O.1.1:	Compare musical elements in different types of music, using correct music vocabulary, as a foundation for understanding the structural conventions of specific styles. **Clarifications:** e.g., rules of rhythm, melody, timbre, form, tonality, harmony, meter; styles: Classical, Baroque
MU.4.O.3.1:	Identify how expressive elements and lyrics affect the mood or emotion of a song. **Clarifications:** e.g., tempo, dynamics, phrasing, articulation
MU.4.O.3.2:	Apply expressive elements to a vocal or instrumental piece and, using correct music vocabulary, explain one's choices.
MU.4.S.1.3:	Arrange a familiar song for voices or instruments by manipulating form. **Clarifications:** e.g., introduction, interlude/bridge, coda, ABA, rondo
MU.4.S.2.1:	Apply knowledge of musical structure to aid in sequencing and memorization and to internalize details of rehearsal and performance.
MU.4.S.3.3:	Perform extended pentatonic melodies at sight. **Clarifications:** e.g., high do, low sol, low la; vocal and/or instrumental
MU.5.C.1.1:	Discuss and apply listening strategies to support appreciation of musical works. **Clarifications:** e.g., focus: structure, instrumentation, tempo, dynamics, melodic line, rhythm patterns, style/genre; organize: listening maps, active listening, checklists
MU.5.C.1.2:	Hypothesize and discuss, using correct music vocabulary, the composer's intent for a specific musical work. **Clarifications:** e.g., title, historical notes, quality recordings, instrumentation, expressive elements
MU.5.C.1.3:	Identify, aurally, selected instruments of the band and orchestra. **Clarifications:** e.g., violin, cello, string bass, flute, clarinet, oboe, bassoon, trumpet, trombone, tuba, French horn, bass drum, snare drum, xylophone, chimes, piano, harpsichord
MU.5.C.2.1:	Define criteria, using correct music vocabulary, to critique one's own and others performance. **Clarifications:** e.g., intonation, balance, blend, timbre
MU.5.C.2.2:	Describe changes, using correct music vocabulary, in one's own and/or others performance over time.
MU.5.C.3.1:	Develop criteria to evaluate an exemplary musical work from a specific period or genre.
MU.5.F.2.1:	Describe jobs associated with various types of concert venues and performing arts centers. **Clarifications:** e.g., music merchant, ticket agent, marketer, agent, security guard, food-and-beverage merchant
MU.5.F.2.2:	Explain why live performances are important to the career of the artist and the success of performance venues.
MU.5.F.3.1:	Examine and discuss the characteristics and behaviors displayed by successful student musicians that can be applied outside the music classroom. **Clarifications:** e.g., dedicated, works toward mastery, punctual, prepared, dependable, self-disciplined, solutions-oriented
MU.5.F.3.2:	Practice safe, legal, and responsible acquisition and use of music media, and describe why it is important to do so. **Clarifications:** e.g., downloading music and other digital media, sharing personal and financial information, copying music
MU.5.H.1.2:	Compare and describe the compositional characteristics used by two or more composers whose works are studied in class.
MU.5.H.3.1:	Examine critical-thinking processes in music and describe how they can be transferred to other disciplines. **Clarifications:** e.g., reading, writing, observing, listening, evaluating, embellishing, revising
MU.5.O.1.1:	Analyze, using correct music vocabulary, the use of musical elements in various styles of music as a foundation for understanding the creative process. **Clarifications:**

	e.g., rhythm patterns, melody, timbre, form, tonality, harmony, meter, key; styles: Classical, Baroque, Romantic, nationalistic, jazz
MU.5.O.3.1:	Examine and explain how expressive elements, when used in a selected musical work, affect personal response. **Clarifications:** e.g., tempo, dynamics, timbre, texture, phrasing, articulation
MU.5.O.3.2:	Perform expressive elements in a vocal or instrumental piece as indicated by the score and/or conductor.
MU.5.S.1.3:	Arrange a familiar song by manipulating specified aspects of music. **Clarifications:** e.g., dynamics, tempo, lyrics, form, rhythm, instrumentation
MU.5.S.1.4:	Sing or play simple melodic patterns by ear with support from the teacher.
MU.5.S.2.1:	Use expressive elements and knowledge of musical structure to aid in sequencing and memorization and to internalize details of rehearsals and performance.
MU.5.S.2.2:	Apply performance techniques to familiar music.
MU.5.S.3.3:	Perform simple diatonic melodies at sight. **Clarifications:** e.g., vocal and/or instrumental
MA.K12.MTR.1.1:	Mathematicians who participate in effortful learning both individually and with others: • Analyze the problem in a way that makes sense given the task. • Ask questions that will help with solving the task. • Build perseverance by modifying methods as needed while solving a challenging task. • Stay engaged and maintain a positive mindset when working to solve tasks. • Help and support each other when attempting a new method or approach. **Clarifications:** Teachers who encourage students to participate actively in effortful learning both individually and with others: • Cultivate a community of growth mindset learners. • Foster perseverance in students by choosing tasks that are challenging. • Develop students' ability to analyze and problem solve. • Recognize students' effort when solving challenging problems.
MA.K12.MTR.2.1:	Demonstrate understanding by representing problems in multiple ways. Mathematicians who demonstrate understanding by representing problems in multiple ways: • Build understanding through modeling and using manipulatives. • Represent solutions to problems in multiple ways using objects, drawings, tables, graphs and equations. • Progress from modeling problems with objects and drawings to using algorithms and equations. • Express connections between concepts and representations. • Choose a representation based on the given context or purpose. **Clarifications:** Teachers who encourage students to demonstrate understanding by representing problems in multiple ways: • Help students make connections between concepts and representations. • Provide opportunities for students to use manipulatives when investigating concepts. • Guide students from concrete to pictorial to abstract representations as understanding progresses. • Show students that various representations can have different purposes and can be useful in different situations.
MA.K12.MTR.3.1:	Complete tasks with mathematical fluency. Mathematicians who complete tasks with mathematical fluency: • Select efficient and appropriate methods for solving problems within the given context. • Maintain flexibility and accuracy while performing procedures and mental calculations. • Complete tasks accurately and with confidence. • Adapt procedures to apply them to a new context. • Use feedback to improve efficiency when performing calculations. **Clarifications:** Teachers who encourage students to complete tasks with mathematical fluency: • Provide students with the flexibility to solve problems by selecting a procedure that allows them to solve efficiently and accurately. • Offer multiple opportunities for students to practice efficient and generalizable methods. • Provide opportunities for students to reflect on the method they used and determine if a more efficient method could have been used.
MA.K12.MTR.4.1:	Engage in discussions that reflect on the mathematical thinking of self and others. Mathematicians who engage in discussions that reflect on the mathematical thinking of self and others: • Communicate mathematical ideas, vocabulary and methods effectively. • Analyze the mathematical thinking of others. • Compare the efficiency of a method to those expressed by others. • Recognize errors and suggest how to correctly solve the task. • Justify results by explaining methods and processes. • Construct possible arguments based on evidence. **Clarifications:** Teachers who encourage students to engage in discussions that reflect on the mathematical thinking of self and others: • Establish a culture in which students ask questions of the teacher and their peers, and error is an opportunity for learning. • Create opportunities for students to discuss their thinking with peers. • Select, sequence and present student work to advance and deepen understanding of correct and increasingly efficient methods. • Develop students' ability to justify methods and compare their responses to the responses of their peers.

MA.K12.MTR.5.1:	Use patterns and structure to help understand and connect mathematical concepts. Mathematicians who use patterns and structure to help understand and connect mathematical concepts: • Focus on relevant details within a problem. • Create plans and procedures to logically order events, steps or ideas to solve problems. • Decompose a complex problem into manageable parts. • Relate previously learned concepts to new concepts. • Look for similarities among problems. • Connect solutions of problems to more complicated large-scale situations. **Clarifications:** Teachers who encourage students to use patterns and structure to help understand and connect mathematical concepts: • Help students recognize the patterns in the world around them and connect these patterns to mathematical concepts. • Support students to develop generalizations based on the similarities found among problems. • Provide opportunities for students to create plans and procedures to solve problems. • Develop students' ability to construct relationships between their current understanding and more sophisticated ways of thinking.
MA.K12.MTR.6.1:	Assess the reasonableness of solutions. Mathematicians who assess the reasonableness of solutions: • Estimate to discover possible solutions. • Use benchmark quantities to determine if a solution makes sense. • Check calculations when solving problems. • Verify possible solutions by explaining the methods used. • Evaluate results based on the given context. **Clarifications:** Teachers who encourage students to assess the reasonableness of solutions: • Have students estimate or predict solutions prior to solving. • Prompt students to continually ask, "Does this solution make sense? How do you know?" • Reinforce that students check their work as they progress within and after a task. • Strengthen students' ability to verify solutions through justifications.
MA.K12.MTR.7.1:	Apply mathematics to real-world contexts. Mathematicians who apply mathematics to real-world contexts: • Connect mathematical concepts to everyday experiences. • Use models and methods to understand, represent and solve problems. • Perform investigations to gather data or determine if a method is appropriate. • Redesign models and methods to improve accuracy or efficiency. **Clarifications:** Teachers who encourage students to apply mathematics to real-world contexts: • Provide opportunities for students to create models, both concrete and abstract, and perform investigations. • Challenge students to question the accuracy of their models and methods. • Support students as they validate conclusions by comparing them to the given situation. • Indicate how various concepts can be applied to other disciplines.
ELA.K12.EE.1.1:	Cite evidence to explain and justify reasoning. **Clarifications:** K-1 Students include textual evidence in their oral communication with guidance and support from adults. The evidence can consist of details from the text without naming the text. During 1st grade, students learn how to incorporate the evidence in their writing. 2-3 Students include relevant textual evidence in their written and oral communication. Students should name the text when they refer to it. In 3rd grade, students should use a combination of direct and indirect citations. 4-5 Students continue with previous skills and reference comments made by speakers and peers. Students cite texts that they've directly quoted, paraphrased, or used for information. When writing, students will use the form of citation dictated by the instructor or the style guide referenced by the instructor. 6-8 Students continue with previous skills and use a style guide to create a proper citation. 9-12 Students continue with previous skills and should be aware of existing style guides and the ways in which they differ.
ELA.K12.EE.2.1:	Read and comprehend grade-level complex texts proficiently. **Clarifications:** See Text Complexity for grade-level complexity bands and a text complexity rubric.
ELA.K12.EE.3.1:	Make inferences to support comprehension. **Clarifications:** Students will make inferences before the words infer or inference are introduced. Kindergarten students will answer questions like "Why is the girl smiling?" or make predictions about what will happen based on the title page. Students will use the terms and apply them in 2nd grade and beyond.
ELA.K12.EE.4.1:	Use appropriate collaborative techniques and active listening skills when engaging in discussions in a variety of situations. **Clarifications:** In kindergarten, students learn to listen to one another respectfully. In grades 1-2, students build upon these skills by justifying what they are thinking. For example: "I think _____ because _____." The collaborative conversations are becoming academic conversations. In grades 3-12, students engage in academic conversations discussing claims and justifying their reasoning, refining and applying skills. Students build on ideas, propel the conversation, and support claims and counterclaims with evidence.

ELA.K12.EE.5.1:	Use the accepted rules governing a specific format to create quality work. **Clarifications:** Students will incorporate skills learned into work products to produce quality work. For students to incorporate these skills appropriately, they must receive instruction. A 3rd grade student creating a poster board display must have instruction in how to effectively present information to do quality work.
ELA.K12.EE.6.1:	Use appropriate voice and tone when speaking or writing. **Clarifications:** In kindergarten and 1st grade, students learn the difference between formal and informal language. For example, the way we talk to our friends differs from the way we speak to adults. In 2nd grade and beyond, students practice appropriate social and academic language to discuss texts.
ELD.K12.ELL.SI.1:	English language learners communicate for social and instructional purposes within the school setting.
SC.4.P.10.3:	Investigate and explain that sound is produced by vibrating objects and that pitch depends on how fast or slow the object vibrates.

General Course Information and Notes

VERSION DESCRIPTION

Students who have varying levels of experience on orchestral string instruments explore high-quality literature written and/or arranged for string orchestra. Rehearsals focus on the development of instrumental techniques and skills, critical listening and aural skills, music literacy, ensemble skills, and aesthetic musical awareness. Public performances may serve as a culmination of specific instructional goals. Students may be required to attend and/or participate in rehearsals and performances outside the school day to support, extend, and assess learning in the classroom. This course may require students to obtain a musical instrument (e.g., borrow, rent, purchase) from an outside source.

GENERAL NOTES

The course descriptions for Elementary Music Electives have been designed to accommodate the mixing of grade levels, experience, and abilities within the same ensemble. Music teachers for elementary music electives should select the most appropriate set of grade-specific benchmarks based on each student's experience, music literacy, and available instruction time. Once an elementary student has entered a course at a specific level of benchmarks, he or she should progress to the next set of grade-specific benchmarks in the sequence for purposes of assessment. If a student reaches the Grade 5 level prior to 5th grade, he or she may continue to participate in the ensemble; the teacher is responsible for designating an appropriate means of increasing the rigor for the student in each subsequent year.

Examples:

- A 3rd grade student beginning in Elementary Band may receive instruction and be assessed according to the Grade 3 benchmarks.
- A 2nd grade student who has taken violin lessons for several years and who is musically literate may receive instruction in Elementary Orchestra and be assessed according to the Grade 5 benchmarks, repeating use of these benchmarks with increased rigor in each subsequent year.
- A 5th grader singing in Elementary Chorus for the first time may receive instruction and be assessed according to the Grade 3 benchmarks.
- A 4th grader in Handbell Ensemble (Special Ensemble) for the first time may receive instruction and be assessed according to the Grade 3 benchmarks. The same student, in Orff Ensemble (Special Ensemble) for the second year, may receive instruction and be assessed according to the Grade 4 benchmarks.

Florida's Benchmarks for Excellent Student Thinking (B.E.S.T.) Standards
This course includes Florida's B.E.S.T. ELA Expectations (EE) and Mathematical Thinking and Reasoning Standards (MTRs) for students. Florida educators should intentionally embed these standards within the content and their instruction as applicable. For guidance on the implementation of the EEs and MTRs, please visit cpalms.org/Standards/BEST_Standards.aspx and select the appropriate B.E.S.T. Standards package.

English Language Development ELD Standards Special Notes Section:
Teachers are required to provide listening, speaking, reading and writing instruction that allows English language learners (ELL) to communicate for social and instructional purposes within the school setting. For the given level of English language proficiency and with visual, graphic, or interactive support, students will interact with grade level words, expressions, sentences and discourse to process or produce language necessary for academic success. The ELD standard should specify a relevant content area concept or topic of study chosen by curriculum developers and teachers which maximizes an ELL's need for communication and social skills. To access an ELL supporting document which delineates performance definitions and descriptors, please click on the following link: cpalms.org/uploads/docs/standards/eld/SI.pdf

GENERAL INFORMATION

Course Number: 5013030

Course Path: Section: Grades PreK to 12 Education Courses > **Grade Group:** Grades PreK to 5 Education Courses > **Subject:** Music Education > **SubSubject:** General >
Abbreviated Title: ELEM ORCHESTRA
Course Length: Year (Y)

Course Status: Draft - Course Pending Approval
Grade Level(s): K,1,2,3,4,5,PreK

Educator Certifications

Music Education (Elementary Grades 1-6)
Music (Elementary and Secondary Grades K-12)
Instrumental Music (Elementary and Secondary Grades K-12)

Elementary Special Ensemble (#5013035) 2022 - And Beyond

Course Standards

Name	Description
MU.3.C.1.1:	Describe listening skills and how they support appreciation of musical works. **Clarifications:** e.g., focus: form, instrumentation, tempo, dynamics; organize: listening maps, active listening, checklists
MU.3.C.1.2:	Respond to a musical work in a variety of ways and compare individual interpretations. **Clarifications:** e.g., move, draw, sing, play, gesture, conduct
MU.3.C.2.1:	Evaluate performances of familiar music using teacher-established criteria.
MU.3.C.3.1:	Identify musical characteristics and elements within a piece of music when discussing the value of the work. **Clarifications:** e.g., tempo, rhythm, timbre, form, instrumentation, texture
MU.3.F.2.1:	Identify musicians in the school, community, and media. **Clarifications:** e.g., band, chorus, and/or orchestra member; music teacher; cantor, choir director, or song leader in religious services
MU.3.F.2.2:	Describe opportunities for personal music-making. **Clarifications:** e.g., performing ensembles, individual lessons, community and church music groups, family, playground, computer-generated music
MU.3.F.3.1:	Collaborate with others to create a musical presentation and acknowledge individual contributions as an integral part of the whole. **Clarifications:** e.g., work together, communicate effectively, share tasks and responsibilities, work well in cooperative learning groups
MU.3.H.1.2:	Identify significant information about specified composers and one or more of their musical works.
MU.3.H.3.1:	Experience and discuss, using correct music and other relevant content-area vocabulary, similarities in the use of pattern, line, and form in music and other teacher-selected contexts. **Clarifications:** e.g., in dance, visual art, language arts, pulse, rhythm, fluency
MU.3.O.1.1:	Identify, using correct music vocabulary, the elements in a musical work. **Clarifications:** e.g., rhythm, pitch, timbre, form
MU.3.O.1.2:	Identify and describe the musical form of a familiar song. **Clarifications:** e.g., AB, ABA, ABABA, call-and-response, verse/refrain, rondo, intro, coda
MU.3.O.3.1:	Describe how tempo and dynamics can change the mood or emotion of a piece of music.
MU.3.S.2.1:	Identify patterns in songs to aid the development of sequencing and memorization skills. **Clarifications:** e.g., parts of a round, parts of a layered work
MU.3.S.3.3:	Sing simple la-sol-mi-re-do patterns at sight. **Clarifications:** e.g., reading from hand signs; reading from nontraditional or traditional notation
MU.4.C.1.1:	Develop effective listening strategies and describe how they can support appreciation of musical works. **Clarifications:** e.g., listen for form, instrumentation, tempo, dynamics, melodic line, rhythm patterns; organize thoughts using listening maps, active listening, checklists
MU.4.C.1.2:	Describe, using correct music vocabulary, what is heard in a specific musical work. **Clarifications:** e.g., movement of melodic line, tempo, repeated and contrasting patterns
MU.4.C.2.1:	Identify and describe basic music performance techniques to provide a foundation for critiquing one's self and others. **Clarifications:** e.g., intonation, balance, blend, timbre, posture, breath support
MU.4.C.2.2:	Critique specific techniques in one's own and others performances using teacher-established criteria.
MU.4.C.3.1:	Describe characteristics that make various musical works appealing. **Clarifications:** e.g., tempo, rhythm, dynamics, blend, timbre, form, texture, instrumentation
MU.4.F.2.1:	Describe roles and careers of selected musicians. **Clarifications:** e.g., teacher, conductor, composer, studio musician, recording technician, sound engineer, entertainer

MU.4.F.3.1:	Identify the characteristics and behaviors displayed by successful student musicians, and discuss how these qualities will contribute to success beyond the music classroom. **Clarifications:** e.g., punctual, prepared, dependable, self-disciplined, solutions-oriented, shows initiative, uses time wisely
MU.4.H.1.2:	Describe the influence of selected composers on the musical works and practices or traditions of their time.
MU.4.H.3.1:	Identify connections among music and other contexts, using correct music and other relevant content-area vocabulary, and explore how learning in one academic area can help with knowledge or skill acquisition in a different academic area. **Clarifications:** e.g., movement, form, repetition, rhythmic patterns/numeric patterns, fractions, vibrations/sound waves
MU.4.O.1.1:	Compare musical elements in different types of music, using correct music vocabulary, as a foundation for understanding the structural conventions of specific styles. **Clarifications:** e.g., rules of rhythm, melody, timbre, form, tonality, harmony, meter; styles: Classical, Baroque
MU.4.O.3.1:	Identify how expressive elements and lyrics affect the mood or emotion of a song. **Clarifications:** e.g., tempo, dynamics, phrasing, articulation
MU.4.O.3.2:	Apply expressive elements to a vocal or instrumental piece and, using correct music vocabulary, explain one's choices.
MU.4.S.1.3:	Arrange a familiar song for voices or instruments by manipulating form. **Clarifications:** e.g., introduction, interlude/bridge, coda, ABA, rondo
MU.4.S.2.1:	Apply knowledge of musical structure to aid in sequencing and memorization and to internalize details of rehearsal and performance.
MU.4.S.3.3:	Perform extended pentatonic melodies at sight. **Clarifications:** e.g., high do, low sol, low la; vocal and/or instrumental
MU.5.C.1.1:	Discuss and apply listening strategies to support appreciation of musical works. **Clarifications:** e.g., focus: structure, instrumentation, tempo, dynamics, melodic line, rhythm patterns, style/genre; organize: listening maps, active listening, checklists
MU.5.C.1.2:	Hypothesize and discuss, using correct music vocabulary, the composer's intent for a specific musical work. **Clarifications:** e.g., title, historical notes, quality recordings, instrumentation, expressive elements
MU.5.C.2.1:	Define criteria, using correct music vocabulary, to critique one's own and others performance. **Clarifications:** e.g., intonation, balance, blend, timbre
MU.5.C.2.2:	Describe changes, using correct music vocabulary, in one's own and/or others performance over time.
MU.5.C.3.1:	Develop criteria to evaluate an exemplary musical work from a specific period or genre.
MU.5.F.2.1:	Describe jobs associated with various types of concert venues and performing arts centers. **Clarifications:** e.g., music merchant, ticket agent, marketer, agent, security guard, food-and-beverage merchant
MU.5.F.2.2:	Explain why live performances are important to the career of the artist and the success of performance venues.
MU.5.F.3.1:	Examine and discuss the characteristics and behaviors displayed by successful student musicians that can be applied outside the music classroom. **Clarifications:** e.g., dedicated, works toward mastery, punctual, prepared, dependable, self-disciplined, solutions-oriented
MU.5.H.1.2:	Compare and describe the compositional characteristics used by two or more composers whose works are studied in class.
MU.5.H.3.1:	Examine critical-thinking processes in music and describe how they can be transferred to other disciplines. **Clarifications:** e.g., reading, writing, observing, listening, evaluating, embellishing, revising
MU.5.O.1.1:	Analyze, using correct music vocabulary, the use of musical elements in various styles of music as a foundation for understanding the creative process. **Clarifications:** e.g., rhythm patterns, melody, timbre, form, tonality, harmony, meter, key; styles: Classical, Baroque, Romantic, nationalistic, jazz
MU.5.O.3.1:	Examine and explain how expressive elements, when used in a selected musical work, affect personal response. **Clarifications:** e.g., tempo, dynamics, timbre, texture, phrasing, articulation
MU.5.O.3.2:	Perform expressive elements in a vocal or instrumental piece as indicated by the score and/or conductor.
MU.5.S.1.3:	Arrange a familiar song by manipulating specified aspects of music. **Clarifications:** e.g., dynamics, tempo, lyrics, form, rhythm, instrumentation
MU.5.S.1.4:	Sing or play simple melodic patterns by ear with support from the teacher.
MU.5.S.2.1:	Use expressive elements and knowledge of musical structure to aid in sequencing and memorization and to internalize details of rehearsals and performance.
MU.5.S.2.2:	Apply performance techniques to familiar music.
MU.5.S.3.3:	Perform simple diatonic melodies at sight. **Clarifications:** e.g., vocal and/or instrumental

MA.K12.MTR.1.1:

Mathematicians who participate in effortful learning both individually and with others:

- Analyze the problem in a way that makes sense given the task.
- Ask questions that will help with solving the task.
- Build perseverance by modifying methods as needed while solving a challenging task.
- Stay engaged and maintain a positive mindset when working to solve tasks.
- Help and support each other when attempting a new method or approach.

Clarifications:

Teachers who encourage students to participate actively in effortful learning both individually and with others:

- Cultivate a community of growth mindset learners.
- Foster perseverance in students by choosing tasks that are challenging.
- Develop students' ability to analyze and problem solve.
- Recognize students' effort when solving challenging problems.

MA.K12.MTR.2.1:

Demonstrate understanding by representing problems in multiple ways.

Mathematicians who demonstrate understanding by representing problems in multiple ways:

- Build understanding through modeling and using manipulatives.
- Represent solutions to problems in multiple ways using objects, drawings, tables, graphs and equations.
- Progress from modeling problems with objects and drawings to using algorithms and equations.
- Express connections between concepts and representations.
- Choose a representation based on the given context or purpose.

Clarifications:

Teachers who encourage students to demonstrate understanding by representing problems in multiple ways:

- Help students make connections between concepts and representations.
- Provide opportunities for students to use manipulatives when investigating concepts.
- Guide students from concrete to pictorial to abstract representations as understanding progresses.
- Show students that various representations can have different purposes and can be useful in different situations.

MA.K12.MTR.3.1:

Complete tasks with mathematical fluency.

Mathematicians who complete tasks with mathematical fluency:

- Select efficient and appropriate methods for solving problems within the given context.
- Maintain flexibility and accuracy while performing procedures and mental calculations.
- Complete tasks accurately and with confidence.
- Adapt procedures to apply them to a new context.
- Use feedback to improve efficiency when performing calculations.

Clarifications:

Teachers who encourage students to complete tasks with mathematical fluency:

- Provide students with the flexibility to solve problems by selecting a procedure that allows them to solve efficiently and accurately.
- Offer multiple opportunities for students to practice efficient and generalizable methods.
- Provide opportunities for students to reflect on the method they used and determine if a more efficient method could have been used.

MA.K12.MTR.4.1:

Engage in discussions that reflect on the mathematical thinking of self and others.

Mathematicians who engage in discussions that reflect on the mathematical thinking of self and others:

- Communicate mathematical ideas, vocabulary and methods effectively.
- Analyze the mathematical thinking of others.
- Compare the efficiency of a method to those expressed by others.
- Recognize errors and suggest how to correctly solve the task.
- Justify results by explaining methods and processes.
- Construct possible arguments based on evidence.

Clarifications:

Teachers who encourage students to engage in discussions that reflect on the mathematical thinking of self and others:

- Establish a culture in which students ask questions of the teacher and their peers, and error is an opportunity for learning.
- Create opportunities for students to discuss their thinking with peers.
- Select, sequence and present student work to advance and deepen understanding of correct and increasingly efficient methods.
- Develop students' ability to justify methods and compare their responses to the responses of their peers.

MA.K12.MTR.5.1:

Use patterns and structure to help understand and connect mathematical concepts.

Mathematicians who use patterns and structure to help understand and connect mathematical concepts:

- Focus on relevant details within a problem.
- Create plans and procedures to logically order events, steps or ideas to solve problems.
- Decompose a complex problem into manageable parts.
- Relate previously learned concepts to new concepts.
- Look for similarities among problems.
- Connect solutions of problems to more complicated large-scale situations.

Clarifications:

Teachers who encourage students to use patterns and structure to help understand and connect mathematical concepts:

- Help students recognize the patterns in the world around them and connect these patterns to mathematical concepts.
- Support students to develop generalizations based on the similarities found among problems.
- Provide opportunities for students to create plans and procedures to solve problems.
- Develop students' ability to construct relationships between their current understanding and more sophisticated ways of thinking.

MA.K12.MTR.6.1:	Assess the reasonableness of solutions. Mathematicians who assess the reasonableness of solutions: • Estimate to discover possible solutions. • Use benchmark quantities to determine if a solution makes sense. • Check calculations when solving problems. • Verify possible solutions by explaining the methods used. • Evaluate results based on the given context. **Clarifications:** Teachers who encourage students to assess the reasonableness of solutions: • Have students estimate or predict solutions prior to solving. • Prompt students to continually ask, "Does this solution make sense? How do you know?" • Reinforce that students check their work as they progress within and after a task. • Strengthen students' ability to verify solutions through justifications.
MA.K12.MTR.7.1:	Apply mathematics to real-world contexts. Mathematicians who apply mathematics to real-world contexts: • Connect mathematical concepts to everyday experiences. • Use models and methods to understand, represent and solve problems. • Perform investigations to gather data or determine if a method is appropriate. • Redesign models and methods to improve accuracy or efficiency. **Clarifications:** Teachers who encourage students to apply mathematics to real-world contexts: • Provide opportunities for students to create models, both concrete and abstract, and perform investigations. • Challenge students to question the accuracy of their models and methods. • Support students as they validate conclusions by comparing them to the given situation. • Indicate how various concepts can be applied to other disciplines.
ELA.K12.EE.1.1:	Cite evidence to explain and justify reasoning. **Clarifications:** K-1 Students include textual evidence in their oral communication with guidance and support from adults. The evidence can consist of details from the text without naming the text. During 1st grade, students learn how to incorporate the evidence in their writing. 2-3 Students include relevant textual evidence in their written and oral communication. Students should name the text when they refer to it. In 3rd grade, students should use a combination of direct and indirect citations. 4-5 Students continue with previous skills and reference comments made by speakers and peers. Students cite texts that they've directly quoted, paraphrased, or used for information. When writing, students will use the form of citation dictated by the instructor or the style guide referenced by the instructor. 6-8 Students continue with previous skills and use a style guide to create a proper citation. 9-12 Students continue with previous skills and should be aware of existing style guides and the ways in which they differ.
ELA.K12.EE.2.1:	Read and comprehend grade-level complex texts proficiently. **Clarifications:** See Text Complexity for grade-level complexity bands and a text complexity rubric.
ELA.K12.EE.3.1:	Make inferences to support comprehension. **Clarifications:** Students will make inferences before the words infer or inference are introduced. Kindergarten students will answer questions like "Why is the girl smiling?" or make predictions about what will happen based on the title page. Students will use the terms and apply them in 2nd grade and beyond.
ELA.K12.EE.4.1:	Use appropriate collaborative techniques and active listening skills when engaging in discussions in a variety of situations. **Clarifications:** In kindergarten, students learn to listen to one another respectfully. In grades 1-2, students build upon these skills by justifying what they are thinking. For example: "I think _____ because _____." The collaborative conversations are becoming academic conversations. In grades 3-12, students engage in academic conversations discussing claims and justifying their reasoning, refining and applying skills. Students build on ideas, propel the conversation, and support claims and counterclaims with evidence.
ELA.K12.EE.5.1:	Use the accepted rules governing a specific format to create quality work. **Clarifications:** Students will incorporate skills learned into work products to produce quality work. For students to incorporate these skills appropriately, they must receive instruction. A 3rd grade student creating a poster board display must have instruction in how to effectively present information to do quality work.
ELA.K12.EE.6.1:	Use appropriate voice and tone when speaking or writing. **Clarifications:** In kindergarten and 1st grade, students learn the difference between formal and informal language. For example, the way we talk to our friends differs from the way we speak to adults. In 2nd grade and beyond, students practice appropriate social and academic language to discuss texts.
ELD.K12.ELL.SI.1:	English language learners communicate for social and instructional purposes within the school setting.

General Course Information and Notes

VERSION DESCRIPTION

Students with varying levels of experience in an elementary ensemble other than chorus, band, or orchestra develop foundational techniques, skills, and music literacy. Public performances may serve as a culmination of specific instructional goals. Students may be required to attend and/or participate in rehearsals and performances outside the school day to support, extend, and assess learning in the classroom. This course, if used for such small-instrument ensembles as recorder or guitar, may require students to obtain a musical instrument (e.g., borrow, rent, purchase) from an outside source.

GENERAL NOTES

The course descriptions for Elementary Music Electives have been designed to accommodate the mixing of grade levels, experience, and abilities within the same ensemble. Music teachers for elementary music electives should select the most appropriate set of grade-specific benchmarks based on each student's experience, music literacy, and available instruction time. Once an elementary student has entered a course at a specific level of benchmarks, he or she should progress to the next set of grade-specific benchmarks in the sequence for purposes of assessment. If a student reaches the Grade 5 level prior to 5th grade, he or she may continue to participate in the ensemble; the teacher is responsible for designating an appropriate means of increasing the rigor for the student in each subsequent year.

Examples:

- A 3rd grade student beginning in Elementary Band may receive instruction and be assessed according to the Grade 3 benchmarks.
- A 2nd grade student who has taken violin lessons for several years and who is musically literate may receive instruction in Elementary Orchestra and be assessed according to the Grade 5 benchmarks, repeating use of these benchmarks with increased rigor in each subsequent year.
- A 5th grader singing in Elementary Chorus for the first time may receive instruction and be assessed according to the Grade 3 benchmarks.
- A 4th grader in Handbell Ensemble (Special Ensemble) for the first time may receive instruction and be assessed according to the Grade 3 benchmarks. The same student, in Orff Ensemble (Special Ensemble) for the second year, may receive instruction and be assessed according to the Grade 4 benchmarks.

Florida's Benchmarks for Excellent Student Thinking (B.E.S.T.) Standards
This course includes Florida's B.E.S.T. ELA Expectations (EE) and Mathematical Thinking and Reasoning Standards (MTRs) for students. Florida educators should intentionally embed these standards within the content and their instruction as applicable. For guidance on the implementation of the EEs and MTRs, please visit cpalms.org/Standards/BEST_Standards.aspx and select the appropriate B.E.S.T. Standards package.

English Language Development ELD Standards Special Notes Section:
Teachers are required to provide listening, speaking, reading and writing instruction that allows English language learners (ELL) to communicate for social and instructional purposes within the school setting. For the given level of English language proficiency and with visual, graphic, or interactive support, students will interact with grade level words, expressions, sentences and discourse to process or produce language necessary for academic success. The ELD standard should specify a relevant content area concept or topic of study chosen by curriculum developers and teachers which maximizes an ELL's need for communication and social skills. To access an ELL supporting document which delineates performance definitions and descriptors, please click on the following link: cpalms.org/uploads/docs/standards/eld/SI.pdf

GENERAL INFORMATION

Course Number: 5013035

Course Path: Section: Grades PreK to 12 Education Courses > **Grade Group:** Grades PreK to 5 Education Courses > **Subject:** Music Education > **SubSubject:** General >
Abbreviated Title: ELEM SPEC ENS
Course Length: Year (Y)

Course Status: Draft - Course Pending Approval

Grade Level(s): K,1,2,3,4,5,PreK

Educator Certifications

Music Education (Elementary Grades 1-6)
Music (Elementary and Secondary Grades K-12)
Instrumental Music (Elementary and Secondary Grades K-12)

Music - Grade Kindergarten (#5013060) 2022 - And Beyond

Course Standards

Name	Description
MU.K.C.1.1:	Respond to music from various sound sources to show awareness of steady beat. **Clarifications:** e.g., steady beat, pulse
MU.K.C.1.2:	Identify various sounds in a piece of music. **Clarifications:** e.g., vocal/instrumental timbres, environmental sounds
MU.K.C.1.3:	Identify, visually and aurally, pitched and unpitched classroom instruments. **Clarifications:** e.g., rhythm sticks, woodblock, xylophone, metallophone, autoharp
MU.K.C.1.4:	Identify singing, speaking, and whispering voices.
MU.K.C.2.1:	Identify similarities and/or differences in a performance.
MU.K.C.3.1:	Share opinions about selected pieces of music.
MU.K.F.1.1:	Respond to and explore music through creative play and found sounds in the music classroom. **Clarifications:** e.g., creative play, drama/acting, kinesthetic response, vocalizations, sound carpets
MU.K.F.3.1:	Exhibit age-appropriate music and life skills that will add to the success in the music classroom. **Clarifications:** e.g., take turns, share, be a good listener, be respectful, display good manners
MU.K.H.1.1:	Respond to music from diverse cultures through singing and movement. **Clarifications:** e.g., nursery rhymes, singing games, folk dances
MU.K.H.2.1:	Respond to and/or perform folk music of American cultural sub-groups. **Clarifications:** e.g., African American, Anglo-American, Latin American, Native American
MU.K.H.3.1:	Perform simple songs, finger plays, and rhymes to experience connections among music, language, and numbers. **Clarifications:** e.g., decoding simple words, phonemes, rhyming words, vocabulary, making predictions, cardinal numbers, sequencing
MU.K.O.1.1:	Respond to beat, rhythm, and melodic line through imitation. **Clarifications:** e.g., locomotor and non-locomotor movement, body levels
MU.K.O.1.2:	Identify similarities and differences in melodic phrases and/or rhythm patterns. **Clarifications:** e.g., visually, aurally
MU.K.O.3.1:	Respond to music to demonstrate how it makes one feel. **Clarifications:** e.g., movement, drawings
MU.K.S.1.1:	Improvise a response to a musical question sung or played by someone else. **Clarifications:** e.g., melodic, rhythmic
MU.K.S.2.1:	Sing or play songs from memory. **Clarifications:** e.g., rhymes, chants, poems
MU.K.S.3.1:	Sing songs of limited range appropriate to the young child and use the head voice.
MU.K.S.3.2:	Perform simple songs and accompaniments. **Clarifications:** e.g., singing, using body percussion or classroom instruments
MU.K.S.3.3:	Match pitches in a song or musical phrase in one or more keys. **Clarifications:** e.g., la, sol, mi
MU.K.S.3.4:	Imitate simple rhythm patterns played by the teacher or a peer. **Clarifications:** e.g., quarter note, quarter rest, beamed eighth notes
	Mathematicians who participate in effortful learning both individually and with others:

- Analyze the problem in a way that makes sense given the task.
- Ask questions that will help with solving the task.
- Build perseverance by modifying methods as needed while solving a challenging task.
- Stay engaged and maintain a positive mindset when working to solve tasks.
- Help and support each other when attempting a new method or approach.

MA.K12.MTR.1.1:

Clarifications:
Teachers who encourage students to participate actively in effortful learning both individually and with others:
- Cultivate a community of growth mindset learners.
- Foster perseverance in students by choosing tasks that are challenging.
- Develop students' ability to analyze and problem solve.
- Recognize students' effort when solving challenging problems.

Demonstrate understanding by representing problems in multiple ways.
Mathematicians who demonstrate understanding by representing problems in multiple ways:

- Build understanding through modeling and using manipulatives.
- Represent solutions to problems in multiple ways using objects, drawings, tables, graphs and equations.
- Progress from modeling problems with objects and drawings to using algorithms and equations.
- Express connections between concepts and representations.
- Choose a representation based on the given context or purpose.

MA.K12.MTR.2.1:

Clarifications:
Teachers who encourage students to demonstrate understanding by representing problems in multiple ways:
- Help students make connections between concepts and representations.
- Provide opportunities for students to use manipulatives when investigating concepts.
- Guide students from concrete to pictorial to abstract representations as understanding progresses.
- Show students that various representations can have different purposes and can be useful in different situations.

Complete tasks with mathematical fluency.
Mathematicians who complete tasks with mathematical fluency:

- Select efficient and appropriate methods for solving problems within the given context.
- Maintain flexibility and accuracy while performing procedures and mental calculations.
- Complete tasks accurately and with confidence.
- Adapt procedures to apply them to a new context.
- Use feedback to improve efficiency when performing calculations.

MA.K12.MTR.3.1:

Clarifications:
Teachers who encourage students to complete tasks with mathematical fluency:
- Provide students with the flexibility to solve problems by selecting a procedure that allows them to solve efficiently and accurately.
- Offer multiple opportunities for students to practice efficient and generalizable methods.
- Provide opportunities for students to reflect on the method they used and determine if a more efficient method could have been used.

Engage in discussions that reflect on the mathematical thinking of self and others.
Mathematicians who engage in discussions that reflect on the mathematical thinking of self and others:

- Communicate mathematical ideas, vocabulary and methods effectively.
- Analyze the mathematical thinking of others.
- Compare the efficiency of a method to those expressed by others.
- Recognize errors and suggest how to correctly solve the task.
- Justify results by explaining methods and processes.
- Construct possible arguments based on evidence.

MA.K12.MTR.4.1:

Clarifications:
Teachers who encourage students to engage in discussions that reflect on the mathematical thinking of self and others:
- Establish a culture in which students ask questions of the teacher and their peers, and error is an opportunity for learning.
- Create opportunities for students to discuss their thinking with peers.
- Select, sequence and present student work to advance and deepen understanding of correct and increasingly efficient methods.
- Develop students' ability to justify methods and compare their responses to the responses of their peers.

Use patterns and structure to help understand and connect mathematical concepts.
Mathematicians who use patterns and structure to help understand and connect mathematical concepts:

- Focus on relevant details within a problem.
- Create plans and procedures to logically order events, steps or ideas to solve problems.
- Decompose a complex problem into manageable parts.
- Relate previously learned concepts to new concepts.
- Look for similarities among problems.
- Connect solutions of problems to more complicated large-scale situations.

MA.K12.MTR.5.1:

Clarifications:
Teachers who encourage students to use patterns and structure to help understand and connect mathematical concepts:
- Help students recognize the patterns in the world around them and connect these patterns to mathematical concepts.
- Support students to develop generalizations based on the similarities found among problems.
- Provide opportunities for students to create plans and procedures to solve problems.
- Develop students' ability to construct relationships between their current understanding and more sophisticated ways of thinking.

Assess the reasonableness of solutions.
Mathematicians who assess the reasonableness of solutions:

MA.K12.MTR.6.1:	• Estimate to discover possible solutions. • Use benchmark quantities to determine if a solution makes sense. • Check calculations when solving problems. • Verify possible solutions by explaining the methods used. • Evaluate results based on the given context. **Clarifications:** Teachers who encourage students to assess the reasonableness of solutions: • Have students estimate or predict solutions prior to solving. • Prompt students to continually ask, "Does this solution make sense? How do you know?" • Reinforce that students check their work as they progress within and after a task. • Strengthen students' ability to verify solutions through justifications.
MA.K12.MTR.7.1:	Apply mathematics to real-world contexts. Mathematicians who apply mathematics to real-world contexts: • Connect mathematical concepts to everyday experiences. • Use models and methods to understand, represent and solve problems. • Perform investigations to gather data or determine if a method is appropriate. • Redesign models and methods to improve accuracy or efficiency. **Clarifications:** Teachers who encourage students to apply mathematics to real-world contexts: • Provide opportunities for students to create models, both concrete and abstract, and perform investigations. • Challenge students to question the accuracy of their models and methods. • Support students as they validate conclusions by comparing them to the given situation. • Indicate how various concepts can be applied to other disciplines.
ELA.K12.EE.1.1:	Cite evidence to explain and justify reasoning. **Clarifications:** K-1 Students include textual evidence in their oral communication with guidance and support from adults. The evidence can consist of details from the text without naming the text. During 1st grade, students learn how to incorporate the evidence in their writing. 2-3 Students include relevant textual evidence in their written and oral communication. Students should name the text when they refer to it. In 3rd grade, students should use a combination of direct and indirect citations. 4-5 Students continue with previous skills and reference comments made by speakers and peers. Students cite texts that they've directly quoted, paraphrased, or used for information. When writing, students will use the form of citation dictated by the instructor or the style guide referenced by the instructor. 6-8 Students continue with previous skills and use a style guide to create a proper citation. 9-12 Students continue with previous skills and should be aware of existing style guides and the ways in which they differ.
ELA.K12.EE.2.1:	Read and comprehend grade-level complex texts proficiently. **Clarifications:** See Text Complexity for grade-level complexity bands and a text complexity rubric.
ELA.K12.EE.3.1:	Make inferences to support comprehension. **Clarifications:** Students will make inferences before the words infer or inference are introduced. Kindergarten students will answer questions like "Why is the girl smiling?" or make predictions about what will happen based on the title page. Students will use the terms and apply them in 2nd grade and beyond.
ELA.K12.EE.4.1:	Use appropriate collaborative techniques and active listening skills when engaging in discussions in a variety of situations. **Clarifications:** In kindergarten, students learn to listen to one another respectfully. In grades 1-2, students build upon these skills by justifying what they are thinking. For example: "I think _____ because _____." The collaborative conversations are becoming academic conversations. In grades 3-12, students engage in academic conversations discussing claims and justifying their reasoning, refining and applying skills. Students build on ideas, propel the conversation, and support claims and counterclaims with evidence.
ELA.K12.EE.5.1:	Use the accepted rules governing a specific format to create quality work. **Clarifications:** Students will incorporate skills learned into work products to produce quality work. For students to incorporate these skills appropriately, they must receive instruction. A 3rd grade student creating a poster board display must have instruction in how to effectively present information to do quality work.
ELA.K12.EE.6.1:	Use appropriate voice and tone when speaking or writing. **Clarifications:** In kindergarten and 1st grade, students learn the difference between formal and informal language. For example, the way we talk to our friends differs from the way we speak to adults. In 2nd grade and beyond, students practice appropriate social and academic language to discuss texts.
PE.K.C.2.1:	Recognize locomotor skills. **Clarifications:** Some examples of locomotor skills are walking, running, skipping, leaping, hopping, jumping and galloping.
PE.K.C.2.2:	Recognize physical activities have safety rules and procedures. **Clarifications:** An example would be to put equipment away when not in use in order to keep the physical activity area safe.

PE.K.R.6.2:	Identify a benefit of willingly trying new movements and motor skills.
PE.K.R.6.3:	Identify the benefits of continuing to participate when not successful on the first try.
DA.K.O.3.1:	Use movement to express a feeling, idea, or story.
DA.K.S.3.3:	Develop kinesthetic awareness by maintaining personal space and moving in pathways through space.
ELD.K12.ELL.SI.1:	English language learners communicate for social and instructional purposes within the school setting.
HE.K.B.5.3:	Recognize the consequences of not following rules/practices when making healthy and safe decisions. **Clarifications:** Injury to self and/or others.
SC.K.P.10.1:	Observe that things that make sound vibrate.
TH.K.S.1.3:	Describe personal preferences related to a performance.

General Course Information and Notes

VERSION DESCRIPTION

Kindergarten students in music class explore their environment and music world through a variety of experiences. Singing, listening, and movement activities will form the foundation for musical development, along with thinking, self-expression, and communication skills will be developed through singing, movement, creative musical play, creating, listening, and understanding activities. A variety of carefully chosen music will allow students to gain knowledge of one's self and build understanding, acceptance, and enrichment throughout their lives. By fostering creativity throughout the curriculum, the seeds of innovation will begin to bloom even in these novice learners.

GENERAL NOTES

All instruction related to Music benchmarks should be framed by the Big Ideas and Enduring Understandings. Non-Music benchmarks listed in this course are also required and should be fully integrated in support of arts instruction.

Special Note: This class may include opportunities to participate in extra rehearsals and performances beyond the school day.

Florida's Benchmarks for Excellent Student Thinking (B.E.S.T.) Standards
This course includes Florida's B.E.S.T. ELA Expectations (EE) and Mathematical Thinking and Reasoning Standards (MTRs) for students. Florida educators should intentionally embed these standards within the content and their instruction as applicable. For guidance on the implementation of the EEs and MTRs, please visit cpalms.org/Standards/BEST_Standards.aspx and select the appropriate B.E.S.T. Standards package.

English Language Development ELD Standards Special Notes Section:
Teachers are required to provide listening, speaking, reading and writing instruction that allows English language learners (ELL) to communicate for social and instructional purposes within the school setting. For the given level of English language proficiency and with visual, graphic, or interactive support, students will interact with grade level words, expressions, sentences and discourse to process or produce language necessary for academic success. The ELD standard should specify a relevant content area concept or topic of study chosen by curriculum developers and teachers which maximizes an ELL's need for communication and social skills. To access an ELL supporting document which delineates performance definitions and descriptors, please click on the following link: cpalms.org/uploads/docs/standards/eld/SI.pdf

GENERAL INFORMATION

Course Number: 5013060

Course Path: Section: Grades PreK to 12 Education Courses > **Grade Group:** Grades PreK to 5 Education Courses > **Subject:** Music Education > **SubSubject:** General >
Abbreviated Title: MUSIC - GRADE K
Course Length: Year (Y)

Course Status: Draft - Course Pending Approval

Grade Level(s): K

Educator Certifications

Music Education (Elementary Grades 1-6)
Music (Elementary and Secondary Grades K-12)
Vocal Music (Elementary and Secondary Grades K-12)

Music - Grade 1 (#5013070) 2022 - And Beyond

Course Standards

Name	Description
MU.1.C.1.1:	Respond to specific, teacher-selected musical characteristics in a song or instrumental piece. **Clarifications:** e.g., beat, rhythm, phrasing, dynamics, tempo
MU.1.C.1.2:	Respond to music from various sound sources to show awareness of differences in musical ideas. **Clarifications:** e.g., moods, images
MU.1.C.1.3:	Classify instruments into pitched and unpitched percussion families. **Clarifications:** e.g., xylophone, glockenspiel, woodblock, tambourine
MU.1.C.1.4:	Differentiate between music performed by one singer and music performed by a group of singers.
MU.1.C.2.1:	Identify the similarities and differences between two performances of a familiar song. **Clarifications:** e.g., tempo, lyrics/no lyrics, style
MU.1.C.3.1:	Share different thoughts or feelings people have about selected pieces of music.
MU.1.F.1.1:	Create sounds or movement freely with props, instruments, and/or found sounds in response to various music styles and/or elements. **Clarifications:** e.g., staccato/legato, phrasing, melodic direction, steady beat, rhythm; props: use scarves, ribbon sticks, fabric shapes
MU.1.F.2.1:	Describe how he or she likes to participate in music. **Clarifications:** e.g., sing with a family member or friend, make up songs, tap rhythms, play a musical instrument
MU.1.F.3.1:	Demonstrate appropriate manners and teamwork necessary for success in a music classroom. **Clarifications:** e.g., take turns, share, be a good listener, be respectful, display good manners
MU.1.H.1.1:	Perform simple songs, dances, and musical games from a variety of cultures. **Clarifications:** e.g., nursery rhymes, singing games, play parties, folk dances
MU.1.H.1.2:	Explain the work of a composer.
MU.1.H.2.1:	Identify and perform folk music used to remember and honor America and its cultural heritage. **Clarifications:** e.g., "This Land is Your Land," "Short'nin' Bread," "America"
MU.1.H.3.1:	Explore the use of instruments and vocal sounds to replace or enhance specified words or phrases in children's songs, choral readings of poems and stories, and/or chants. **Clarifications:** e.g., rhyming words, vowel sounds, characters, setting, mood
MU.1.O.1.1:	Respond to contrasts in music as a foundation for understanding structure. **Clarifications:** e.g., high/low, fast/slow, long/short, phrases
MU.1.O.1.2:	Identify patterns of a simple, four-measure song or speech piece. **Clarifications:** e.g., AABA, ABCA, ABAC
MU.1.O.3.1:	Respond to changes in tempo and/or dynamics within musical examples.
MU.1.S.1.1:	Improvise a four-beat response to a musical question sung or played by someone else. **Clarifications:** e.g., melodic, rhythmic
MU.1.S.1.2:	Create short melodic and rhythmic patterns based on teacher-established guidelines.
MU.1.S.2.1:	Sing or play songs, which may include changes in verses or repeats, from memory.
MU.1.S.3.1:	Sing simple songs in a group, using head voice and maintaining pitch. **Clarifications:** e.g., folk songs, finger-plays, call-and-response, echo songs
MU.1.S.3.2:	Play three- to five-note melodies and/or accompaniments on classroom instruments.
MU.1.S.3.3:	Sing simple la-sol-mi patterns at sight. **Clarifications:** e.g., reading from hand signs or iconic representations
	Match simple aural rhythm patterns in duple meter with written patterns.

MU.1.S.3.4:	**Clarifications:** e.g., quarter note/rest, beamed eighth notes
MU.1.S.3.5:	Show visual representation of simple melodic patterns performed by the teacher or a peer. **Clarifications:** e.g., draw, body/hand signs, manipulatives, la-sol-mi
MA.K12.MTR.1.1:	Mathematicians who participate in effortful learning both individually and with others: • Analyze the problem in a way that makes sense given the task. • Ask questions that will help with solving the task. • Build perseverance by modifying methods as needed while solving a challenging task. • Stay engaged and maintain a positive mindset when working to solve tasks. • Help and support each other when attempting a new method or approach. **Clarifications:** Teachers who encourage students to participate actively in effortful learning both individually and with others: • Cultivate a community of growth mindset learners. • Foster perseverance in students by choosing tasks that are challenging. • Develop students' ability to analyze and problem solve. • Recognize students' effort when solving challenging problems.
MA.K12.MTR.2.1:	Demonstrate understanding by representing problems in multiple ways. Mathematicians who demonstrate understanding by representing problems in multiple ways: • Build understanding through modeling and using manipulatives. • Represent solutions to problems in multiple ways using objects, drawings, tables, graphs and equations. • Progress from modeling problems with objects and drawings to using algorithms and equations. • Express connections between concepts and representations. • Choose a representation based on the given context or purpose. **Clarifications:** Teachers who encourage students to demonstrate understanding by representing problems in multiple ways: • Help students make connections between concepts and representations. • Provide opportunities for students to use manipulatives when investigating concepts. • Guide students from concrete to pictorial to abstract representations as understanding progresses. • Show students that various representations can have different purposes and can be useful in different situations.
MA.K12.MTR.3.1:	Complete tasks with mathematical fluency. Mathematicians who complete tasks with mathematical fluency: • Select efficient and appropriate methods for solving problems within the given context. • Maintain flexibility and accuracy while performing procedures and mental calculations. • Complete tasks accurately and with confidence. • Adapt procedures to apply them to a new context. • Use feedback to improve efficiency when performing calculations. **Clarifications:** Teachers who encourage students to complete tasks with mathematical fluency: • Provide students with the flexibility to solve problems by selecting a procedure that allows them to solve efficiently and accurately. • Offer multiple opportunities for students to practice efficient and generalizable methods. • Provide opportunities for students to reflect on the method they used and determine if a more efficient method could have been used.
MA.K12.MTR.4.1:	Engage in discussions that reflect on the mathematical thinking of self and others. Mathematicians who engage in discussions that reflect on the mathematical thinking of self and others: • Communicate mathematical ideas, vocabulary and methods effectively. • Analyze the mathematical thinking of others. • Compare the efficiency of a method to those expressed by others. • Recognize errors and suggest how to correctly solve the task. • Justify results by explaining methods and processes. • Construct possible arguments based on evidence. **Clarifications:** Teachers who encourage students to engage in discussions that reflect on the mathematical thinking of self and others: • Establish a culture in which students ask questions of the teacher and their peers, and error is an opportunity for learning. • Create opportunities for students to discuss their thinking with peers. • Select, sequence and present student work to advance and deepen understanding of correct and increasingly efficient methods. • Develop students' ability to justify methods and compare their responses to the responses of their peers.
MA.K12.MTR.5.1:	Use patterns and structure to help understand and connect mathematical concepts. Mathematicians who use patterns and structure to help understand and connect mathematical concepts: • Focus on relevant details within a problem. • Create plans and procedures to logically order events, steps or ideas to solve problems. • Decompose a complex problem into manageable parts. • Relate previously learned concepts to new concepts. • Look for similarities among problems. • Connect solutions of problems to more complicated large-scale situations. **Clarifications:**

	Teachers who encourage students to use patterns and structure to help understand and connect mathematical concepts: • Help students recognize the patterns in the world around them and connect these patterns to mathematical concepts. • Support students to develop generalizations based on the similarities found among problems. • Provide opportunities for students to create plans and procedures to solve problems. • Develop students' ability to construct relationships between their current understanding and more sophisticated ways of thinking.
MA.K12.MTR.6.1:	Assess the reasonableness of solutions. Mathematicians who assess the reasonableness of solutions: • Estimate to discover possible solutions. • Use benchmark quantities to determine if a solution makes sense. • Check calculations when solving problems. • Verify possible solutions by explaining the methods used. • Evaluate results based on the given context. **Clarifications:** Teachers who encourage students to assess the reasonableness of solutions: • Have students estimate or predict solutions prior to solving. • Prompt students to continually ask, "Does this solution make sense? How do you know?" • Reinforce that students check their work as they progress within and after a task. • Strengthen students' ability to verify solutions through justifications.
MA.K12.MTR.7.1:	Apply mathematics to real-world contexts. Mathematicians who apply mathematics to real-world contexts: • Connect mathematical concepts to everyday experiences. • Use models and methods to understand, represent and solve problems. • Perform investigations to gather data or determine if a method is appropriate. • Redesign models and methods to improve accuracy or efficiency. **Clarifications:** Teachers who encourage students to apply mathematics to real-world contexts: • Provide opportunities for students to create models, both concrete and abstract, and perform investigations. • Challenge students to question the accuracy of their models and methods. • Support students as they validate conclusions by comparing them to the given situation. • Indicate how various concepts can be applied to other disciplines.
ELA.K12.EE.1.1:	Cite evidence to explain and justify reasoning. **Clarifications:** K-1 Students include textual evidence in their oral communication with guidance and support from adults. The evidence can consist of details from the text without naming the text. During 1st grade, students learn how to incorporate the evidence in their writing. 2-3 Students include relevant textual evidence in their written and oral communication. Students should name the text when they refer to it. In 3rd grade, students should use a combination of direct and indirect citations. 4-5 Students continue with previous skills and reference comments made by speakers and peers. Students cite texts that they've directly quoted, paraphrased, or used for information. When writing, students will use the form of citation dictated by the instructor or the style guide referenced by the instructor. 6-8 Students continue with previous skills and use a style guide to create a proper citation. 9-12 Students continue with previous skills and should be aware of existing style guides and the ways in which they differ.
ELA.K12.EE.2.1:	Read and comprehend grade-level complex texts proficiently. **Clarifications:** See Text Complexity for grade-level complexity bands and a text complexity rubric.
ELA.K12.EE.3.1:	Make inferences to support comprehension. **Clarifications:** Students will make inferences before the words infer or inference are introduced. Kindergarten students will answer questions like "Why is the girl smiling?" or make predictions about what will happen based on the title page. Students will use the terms and apply them in 2nd grade and beyond.
ELA.K12.EE.4.1:	Use appropriate collaborative techniques and active listening skills when engaging in discussions in a variety of situations. **Clarifications:** In kindergarten, students learn to listen to one another respectfully. In grades 1-2, students build upon these skills by justifying what they are thinking. For example: "I think _____ because _____." The collaborative conversations are becoming academic conversations. In grades 3-12, students engage in academic conversations discussing claims and justifying their reasoning, refining and applying skills. Students build on ideas, propel the conversation, and support claims and counterclaims with evidence.
ELA.K12.EE.5.1:	Use the accepted rules governing a specific format to create quality work. **Clarifications:** Students will incorporate skills learned into work products to produce quality work. For students to incorporate these skills appropriately, they must receive instruction. A 3rd grade student creating a poster board display must have instruction in how to effectively present information to do quality work.
ELA.K12.EE.6.1:	Use appropriate voice and tone when speaking or writing. **Clarifications:** In kindergarten and 1st grade, students learn the difference between formal and informal language. For example, the way we talk to our friends differs from the way we speak to adults. In 2nd grade and beyond, students practice appropriate social and academic language to discuss texts.

DA.1.O.3.1:	Create movement phrases to express a feeling, idea, or story.
DA.1.S.3.4:	Demonstrate acuity in transferring given rhythmic patterns from the aural to the kinesthetic. **Clarifications:** e.g., verbalized rhythm transferred to the feet
PE.1.C.2.1:	Identify the critical elements of locomotor skills. **Clarifications:** Some examples of critical elements of locomotor skills are step-hop for skipping and use of one foot for hopping.
PE.1.C.2.2:	Identify safety rules and procedures for teacher-selected physical activities. **Clarifications:** An example of a safety procedure is having students stand a safe distance away from a student swinging a bat during striking activities.
ELD.K12.ELL.SI.1:	English language learners communicate for social and instructional purposes within the school setting.
HE.1.B.5.3:	Explain the consequences of not following rules/practices when making healthy and safe decisions. **Clarifications:** Tooth decay and environmental damage.
TH.1.S.1.3:	Explain personal preferences related to a performance.

General Course Information and Notes

VERSION DESCRIPTION

First-grade students in music class explore their world through listening, singing, moving, playing instruments, and creating to stimulate the imagination and lead to innovation and creative risk-taking. As they develop basic skills, techniques, and processes in music, they strengthen their music and extra-music vocabulary and music literacy, as well as their ability to remember, focus on, process, and sequence information. As students sing, play, move, and create together, they develop the foundation for important skills such as teamwork, acceptance, respect, and responsibility that will help students be successful in the 21st century.

GENERAL NOTES

All instruction related to Music benchmarks should be framed by the Big Ideas and Enduring Understandings. Non-Music benchmarks listed in this course are also required and should be fully integrated in support of arts instruction.

Special Note: This class may include opportunities to participate in extra rehearsals and performances beyond the school day.

Florida's Benchmarks for Excellent Student Thinking (B.E.S.T.) Standards
This course includes Florida's B.E.S.T. ELA Expectations (EE) and Mathematical Thinking and Reasoning Standards (MTRs) for students. Florida educators should intentionally embed these standards within the content and their instruction as applicable. For guidance on the implementation of the EEs and MTRs, please visit cpalms.org/Standards/BEST_Standards.aspx and select the appropriate B.E.S.T. Standards package.

English Language Development ELD Standards Special Notes Section:
Teachers are required to provide listening, speaking, reading and writing instruction that allows English language learners (ELL) to communicate for social and instructional purposes within the school setting. For the given level of English language proficiency and with visual, graphic, or interactive support, students will interact with grade level words, expressions, sentences and discourse to process or produce language necessary for academic success. The ELD standard should specify a relevant content area concept or topic of study chosen by curriculum developers and teachers which maximizes an ELL's need for communication and social skills. To access an ELL supporting document which delineates performance definitions and descriptors, please click on the following link: cpalms.org/uploads/docs/standards/eld/SI.pdf

GENERAL INFORMATION

Course Number: 5013070

Course Path: Section: Grades PreK to 12 Education Courses > **Grade Group:** Grades PreK to 5 Education Courses > **Subject:** Music Education > **SubSubject:** General >
Abbreviated Title: MUSIC - GRADE 1
Course Length: Year (Y)

Course Status: Draft - Course Pending Approval

Grade Level(s): 1

Educator Certifications

Music Education (Elementary Grades 1-6)
Music (Elementary and Secondary Grades K-12)
Vocal Music (Elementary and Secondary Grades K-12)

Music - Grade 2 (#5013080) 2022 - And Beyond

Course Standards

Name	Description
MU.2.C.1.1:	Identify appropriate listening skills for learning about musical examples selected by the teacher. **Clarifications:** e.g., listen for form, voices/instruments; organize thoughts using listening maps, active listening, checklists
MU.2.C.1.2:	Respond to a piece of music and discuss individual interpretations. **Clarifications:** e.g., move, write, draw, describe, gesture
MU.2.C.1.3:	Classify unpitched instruments into metals, membranes, shakers, and wooden categories.
MU.2.C.1.4:	Identify child, adult male, and adult female voices by timbre.
MU.2.C.2.1:	Identify strengths and needs in classroom performances of familiar songs.
MU.2.C.3.1:	Discuss why musical characteristics are important when forming and discussing opinions about music. **Clarifications:** e.g., tempo, rhythm, dynamics, instrumentation
MU.2.F.1.1:	Create a musical performance that brings a story or poem to life. **Clarifications:** e.g., sound carpets, original stories and poems, literary works
MU.2.F.2.1:	Describe how people participate in music. **Clarifications:** e.g., singing with family or friends, school music classes, live concerts, parades, sound recordings, video games, movie soundtracks, television and radio commercials
MU.2.F.3.1:	Collaborate with others in a music presentation and discuss what was successful and what could be improved. **Clarifications:** e.g., take turns, share, be a good listener, be respectful, display good manners, work well in cooperative learning groups
MU.2.H.1.1:	Perform songs, musical games, dances, and simple instrumental accompaniments from a variety of cultures. **Clarifications:** e.g., multi-cultural and classroom pitched or non-pitched instruments; bordun, ostinato
MU.2.H.1.2:	Identify the primary differences between composed and folk music.
MU.2.H.2.1:	Discuss how music is used for celebrations in American and other cultures. **Clarifications:** e.g., birthdays, New Year, national and religious holidays
MU.2.H.3.1:	Perform and compare patterns, aurally and visually, found in songs, finger plays, or rhymes to gain a foundation for exploring patterns in other contexts.
MU.2.O.1.1:	Identify basic elements of music in a song or instrumental excerpt. **Clarifications:** e.g., melody, rhythm, pitch, form
MU.2.O.1.2:	Identify the form of a simple piece of music. **Clarifications:** e.g., AB, ABA, call-and-response
MU.2.O.3.1:	Describe changes in tempo and dynamics within a musical work.
MU.2.S.1.1:	Improvise short phrases in response to a given musical question.
MU.2.S.1.2:	Create simple ostinati to accompany songs or poems.
MU.2.S.2.1:	Sing or play songs, which may include changes in dynamics, lyrics, and form, from memory.
MU.2.S.3.1:	Sing songs in an appropriate range, using head voice and maintaining pitch.
MU.2.S.3.2:	Play simple melodies and/or accompaniments on classroom instruments.
MU.2.S.3.3:	Sing simple la-sol-mi-do patterns at sight. **Clarifications:** e.g., reading from hand signs and/or iconic or traditional representations
MU.2.S.3.4:	Compare aural melodic patterns with written patterns to determine whether they are the same or different. **Clarifications:** e.g., la-sol-mi-do; quarter note/rest, beamed eighth notes
MU.2.S.3.5:	Show visual, gestural, and traditional representation of simple melodic patterns performed by someone else. **Clarifications:** e.g., draw, body/hand signs, manipulatives, la-sol-mi
	Mathematicians who participate in effortful learning both individually and with others: • Analyze the problem in a way that makes sense given the task. • Ask questions that will help with solving the task.

- Build perseverance by modifying methods as needed while solving a challenging task.
- Stay engaged and maintain a positive mindset when working to solve tasks.
- Help and support each other when attempting a new method or approach.

MA.K12.MTR.1.1:

Clarifications:
Teachers who encourage students to participate actively in effortful learning both individually and with others:
- Cultivate a community of growth mindset learners.
- Foster perseverance in students by choosing tasks that are challenging.
- Develop students' ability to analyze and problem solve.
- Recognize students' effort when solving challenging problems.

Demonstrate understanding by representing problems in multiple ways.
Mathematicians who demonstrate understanding by representing problems in multiple ways:

- Build understanding through modeling and using manipulatives.
- Represent solutions to problems in multiple ways using objects, drawings, tables, graphs and equations.
- Progress from modeling problems with objects and drawings to using algorithms and equations.
- Express connections between concepts and representations.
- Choose a representation based on the given context or purpose.

MA.K12.MTR.2.1:

Clarifications:
Teachers who encourage students to demonstrate understanding by representing problems in multiple ways:
- Help students make connections between concepts and representations.
- Provide opportunities for students to use manipulatives when investigating concepts.
- Guide students from concrete to pictorial to abstract representations as understanding progresses.
- Show students that various representations can have different purposes and can be useful in different situations.

Complete tasks with mathematical fluency.
Mathematicians who complete tasks with mathematical fluency:

- Select efficient and appropriate methods for solving problems within the given context.
- Maintain flexibility and accuracy while performing procedures and mental calculations.
- Complete tasks accurately and with confidence.
- Adapt procedures to apply them to a new context.
- Use feedback to improve efficiency when performing calculations.

MA.K12.MTR.3.1:

Clarifications:
Teachers who encourage students to complete tasks with mathematical fluency:
- Provide students with the flexibility to solve problems by selecting a procedure that allows them to solve efficiently and accurately.
- Offer multiple opportunities for students to practice efficient and generalizable methods.
- Provide opportunities for students to reflect on the method they used and determine if a more efficient method could have been used.

Engage in discussions that reflect on the mathematical thinking of self and others.
Mathematicians who engage in discussions that reflect on the mathematical thinking of self and others:

- Communicate mathematical ideas, vocabulary and methods effectively.
- Analyze the mathematical thinking of others.
- Compare the efficiency of a method to those expressed by others.
- Recognize errors and suggest how to correctly solve the task.
- Justify results by explaining methods and processes.
- Construct possible arguments based on evidence.

MA.K12.MTR.4.1:

Clarifications:
Teachers who encourage students to engage in discussions that reflect on the mathematical thinking of self and others:
- Establish a culture in which students ask questions of the teacher and their peers, and error is an opportunity for learning.
- Create opportunities for students to discuss their thinking with peers.
- Select, sequence and present student work to advance and deepen understanding of correct and increasingly efficient methods.
- Develop students' ability to justify methods and compare their responses to the responses of their peers.

Use patterns and structure to help understand and connect mathematical concepts.
Mathematicians who use patterns and structure to help understand and connect mathematical concepts:

- Focus on relevant details within a problem.
- Create plans and procedures to logically order events, steps or ideas to solve problems.
- Decompose a complex problem into manageable parts.
- Relate previously learned concepts to new concepts.
- Look for similarities among problems.
- Connect solutions of problems to more complicated large-scale situations.

MA.K12.MTR.5.1:

Clarifications:
Teachers who encourage students to use patterns and structure to help understand and connect mathematical concepts:
- Help students recognize the patterns in the world around them and connect these patterns to mathematical concepts.
- Support students to develop generalizations based on the similarities found among problems.
- Provide opportunities for students to create plans and procedures to solve problems.
- Develop students' ability to construct relationships between their current understanding and more sophisticated ways of thinking.

Assess the reasonableness of solutions.
Mathematicians who assess the reasonableness of solutions:

- Estimate to discover possible solutions.

MA.K12.MTR.6.1:	• Use benchmark quantities to determine if a solution makes sense. • Check calculations when solving problems. • Verify possible solutions by explaining the methods used. • Evaluate results based on the given context. **Clarifications:** Teachers who encourage students to assess the reasonableness of solutions: • Have students estimate or predict solutions prior to solving. • Prompt students to continually ask, "Does this solution make sense? How do you know?" • Reinforce that students check their work as they progress within and after a task. • Strengthen students' ability to verify solutions through justifications.
MA.K12.MTR.7.1:	Apply mathematics to real-world contexts. Mathematicians who apply mathematics to real-world contexts: • Connect mathematical concepts to everyday experiences. • Use models and methods to understand, represent and solve problems. • Perform investigations to gather data or determine if a method is appropriate. • Redesign models and methods to improve accuracy or efficiency. **Clarifications:** Teachers who encourage students to apply mathematics to real-world contexts: • Provide opportunities for students to create models, both concrete and abstract, and perform investigations. • Challenge students to question the accuracy of their models and methods. • Support students as they validate conclusions by comparing them to the given situation. • Indicate how various concepts can be applied to other disciplines.
ELA.K12.EE.1.1:	Cite evidence to explain and justify reasoning. **Clarifications:** K-1 Students include textual evidence in their oral communication with guidance and support from adults. The evidence can consist of details from the text without naming the text. During 1st grade, students learn how to incorporate the evidence in their writing. 2-3 Students include relevant textual evidence in their written and oral communication. Students should name the text when they refer to it. In 3rd grade, students should use a combination of direct and indirect citations. 4-5 Students continue with previous skills and reference comments made by speakers and peers. Students cite texts that they've directly quoted, paraphrased, or used for information. When writing, students will use the form of citation dictated by the instructor or the style guide referenced by the instructor. 6-8 Students continue with previous skills and use a style guide to create a proper citation. 9-12 Students continue with previous skills and should be aware of existing style guides and the ways in which they differ.
ELA.K12.EE.2.1:	Read and comprehend grade-level complex texts proficiently. **Clarifications:** See Text Complexity for grade-level complexity bands and a text complexity rubric.
ELA.K12.EE.3.1:	Make inferences to support comprehension. **Clarifications:** Students will make inferences before the words infer or inference are introduced. Kindergarten students will answer questions like "Why is the girl smiling?" or make predictions about what will happen based on the title page. Students will use the terms and apply them in 2nd grade and beyond.
ELA.K12.EE.4.1:	Use appropriate collaborative techniques and active listening skills when engaging in discussions in a variety of situations. **Clarifications:** In kindergarten, students learn to listen to one another respectfully. In grades 1-2, students build upon these skills by justifying what they are thinking. For example: "I think _____ because _____." The collaborative conversations are becoming academic conversations. In grades 3-12, students engage in academic conversations discussing claims and justifying their reasoning, refining and applying skills. Students build on ideas, propel the conversation, and support claims and counterclaims with evidence.
ELA.K12.EE.5.1:	Use the accepted rules governing a specific format to create quality work. **Clarifications:** Students will incorporate skills learned into work products to produce quality work. For students to incorporate these skills appropriately, they must receive instruction. A 3rd grade student creating a poster board display must have instruction in how to effectively present information to do quality work.
ELA.K12.EE.6.1:	Use appropriate voice and tone when speaking or writing. **Clarifications:** In kindergarten and 1st grade, students learn the difference between formal and informal language. For example, the way we talk to our friends differs from the way we speak to adults. In 2nd grade and beyond, students practice appropriate social and academic language to discuss texts.
PE.2.C.2.2:	Identify safety rules and procedures for selected physical activities. **Clarifications:** An example of a safety procedure is having students stand a safe distance away from a student swinging a bat during striking activities.
PE.2.M.1.9:	Perform one folk or line dance accurately. **Clarifications:** An example of a line dance is the Electric Slide.
PE.2.R.6.2:	Discuss the relationship between skill competence and enjoyment.
PE.2.R.6.3:	Identify ways to contribute as a member of a cooperative group.

DA.2.O.3.1:	Use movement to interpret feelings, stories, pictures, and songs.
ELD.K12.ELL.SI.1:	English language learners communicate for social and instructional purposes within the school setting.
HE.2.B.5.3:	Compare the consequences of not following rules/practices when making healthy and safe decisions. **Clarifications:** Negative emotions, accidents, injuries, and pollution.
TH.2.C.1.1:	Describe a character in a story and tell why the character is important to the story.

General Course Information and Notes

VERSION DESCRIPTION

Second-grade students in music class continue exploration of their world as they strengthen their musical skills, techniques, and processes. Student's working vocabulary and musical literacy and understanding deepen with the ability to use unique musical language to communicate their own ideas. Connections with the arts and other disciplines allow students to transfer knowledge and skills to and from other fields of study. As students sing, play, move, and create together, they continue to build such important skills as teamwork, acceptance, respect, and responsibility that will help them be successful in the 21st century.

GENERAL NOTES

All instruction related to Music benchmarks should be framed by the Big Ideas and Enduring Understandings. Non-Music benchmarks listed in this course are also required and should be fully integrated in support of arts instruction.

Special Note: This class may include opportunities to participate in extra rehearsals and performances beyond the school day.

Florida's Benchmarks for Excellent Student Thinking (B.E.S.T.) Standards
This course includes Florida's B.E.S.T. ELA Expectations (EE) and Mathematical Thinking and Reasoning Standards (MTRs) for students. Florida educators should intentionally embed these standards within the content and their instruction as applicable. For guidance on the implementation of the EEs and MTRs, please visit cpalms.org/Standards/BEST_Standards.aspx and select the appropriate B.E.S.T. Standards package.

English Language Development ELD Standards Special Notes Section:
Teachers are required to provide listening, speaking, reading and writing instruction that allows English language learners (ELL) to communicate for social and instructional purposes within the school setting. For the given level of English language proficiency and with visual, graphic, or interactive support, students will interact with grade level words, expressions, sentences and discourse to process or produce language necessary for academic success. The ELD standard should specify a relevant content area concept or topic of study chosen by curriculum developers and teachers which maximizes an ELL's need for communication and social skills. To access an ELL supporting document which delineates performance definitions and descriptors, please click on the following link: cpalms.org/uploads/docs/standards/eld/SI.pdf

GENERAL INFORMATION

Course Number: 5013080

Course Path: Section: Grades PreK to 12 Education Courses > **Grade Group:** Grades PreK to 5 Education Courses > **Subject:** Music Education > **SubSubject:** General >
Abbreviated Title: MUSIC - GRADE 2
Course Length: Year (Y)

Course Status: Draft - Course Pending Approval

Grade Level(s): 2

Educator Certifications

Music Education (Elementary Grades 1-6)
Vocal Music (Elementary and Secondary Grades K-12)
Music (Elementary and Secondary Grades K-12)

Music - Intermediate 1 (#5013090) 2022 - And Beyond

Course Standards

Name	Description
MU.3.C.1.1:	Describe listening skills and how they support appreciation of musical works. **Clarifications:** e.g., focus: form, instrumentation, tempo, dynamics; organize: listening maps, active listening, checklists
MU.3.C.1.2:	Respond to a musical work in a variety of ways and compare individual interpretations. **Clarifications:** e.g., move, draw, sing, play, gesture, conduct
MU.3.C.1.3:	Identify families of orchestral and band instruments. **Clarifications:** e.g., strings, woodwinds, brass, percussion, keyboards
MU.3.C.1.4:	Discriminate between unison and two-part singing.
MU.3.C.2.1:	Evaluate performances of familiar music using teacher-established criteria.
MU.3.C.3.1:	Identify musical characteristics and elements within a piece of music when discussing the value of the work. **Clarifications:** e.g., tempo, rhythm, timbre, form, instrumentation, texture
MU.3.F.1.1:	Enhance the meaning of a story or poem by creating a musical interpretation using voices, instruments, movement, and/or found sounds. **Clarifications:** e.g., sound carpets, original stories and poems, literary works
MU.3.F.2.1:	Identify musicians in the school, community, and media. **Clarifications:** e.g., band, chorus, and/or orchestra member; music teacher; cantor, choir director, or song leader in religious services
MU.3.F.2.2:	Describe opportunities for personal music-making. **Clarifications:** e.g., performing ensembles, individual lessons, community and church music groups, family, playground, computer-generated music
MU.3.F.3.1:	Collaborate with others to create a musical presentation and acknowledge individual contributions as an integral part of the whole. **Clarifications:** e.g., work together, communicate effectively, share tasks and responsibilities, work well in cooperative learning groups
MU.3.H.1.1:	Compare indigenous instruments of specified cultures. **Clarifications:** e.g., congas, dundun drums, maracas, dulcimer, darabukah
MU.3.H.1.2:	Identify significant information about specified composers and one or more of their musical works.
MU.3.H.1.3:	Identify timbre(s) in music from a variety of cultures. **Clarifications:** e.g., metals, woods, shakers, strings, voice: adult, child
MU.3.H.2.1:	Discuss how music in America was influenced by people and events in its history. **Clarifications:** e.g., slavery, expansion of railroad, jazz, war, politics
MU.3.H.3.1:	Experience and discuss, using correct music and other relevant content-area vocabulary, similarities in the use of pattern, line, and form in music and other teacher-selected contexts. **Clarifications:** e.g., in dance, visual art, language arts, pulse, rhythm, fluency
MU.3.O.1.1:	Identify, using correct music vocabulary, the elements in a musical work. **Clarifications:** e.g., rhythm, pitch, timbre, form
MU.3.O.1.2:	Identify and describe the musical form of a familiar song. **Clarifications:** e.g., AB, ABA, ABABA, call-and-response, verse/refrain, rondo, intro, coda
MU.3.O.2.1:	Rearrange melodic or rhythmic patterns to generate new phrases.
MU.3.O.3.1:	Describe how tempo and dynamics can change the mood or emotion of a piece of music.
MU.3.S.1.1:	Improvise rhythms or melodies over ostinati.
MU.3.S.1.2:	Create an alternate ending to a familiar song. **Clarifications:** e.g., dynamics, tempo, lyrics
MU.3.S.2.1:	Identify patterns in songs to aid the development of sequencing and memorization skills. **Clarifications:**

	e.g., parts of a round, parts of a layered work
MU.3.S.3.1:	Sing rounds, canons, or ostinati in an appropriate range, using head voice and maintaining pitch.
MU.3.S.3.2:	Play melodies and layered ostinati, using proper instrumental technique, on pitched and unpitched instruments.
MU.3.S.3.3:	Sing simple la-sol-mi-re-do patterns at sight. **Clarifications:** e.g., reading from hand signs; reading from nontraditional or traditional notation
MU.3.S.3.4:	Match simple aural rhythm patterns in duple and triple meter with written patterns. **Clarifications:** e.g., 2/4, 3/4, 4/4
MU.3.S.3.5:	Notate simple rhythmic and melodic patterns using traditional notation. **Clarifications:** e.g., rhythmic: quarter notes, beamed eighth notes, half notes, quarter rests, half rests; melodic: la-sol-mi-do
MA.K12.MTR.1.1:	Mathematicians who participate in effortful learning both individually and with others: • Analyze the problem in a way that makes sense given the task. • Ask questions that will help with solving the task. • Build perseverance by modifying methods as needed while solving a challenging task. • Stay engaged and maintain a positive mindset when working to solve tasks. • Help and support each other when attempting a new method or approach. **Clarifications:** Teachers who encourage students to participate actively in effortful learning both individually and with others: • Cultivate a community of growth mindset learners. • Foster perseverance in students by choosing tasks that are challenging. • Develop students' ability to analyze and problem solve. • Recognize students' effort when solving challenging problems.
MA.K12.MTR.2.1:	Demonstrate understanding by representing problems in multiple ways. Mathematicians who demonstrate understanding by representing problems in multiple ways: • Build understanding through modeling and using manipulatives. • Represent solutions to problems in multiple ways using objects, drawings, tables, graphs and equations. • Progress from modeling problems with objects and drawings to using algorithms and equations. • Express connections between concepts and representations. • Choose a representation based on the given context or purpose. **Clarifications:** Teachers who encourage students to demonstrate understanding by representing problems in multiple ways: • Help students make connections between concepts and representations. • Provide opportunities for students to use manipulatives when investigating concepts. • Guide students from concrete to pictorial to abstract representations as understanding progresses. • Show students that various representations can have different purposes and can be useful in different situations.
MA.K12.MTR.3.1:	Complete tasks with mathematical fluency. Mathematicians who complete tasks with mathematical fluency: • Select efficient and appropriate methods for solving problems within the given context. • Maintain flexibility and accuracy while performing procedures and mental calculations. • Complete tasks accurately and with confidence. • Adapt procedures to apply them to a new context. • Use feedback to improve efficiency when performing calculations. **Clarifications:** Teachers who encourage students to complete tasks with mathematical fluency: • Provide students with the flexibility to solve problems by selecting a procedure that allows them to solve efficiently and accurately. • Offer multiple opportunities for students to practice efficient and generalizable methods. • Provide opportunities for students to reflect on the method they used and determine if a more efficient method could have been used.
MA.K12.MTR.4.1:	Engage in discussions that reflect on the mathematical thinking of self and others. Mathematicians who engage in discussions that reflect on the mathematical thinking of self and others: • Communicate mathematical ideas, vocabulary and methods effectively. • Analyze the mathematical thinking of others. • Compare the efficiency of a method to those expressed by others. • Recognize errors and suggest how to correctly solve the task. • Justify results by explaining methods and processes. • Construct possible arguments based on evidence. **Clarifications:** Teachers who encourage students to engage in discussions that reflect on the mathematical thinking of self and others: • Establish a culture in which students ask questions of the teacher and their peers, and error is an opportunity for learning. • Create opportunities for students to discuss their thinking with peers. • Select, sequence and present student work to advance and deepen understanding of correct and increasingly efficient methods. • Develop students' ability to justify methods and compare their responses to the responses of their peers.
	Use patterns and structure to help understand and connect mathematical concepts. Mathematicians who use patterns and structure to help understand and connect mathematical concepts:

MA.K12.MTR.5.1:	• Focus on relevant details within a problem. • Create plans and procedures to logically order events, steps or ideas to solve problems. • Decompose a complex problem into manageable parts. • Relate previously learned concepts to new concepts. • Look for similarities among problems. • Connect solutions of problems to more complicated large-scale situations. **Clarifications:** Teachers who encourage students to use patterns and structure to help understand and connect mathematical concepts: • Help students recognize the patterns in the world around them and connect these patterns to mathematical concepts. • Support students to develop generalizations based on the similarities found among problems. • Provide opportunities for students to create plans and procedures to solve problems. • Develop students' ability to construct relationships between their current understanding and more sophisticated ways of thinking.
MA.K12.MTR.6.1:	Assess the reasonableness of solutions. Mathematicians who assess the reasonableness of solutions: • Estimate to discover possible solutions. • Use benchmark quantities to determine if a solution makes sense. • Check calculations when solving problems. • Verify possible solutions by explaining the methods used. • Evaluate results based on the given context. **Clarifications:** Teachers who encourage students to assess the reasonableness of solutions: • Have students estimate or predict solutions prior to solving. • Prompt students to continually ask, "Does this solution make sense? How do you know?" • Reinforce that students check their work as they progress within and after a task. • Strengthen students' ability to verify solutions through justifications.
MA.K12.MTR.7.1:	Apply mathematics to real-world contexts. Mathematicians who apply mathematics to real-world contexts: • Connect mathematical concepts to everyday experiences. • Use models and methods to understand, represent and solve problems. • Perform investigations to gather data or determine if a method is appropriate. • Redesign models and methods to improve accuracy or efficiency. **Clarifications:** Teachers who encourage students to apply mathematics to real-world contexts: • Provide opportunities for students to create models, both concrete and abstract, and perform investigations. • Challenge students to question the accuracy of their models and methods. • Support students as they validate conclusions by comparing them to the given situation. • Indicate how various concepts can be applied to other disciplines.
ELA.K12.EE.1.1:	Cite evidence to explain and justify reasoning. **Clarifications:** K-1 Students include textual evidence in their oral communication with guidance and support from adults. The evidence can consist of details from the text without naming the text. During 1st grade, students learn how to incorporate the evidence in their writing. 2-3 Students include relevant textual evidence in their written and oral communication. Students should name the text when they refer to it. In 3rd grade, students should use a combination of direct and indirect citations. 4-5 Students continue with previous skills and reference comments made by speakers and peers. Students cite texts that they've directly quoted, paraphrased, or used for information. When writing, students will use the form of citation dictated by the instructor or the style guide referenced by the instructor. 6-8 Students continue with previous skills and use a style guide to create a proper citation. 9-12 Students continue with previous skills and should be aware of existing style guides and the ways in which they differ.
ELA.K12.EE.2.1:	Read and comprehend grade-level complex texts proficiently. **Clarifications:** See Text Complexity for grade-level complexity bands and a text complexity rubric.
ELA.K12.EE.3.1:	Make inferences to support comprehension. **Clarifications:** Students will make inferences before the words infer or inference are introduced. Kindergarten students will answer questions like "Why is the girl smiling?" or make predictions about what will happen based on the title page. Students will use the terms and apply them in 2nd grade and beyond.
ELA.K12.EE.4.1:	Use appropriate collaborative techniques and active listening skills when engaging in discussions in a variety of situations. **Clarifications:** In kindergarten, students learn to listen to one another respectfully. In grades 1-2, students build upon these skills by justifying what they are thinking. For example: "I think _____ because _____." The collaborative conversations are becoming academic conversations. In grades 3-12, students engage in academic conversations discussing claims and justifying their reasoning, refining and applying skills. Students build on ideas, propel the conversation, and support claims and counterclaims with evidence.
	Use the accepted rules governing a specific format to create quality work. **Clarifications:**

ELA.K12.EE.5.1:	Students will incorporate skills learned into work products to produce quality work. For students to incorporate these skills appropriately, they must receive instruction. A 3rd grade student creating a poster board display must have instruction in how to effectively present information to do quality work.
ELA.K12.EE.6.1:	Use appropriate voice and tone when speaking or writing. **Clarifications:** In kindergarten and 1st grade, students learn the difference between formal and informal language. For example, the way we talk to our friends differs from the way we speak to adults. In 2nd grade and beyond, students practice appropriate social and academic language to discuss texts.
PE.3.C.2.2:	Understand the importance of safety rules and procedures in all physical activities. **Clarifications:** An example of a safety procedure is wearing a helmet when riding a bicycle.
PE.3.M.1.10:	Perform one dance accurately. **Clarifications:** Some examples of dances are square, contra, step and social.
DA.3.H.1.1:	Practice and perform social, cultural, or folk dances, using associated traditional music, to identify commonalities and differences.
ELD.K12.ELL.SI.1:	English language learners communicate for social and instructional purposes within the school setting.
VA.3.H.1.3:	Identify and be respectful of ideas important to individuals, groups, or cultures that are reflected in their artworks.

General Course Information and Notes

VERSION DESCRIPTION

Third-grade* students in music class explore their world by engaging in active learning processes to refine the skills, techniques, and processes of musicianship through such activities as improvisation and arranging. As they continue to develop their working music and cross-content vocabulary and become able to identify fundamental characteristics of musical structures, they demonstrate artistic growth through cognition and reflection and endeavor to use their own artistic voices to communicate ideas and inventions. They recognize the importance of cultural experiences in music throughout history and in emerging art forms. Music students examine the positive impact of the arts in society and practice creative risk-taking in preparation for contributive citizenship in the 21st century.

GENERAL NOTES

All instruction related to Music benchmarks should be framed by the Big Ideas and Enduring Understandings. Non-Music benchmarks listed in this course are also required and should be fully integrated in support of arts instruction.

* Intermediate Music 1, 2, and 3 have been designed in two ways: 1) to challenge students on grade level who have previously taken classes in this content area; and 2) to challenge students whose education in this content area has been delayed until the intermediate grades. Music teachers of classes in Grades 3, 4, and 5 should select the most appropriate course level in the series based on each group's prior experience, the benchmarks, and available instruction time. Once elementary students have entered the series, they must progress to the next course in sequence.

Examples:

- A 3rd grade class that may or may not have taken Music previously should be enrolled in Intermediate Music 1 and progress through the series in subsequent grades.
- 4th graders beginning formal instruction in Music for the first time may be enrolled, as a class, in Intermediate Music 1, and must then progress to Intermediate Music 2 in the following year.]

Special Note: This class may include opportunities to participate in extra rehearsals and performances beyond the school day.

Florida's Benchmarks for Excellent Student Thinking (B.E.S.T.) Standards
This course includes Florida's B.E.S.T. ELA Expectations (EE) and Mathematical Thinking and Reasoning Standards (MTRs) for students. Florida educators should intentionally embed these standards within the content and their instruction as applicable. For guidance on the implementation of the EEs and MTRs, please visit cpalms.org/Standards/BEST_Standards.aspx and select the appropriate B.E.S.T. Standards package.

English Language Development ELD Standards Special Notes Section:
Teachers are required to provide listening, speaking, reading and writing instruction that allows English language learners (ELL) to communicate for social and instructional purposes within the school setting. For the given level of English language proficiency and with visual, graphic, or interactive support, students will interact with grade level words, expressions, sentences and discourse to process or produce language necessary for academic success. The ELD standard should specify a relevant content area concept or topic of study chosen by curriculum developers and teachers which maximizes an ELL's need for communication and social skills. To access an ELL supporting document which delineates performance definitions and descriptors, please click on the following link: cpalms.org/uploads/docs/standards/eld/SI.pdf

GENERAL INFORMATION

Course Number: 5013090

Course Path: Section: Grades PreK to 12 Education Courses > **Grade Group:** Grades PreK to 5 Education Courses > **Subject:** Music Education > **SubSubject:** General >
Abbreviated Title: MUSIC-INTERM 1
Course Length: Year (Y)

Course Status: Draft - Course Pending Approval

Grade Level(s): K,1,2,3,4,5,PreK

Educator Certifications

Music Education (Elementary Grades 1-6)
Music (Elementary and Secondary Grades K-12)
Vocal Music (Elementary and Secondary Grades K-12)

Music - Intermediate 2 (#5013100) 2022 - And Beyond

Course Standards

Name	Description
MU.4.C.1.1:	Develop effective listening strategies and describe how they can support appreciation of musical works. **Clarifications:** e.g., listen for form, instrumentation, tempo, dynamics, melodic line, rhythm patterns; organize thoughts using listening maps, active listening, checklists
MU.4.C.1.2:	Describe, using correct music vocabulary, what is heard in a specific musical work. **Clarifications:** e.g., movement of melodic line, tempo, repeated and contrasting patterns
MU.4.C.1.3:	Classify orchestral and band instruments as strings, woodwinds, brass, percussion, or keyboard.
MU.4.C.1.4:	Identify and describe the four primary voice parts, i.e., soprano, alto, tenor, bass.
MU.4.C.2.1:	Identify and describe basic music performance techniques to provide a foundation for critiquing one's self and others. **Clarifications:** e.g., intonation, balance, blend, timbre, posture, breath support
MU.4.C.2.2:	Critique specific techniques in one's own and others performances using teacher-established criteria.
MU.4.C.3.1:	Describe characteristics that make various musical works appealing. **Clarifications:** e.g., tempo, rhythm, dynamics, blend, timbre, form, texture, instrumentation
MU.4.F.1.1:	Create new interpretations of melodic or rhythmic pieces by varying or adding dynamics, timbre, tempo, lyrics, and/or movement. **Clarifications:** e.g., mallet use, vocal and instrumental changes, digital sounds, literature, poetry
MU.4.F.2.1:	Describe roles and careers of selected musicians. **Clarifications:** e.g., teacher, conductor, composer, studio musician, recording technician, sound engineer, entertainer
MU.4.F.3.1:	Identify the characteristics and behaviors displayed by successful student musicians, and discuss how these qualities will contribute to success beyond the music classroom. **Clarifications:** e.g., punctual, prepared, dependable, self-disciplined, solutions-oriented, shows initiative, uses time wisely
MU.4.F.3.2:	Discuss the safe, legal way to download songs and other media. **Clarifications:** e.g., sharing personal and financial information, copying and sharing music
MU.4.H.1.1:	Examine and describe a cultural tradition, other than one's own, learned through its musical style and/or use of authentic instruments.
MU.4.H.1.2:	Describe the influence of selected composers on the musical works and practices or traditions of their time.
MU.4.H.1.3:	Identify pieces of music that originated from cultures other than one's own.
MU.4.H.2.1:	Perform, listen to, and discuss music related to Florida's history. **Clarifications:** e.g., music of Stephen Foster; Spanish, African American, and Native American influences; folk music; early music used to heal, signal, impress, intimidate, immortalize
MU.4.H.2.2:	Identify ways in which individuals of varying ages and cultures experience music. **Clarifications:** e.g., live concert, musical theatre, Internet, recordings
MU.4.H.3.1:	Identify connections among music and other contexts, using correct music and other relevant content-area vocabulary, and explore how learning in one academic area can help with knowledge or skill acquisition in a different academic area. **Clarifications:** e.g., movement, form, repetition, rhythmic patterns/numeric patterns, fractions, vibrations/sound waves
MU.4.O.1.1:	Compare musical elements in different types of music, using correct music vocabulary, as a foundation for understanding the structural conventions of specific styles. **Clarifications:** e.g., rules of rhythm, melody, timbre, form, tonality, harmony, meter; styles: Classical, Baroque
MU.4.O.2.1:	Create variations for selected melodies.
MU.4.O.3.1:	Identify how expressive elements and lyrics affect the mood or emotion of a song. **Clarifications:** e.g., tempo, dynamics, phrasing, articulation
MU.4.O.3.2:	Apply expressive elements to a vocal or instrumental piece and, using correct music vocabulary, explain one's choices.
MU.4.S.1.1:	Improvise phrases, using familiar songs. **Clarifications:** e.g., altering text, rhythm, pitch, melody

MU.4.S.1.2:	Create melodic patterns using a variety of sound sources. **Clarifications:** e.g., voice, instrument
MU.4.S.1.3:	Arrange a familiar song for voices or instruments by manipulating form. **Clarifications:** e.g., introduction, interlude/bridge, coda, ABA, rondo
MU.4.S.2.1:	Apply knowledge of musical structure to aid in sequencing and memorization and to internalize details of rehearsal and performance.
MU.4.S.3.1:	Sing rounds, canons, and/or partner songs in an appropriate range, using proper vocal technique and maintaining pitch.
MU.4.S.3.2:	Play rounds, canons, or layered ostinati on classroom instruments.
MU.4.S.3.3:	Perform extended pentatonic melodies at sight. **Clarifications:** e.g., high do, low sol, low la; vocal and/or instrumental
MU.4.S.3.4:	Play simple ostinati, by ear, using classroom instruments.
MU.4.S.3.5:	Notate simple rhythmic phrases and extended pentatonic melodies using traditional notation. **Clarifications:** e.g., rhythmic: quarter notes, beamed eighth notes, half notes, whole notes; corresponding rests; dotted half note; melodic: la-sol-mi-re-do
MA.K12.MTR.1.1:	Mathematicians who participate in effortful learning both individually and with others: • Analyze the problem in a way that makes sense given the task. • Ask questions that will help with solving the task. • Build perseverance by modifying methods as needed while solving a challenging task. • Stay engaged and maintain a positive mindset when working to solve tasks. • Help and support each other when attempting a new method or approach. **Clarifications:** Teachers who encourage students to participate actively in effortful learning both individually and with others: • Cultivate a community of growth mindset learners. • Foster perseverance in students by choosing tasks that are challenging. • Develop students' ability to analyze and problem solve. • Recognize students' effort when solving challenging problems.
MA.K12.MTR.2.1:	Demonstrate understanding by representing problems in multiple ways. Mathematicians who demonstrate understanding by representing problems in multiple ways: • Build understanding through modeling and using manipulatives. • Represent solutions to problems in multiple ways using objects, drawings, tables, graphs and equations. • Progress from modeling problems with objects and drawings to using algorithms and equations. • Express connections between concepts and representations. • Choose a representation based on the given context or purpose. **Clarifications:** Teachers who encourage students to demonstrate understanding by representing problems in multiple ways: • Help students make connections between concepts and representations. • Provide opportunities for students to use manipulatives when investigating concepts. • Guide students from concrete to pictorial to abstract representations as understanding progresses. • Show students that various representations can have different purposes and can be useful in different situations.
MA.K12.MTR.3.1:	Complete tasks with mathematical fluency. Mathematicians who complete tasks with mathematical fluency: • Select efficient and appropriate methods for solving problems within the given context. • Maintain flexibility and accuracy while performing procedures and mental calculations. • Complete tasks accurately and with confidence. • Adapt procedures to apply them to a new context. • Use feedback to improve efficiency when performing calculations. **Clarifications:** Teachers who encourage students to complete tasks with mathematical fluency: • Provide students with the flexibility to solve problems by selecting a procedure that allows them to solve efficiently and accurately. • Offer multiple opportunities for students to practice efficient and generalizable methods. • Provide opportunities for students to reflect on the method they used and determine if a more efficient method could have been used.
MA.K12.MTR.4.1:	Engage in discussions that reflect on the mathematical thinking of self and others. Mathematicians who engage in discussions that reflect on the mathematical thinking of self and others: • Communicate mathematical ideas, vocabulary and methods effectively. • Analyze the mathematical thinking of others. • Compare the efficiency of a method to those expressed by others. • Recognize errors and suggest how to correctly solve the task. • Justify results by explaining methods and processes. • Construct possible arguments based on evidence. **Clarifications:** Teachers who encourage students to engage in discussions that reflect on the mathematical thinking of self and others: • Establish a culture in which students ask questions of the teacher and their peers, and error is an opportunity for learning. • Create opportunities for students to discuss their thinking with peers.

	• Select, sequence and present student work to advance and deepen understanding of correct and increasingly efficient methods. • Develop students' ability to justify methods and compare their responses to the responses of their peers.
MA.K12.MTR.5.1:	Use patterns and structure to help understand and connect mathematical concepts. Mathematicians who use patterns and structure to help understand and connect mathematical concepts: • Focus on relevant details within a problem. • Create plans and procedures to logically order events, steps or ideas to solve problems. • Decompose a complex problem into manageable parts. • Relate previously learned concepts to new concepts. • Look for similarities among problems. • Connect solutions of problems to more complicated large-scale situations. **Clarifications:** Teachers who encourage students to use patterns and structure to help understand and connect mathematical concepts: • Help students recognize the patterns in the world around them and connect these patterns to mathematical concepts. • Support students to develop generalizations based on the similarities found among problems. • Provide opportunities for students to create plans and procedures to solve problems. • Develop students' ability to construct relationships between their current understanding and more sophisticated ways of thinking.
MA.K12.MTR.6.1:	Assess the reasonableness of solutions. Mathematicians who assess the reasonableness of solutions: • Estimate to discover possible solutions. • Use benchmark quantities to determine if a solution makes sense. • Check calculations when solving problems. • Verify possible solutions by explaining the methods used. • Evaluate results based on the given context. **Clarifications:** Teachers who encourage students to assess the reasonableness of solutions: • Have students estimate or predict solutions prior to solving. • Prompt students to continually ask, "Does this solution make sense? How do you know?" • Reinforce that students check their work as they progress within and after a task. • Strengthen students' ability to verify solutions through justifications.
MA.K12.MTR.7.1:	Apply mathematics to real-world contexts. Mathematicians who apply mathematics to real-world contexts: • Connect mathematical concepts to everyday experiences. • Use models and methods to understand, represent and solve problems. • Perform investigations to gather data or determine if a method is appropriate. • Redesign models and methods to improve accuracy or efficiency. **Clarifications:** Teachers who encourage students to apply mathematics to real-world contexts: • Provide opportunities for students to create models, both concrete and abstract, and perform investigations. • Challenge students to question the accuracy of their models and methods. • Support students as they validate conclusions by comparing them to the given situation. • Indicate how various concepts can be applied to other disciplines.
ELA.K12.EE.1.1:	Cite evidence to explain and justify reasoning. **Clarifications:** K-1 Students include textual evidence in their oral communication with guidance and support from adults. The evidence can consist of details from the text without naming the text. During 1st grade, students learn how to incorporate the evidence in their writing. 2-3 Students include relevant textual evidence in their written and oral communication. Students should name the text when they refer to it. In 3rd grade, students should use a combination of direct and indirect citations. 4-5 Students continue with previous skills and reference comments made by speakers and peers. Students cite texts that they've directly quoted, paraphrased, or used for information. When writing, students will use the form of citation dictated by the instructor or the style guide referenced by the instructor. 6-8 Students continue with previous skills and use a style guide to create a proper citation. 9-12 Students continue with previous skills and should be aware of existing style guides and the ways in which they differ.
ELA.K12.EE.2.1:	Read and comprehend grade-level complex texts proficiently. **Clarifications:** See Text Complexity for grade-level complexity bands and a text complexity rubric.
ELA.K12.EE.3.1:	Make inferences to support comprehension. **Clarifications:** Students will make inferences before the words infer or inference are introduced. Kindergarten students will answer questions like "Why is the girl smiling?" or make predictions about what will happen based on the title page. Students will use the terms and apply them in 2nd grade and beyond.
ELA.K12.EE.4.1:	Use appropriate collaborative techniques and active listening skills when engaging in discussions in a variety of situations. **Clarifications:** In kindergarten, students learn to listen to one another respectfully. In grades 1-2, students build upon these skills by justifying what they are thinking. For example: "I think _____ because _____." The collaborative conversations are becoming academic conversations.

	In grades 3-12, students engage in academic conversations discussing claims and justifying their reasoning, refining and applying skills. Students build on ideas, propel the conversation, and support claims and counterclaims with evidence.
ELA.K12.EE.5.1:	Use the accepted rules governing a specific format to create quality work. **Clarifications:** Students will incorporate skills learned into work products to produce quality work. For students to incorporate these skills appropriately, they must receive instruction. A 3rd grade student creating a poster board display must have instruction in how to effectively present information to do quality work.
ELA.K12.EE.6.1:	Use appropriate voice and tone when speaking or writing. **Clarifications:** In kindergarten and 1st grade, students learn the difference between formal and informal language. For example, the way we talk to our friends differs from the way we speak to adults. In 2nd grade and beyond, students practice appropriate social and academic language to discuss texts.
PE.4.C.2.2:	Understand the importance of safety rules and procedures in all physical activities, especially those that are high risk. **Clarifications:** An example of a safety procedure is having students stand a safe distance away from a student swinging a golf club during striking activities.
PE.4.M.1.10:	Perform two or more dances accurately. **Clarifications:** Some examples of dances are line, square, contra, folk, step and social.
DA.4.H.3.3:	Describe how dance and music can each be used to interpret and support the other.
ELD.K12.ELL.SI.1:	English language learners communicate for social and instructional purposes within the school setting.
SC.4.P.10.3:	Investigate and explain that sound is produced by vibrating objects and that pitch depends on how fast or slow the object vibrates.

General Course Information and Notes

VERSION DESCRIPTION

Fourth-grade* students in music class explore artistic intent by investigating the inventive development of ideas, applying musicianship skills and techniques while engaging in the creation and interpretation of the arts. They analyze the characteristics of musical structures from simple to complex to build understanding and respect for the creative process. As they examine the significant cultural contributions in the arts throughout history, particularly in Florida, they become increasingly able to identify the connections among music and other fields of study. Music students also develop knowledge of careers in, and related to, the arts as they explore the impact of music on the local and global economies of the 21st century and strengthen personal skills for success throughout school and beyond.

GENERAL NOTES

All instruction related to Music benchmarks should be framed by the Big Ideas and Enduring Understandings. Non-Music benchmarks listed in this course are also required and should be fully integrated in support of arts instruction.

* Intermediate Music 1, 2, and 3 have been designed in two ways: 1) to challenge students on grade level who have previously taken classes in this content area; and 2) to challenge students whose education in this content area has been delayed until the intermediate grades. Music teachers of classes in Grades 3, 4, and 5 should select the most appropriate course level in the series based on each group's prior experience, the benchmarks, and available instruction time. Once elementary students have entered the series, they must progress to the next course in sequence.

Examples:

- A 3rd grade class that may or may not have taken Music previously should be enrolled in Intermediate Music 1 and progress through the series in subsequent grades.
- 4th graders beginning formal instruction in Music for the first time may be enrolled, as a class, in Intermediate Music 1, and must then progress to Intermediate Music 2 in the following year.

Special Note: This class may include opportunities to participate in extra rehearsals and performances beyond the school day.

Florida's Benchmarks for Excellent Student Thinking (B.E.S.T.) Standards
This course includes Florida's B.E.S.T. ELA Expectations (EE) and Mathematical Thinking and Reasoning Standards (MTRs) for students. Florida educators should intentionally embed these standards within the content and their instruction as applicable. For guidance on the implementation of the EEs and MTRs, please visit cpalms.org/Standards/BEST_Standards.aspx and select the appropriate B.E.S.T. Standards package.

English Language Development ELD Standards Special Notes Section:
Teachers are required to provide listening, speaking, reading and writing instruction that allows English language learners (ELL) to communicate for social and instructional purposes within the school setting. For the given level of English language proficiency and with visual, graphic, or interactive support, students will interact with grade level words, expressions, sentences and discourse to process or produce language necessary for academic success. The ELD standard should specify a relevant content area concept or topic of study chosen by curriculum developers and teachers which maximizes an ELL's need for communication and social skills. To access an ELL supporting document which delineates performance definitions and descriptors, please click on the following link: cpalms.org/uploads/docs/standards/eld/SI.pdf

GENERAL INFORMATION

Course Number: 5013100

Course Path: Section: Grades PreK to 12 Education Courses > **Grade Group:** Grades PreK to 5 Education Courses > **Subject:** Music Education > **SubSubject:**

General >

Abbreviated Title: MUSIC-INTERM 2

Course Length: Year (Y)

Course Status: Draft - Course Pending Approval

Grade Level(s): K,1,2,3,4,5,PreK

Educator Certifications

Music Education (Elementary Grades 1-6)
Music (Elementary and Secondary Grades K-12)
Vocal Music (Elementary and Secondary Grades K-12)

Music - Intermediate 3 (#5013110) 2022 - And Beyond

Course Standards

Name	Description
MU.5.C.1.1:	Discuss and apply listening strategies to support appreciation of musical works. **Clarifications:** e.g., focus: structure, instrumentation, tempo, dynamics, melodic line, rhythm patterns, style/genre; organize: listening maps, active listening, checklists
MU.5.C.1.2:	Hypothesize and discuss, using correct music vocabulary, the composer's intent for a specific musical work. **Clarifications:** e.g., title, historical notes, quality recordings, instrumentation, expressive elements
MU.5.C.1.3:	Identify, aurally, selected instruments of the band and orchestra. **Clarifications:** e.g., violin, cello, string bass, flute, clarinet, oboe, bassoon, trumpet, trombone, tuba, French horn, bass drum, snare drum, xylophone, chimes, piano, harpsichord
MU.5.C.1.4:	Identify, aurally, the four primary voice parts, i.e., soprano, alto, tenor, bass, of a mixed choir.
MU.5.C.2.1:	Define criteria, using correct music vocabulary, to critique one's own and others performance. **Clarifications:** e.g., intonation, balance, blend, timbre
MU.5.C.2.2:	Describe changes, using correct music vocabulary, in one's own and/or others performance over time.
MU.5.C.3.1:	Develop criteria to evaluate an exemplary musical work from a specific period or genre.
MU.5.F.1.1:	Create a performance, using visual, kinesthetic, digital, and/or acoustic means to manipulate musical elements.
MU.5.F.2.1:	Describe jobs associated with various types of concert venues and performing arts centers. **Clarifications:** e.g., music merchant, ticket agent, marketer, agent, security guard, food-and-beverage merchant
MU.5.F.2.2:	Explain why live performances are important to the career of the artist and the success of performance venues.
MU.5.F.3.1:	Examine and discuss the characteristics and behaviors displayed by successful student musicians that can be applied outside the music classroom. **Clarifications:** e.g., dedicated, works toward mastery, punctual, prepared, dependable, self-disciplined, solutions-oriented
MU.5.F.3.2:	Practice safe, legal, and responsible acquisition and use of music media, and describe why it is important to do so. **Clarifications:** e.g., downloading music and other digital media, sharing personal and financial information, copying music
MU.5.H.1.1:	Identify the purposes for which music is used within various cultures. **Clarifications:** e.g., communication, celebration, ceremony
MU.5.H.1.2:	Compare and describe the compositional characteristics used by two or more composers whose works are studied in class.
MU.5.H.1.3:	Compare stylistic and musical features in works originating from different cultures. **Clarifications:** e.g., use of rhythm, texture, tonality, use of folk melodies, improvisation, instrumentation, aural/oral traditions, principle drumming patterns
MU.5.H.2.1:	Examine the contributions of musicians and composers for a specific historical period.
MU.5.H.2.2:	Describe how technology has changed the way audiences experience music.
MU.5.H.3.1:	Examine critical-thinking processes in music and describe how they can be transferred to other disciplines. **Clarifications:** e.g., reading, writing, observing, listening, evaluating, embellishing, revising
MU.5.O.1.1:	Analyze, using correct music vocabulary, the use of musical elements in various styles of music as a foundation for understanding the creative process. **Clarifications:** e.g., rhythm patterns, melody, timbre, form, tonality, harmony, meter, key; styles: Classical, Baroque, Romantic, nationalistic, jazz
MU.5.O.2.1:	Create a new melody from two or more melodic motifs.
MU.5.O.3.1:	Examine and explain how expressive elements, when used in a selected musical work, affect personal response. **Clarifications:** e.g., tempo, dynamics, timbre, texture, phrasing, articulation
MU.5.O.3.2:	Perform expressive elements in a vocal or instrumental piece as indicated by the score and/or conductor.
MU.5.S.1.1:	Improvise rhythmic and melodic phrases to create simple variations on familiar melodies.
MU.5.S.1.2:	Compose short vocal or instrumental pieces using a variety of sound sources.
MU.5.S.1.3:	Arrange a familiar song by manipulating specified aspects of music. **Clarifications:** e.g., dynamics, tempo, lyrics, form, rhythm, instrumentation
MU.5.S.1.4:	Sing or play simple melodic patterns by ear with support from the teacher.

MU.5.S.2.1:	Use expressive elements and knowledge of musical structure to aid in sequencing and memorization and to internalize details of rehearsals and performance.
MU.5.S.2.2:	Apply performance techniques to familiar music.
MU.5.S.3.1:	Sing part songs in an appropriate range, using proper vocal technique and maintaining pitch.
MU.5.S.3.2:	Play melodies and accompaniments, using proper instrumental technique, on pitched and unpitched instruments.
MU.5.S.3.3:	Perform simple diatonic melodies at sight. **Clarifications:** e.g., vocal and/or instrumental
MU.5.S.3.4:	Play melodies and accompaniments, by ear, using classroom instruments.
MU.5.S.3.5:	Notate rhythmic phrases and simple diatonic melodies using traditional notation. **Clarifications:** e.g., rhythmic: quarter notes, beamed eighth notes, half notes, whole notes; corresponding rests; dotted half note; sixteenth notes; syncopation
MA.K12.MTR.1.1:	Mathematicians who participate in effortful learning both individually and with others: • Analyze the problem in a way that makes sense given the task. • Ask questions that will help with solving the task. • Build perseverance by modifying methods as needed while solving a challenging task. • Stay engaged and maintain a positive mindset when working to solve tasks. • Help and support each other when attempting a new method or approach. **Clarifications:** Teachers who encourage students to participate actively in effortful learning both individually and with others: • Cultivate a community of growth mindset learners. • Foster perseverance in students by choosing tasks that are challenging. • Develop students' ability to analyze and problem solve. • Recognize students' effort when solving challenging problems.
MA.K12.MTR.2.1:	Demonstrate understanding by representing problems in multiple ways. Mathematicians who demonstrate understanding by representing problems in multiple ways: • Build understanding through modeling and using manipulatives. • Represent solutions to problems in multiple ways using objects, drawings, tables, graphs and equations. • Progress from modeling problems with objects and drawings to using algorithms and equations. • Express connections between concepts and representations. • Choose a representation based on the given context or purpose. **Clarifications:** Teachers who encourage students to demonstrate understanding by representing problems in multiple ways: • Help students make connections between concepts and representations. • Provide opportunities for students to use manipulatives when investigating concepts. • Guide students from concrete to pictorial to abstract representations as understanding progresses. • Show students that various representations can have different purposes and can be useful in different situations.
MA.K12.MTR.3.1:	Complete tasks with mathematical fluency. Mathematicians who complete tasks with mathematical fluency: • Select efficient and appropriate methods for solving problems within the given context. • Maintain flexibility and accuracy while performing procedures and mental calculations. • Complete tasks accurately and with confidence. • Adapt procedures to apply them to a new context. • Use feedback to improve efficiency when performing calculations. **Clarifications:** Teachers who encourage students to complete tasks with mathematical fluency: • Provide students with the flexibility to solve problems by selecting a procedure that allows them to solve efficiently and accurately. • Offer multiple opportunities for students to practice efficient and generalizable methods. • Provide opportunities for students to reflect on the method they used and determine if a more efficient method could have been used.
MA.K12.MTR.4.1:	Engage in discussions that reflect on the mathematical thinking of self and others. Mathematicians who engage in discussions that reflect on the mathematical thinking of self and others: • Communicate mathematical ideas, vocabulary and methods effectively. • Analyze the mathematical thinking of others. • Compare the efficiency of a method to those expressed by others. • Recognize errors and suggest how to correctly solve the task. • Justify results by explaining methods and processes. • Construct possible arguments based on evidence. **Clarifications:** Teachers who encourage students to engage in discussions that reflect on the mathematical thinking of self and others: • Establish a culture in which students ask questions of the teacher and their peers, and error is an opportunity for learning. • Create opportunities for students to discuss their thinking with peers. • Select, sequence and present student work to advance and deepen understanding of correct and increasingly efficient methods. • Develop students' ability to justify methods and compare their responses to the responses of their peers.
	Use patterns and structure to help understand and connect mathematical concepts. Mathematicians who use patterns and structure to help understand and connect mathematical concepts:

MA.K12.MTR.5.1:	• Focus on relevant details within a problem. • Create plans and procedures to logically order events, steps or ideas to solve problems. • Decompose a complex problem into manageable parts. • Relate previously learned concepts to new concepts. • Look for similarities among problems. • Connect solutions of problems to more complicated large-scale situations. **Clarifications:** Teachers who encourage students to use patterns and structure to help understand and connect mathematical concepts: • Help students recognize the patterns in the world around them and connect these patterns to mathematical concepts. • Support students to develop generalizations based on the similarities found among problems. • Provide opportunities for students to create plans and procedures to solve problems. • Develop students' ability to construct relationships between their current understanding and more sophisticated ways of thinking.
MA.K12.MTR.6.1:	Assess the reasonableness of solutions. Mathematicians who assess the reasonableness of solutions: • Estimate to discover possible solutions. • Use benchmark quantities to determine if a solution makes sense. • Check calculations when solving problems. • Verify possible solutions by explaining the methods used. • Evaluate results based on the given context. **Clarifications:** Teachers who encourage students to assess the reasonableness of solutions: • Have students estimate or predict solutions prior to solving. • Prompt students to continually ask, "Does this solution make sense? How do you know?" • Reinforce that students check their work as they progress within and after a task. • Strengthen students' ability to verify solutions through justifications.
MA.K12.MTR.7.1:	Apply mathematics to real-world contexts. Mathematicians who apply mathematics to real-world contexts: • Connect mathematical concepts to everyday experiences. • Use models and methods to understand, represent and solve problems. • Perform investigations to gather data or determine if a method is appropriate. • Redesign models and methods to improve accuracy or efficiency. **Clarifications:** Teachers who encourage students to apply mathematics to real-world contexts: • Provide opportunities for students to create models, both concrete and abstract, and perform investigations. • Challenge students to question the accuracy of their models and methods. • Support students as they validate conclusions by comparing them to the given situation. • Indicate how various concepts can be applied to other disciplines.
ELA.K12.EE.1.1:	Cite evidence to explain and justify reasoning. **Clarifications:** K-1 Students include textual evidence in their oral communication with guidance and support from adults. The evidence can consist of details from the text without naming the text. During 1st grade, students learn how to incorporate the evidence in their writing. 2-3 Students include relevant textual evidence in their written and oral communication. Students should name the text when they refer to it. In 3rd grade, students should use a combination of direct and indirect citations. 4-5 Students continue with previous skills and reference comments made by speakers and peers. Students cite texts that they've directly quoted, paraphrased, or used for information. When writing, students will use the form of citation dictated by the instructor or the style guide referenced by the instructor. 6-8 Students continue with previous skills and use a style guide to create a proper citation. 9-12 Students continue with previous skills and should be aware of existing style guides and the ways in which they differ.
ELA.K12.EE.2.1:	Read and comprehend grade-level complex texts proficiently. **Clarifications:** See Text Complexity for grade-level complexity bands and a text complexity rubric.
ELA.K12.EE.3.1:	Make inferences to support comprehension. **Clarifications:** Students will make inferences before the words infer or inference are introduced. Kindergarten students will answer questions like "Why is the girl smiling?" or make predictions about what will happen based on the title page. Students will use the terms and apply them in 2nd grade and beyond.
ELA.K12.EE.4.1:	Use appropriate collaborative techniques and active listening skills when engaging in discussions in a variety of situations. **Clarifications:** In kindergarten, students learn to listen to one another respectfully. In grades 1-2, students build upon these skills by justifying what they are thinking. For example: "I think _____ because _____." The collaborative conversations are becoming academic conversations. In grades 3-12, students engage in academic conversations discussing claims and justifying their reasoning, refining and applying skills. Students build on ideas, propel the conversation, and support claims and counterclaims with evidence.
	Use the accepted rules governing a specific format to create quality work. **Clarifications:**

ELA.K12.EE.5.1:	Students will incorporate skills learned into work products to produce quality work. For students to incorporate these skills appropriately, they must receive instruction. A 3rd grade student creating a poster board display must have instruction in how to effectively present information to do quality work.
ELA.K12.EE.6.1:	Use appropriate voice and tone when speaking or writing. **Clarifications:** In kindergarten and 1st grade, students learn the difference between formal and informal language. For example, the way we talk to our friends differs from the way we speak to adults. In 2nd grade and beyond, students practice appropriate social and academic language to discuss texts.
ELD.K12.ELL.SI.1:	English language learners communicate for social and instructional purposes within the school setting.
TH.5.H.1.2:	Participate in a performance to explore and celebrate a variety of human experiences.

General Course Information and Notes

VERSION DESCRIPTION

Fifth-grade* students in music class develop and analyze the skills necessary for the critical assessment of artistic works and creative works in other contexts. They demonstrate the proficiency of comprehensive musicianship and interpretive skills in the arts, which allows them to explore manipulation of musical structures to represent a personal and creative form of artistic communication. As students become more musically sophisticated, they establish and document reciprocal relationships among music and other disciplines of study. They learn to transfer their music knowledge and innovative skills as a means of discovering the significant contributions of music and the arts, in general, to positive social development and global economic success in the 21st Century.

GENERAL NOTES

All instruction related to Music benchmarks should be framed by the Big Ideas and Enduring Understandings. Non-Music benchmarks listed in this course are also required and should be fully integrated in support of arts instruction.

* Intermediate Music 1, 2, and 3 have been designed in two ways: 1) to challenge students on grade level who have previously taken classes in this content area; and 2) to challenge students whose education in this content area has been delayed until the intermediate grades. Music teachers of classes in Grades 3, 4, and 5 should select the most appropriate course level in the series based on each group's prior experience, the benchmarks, and available instruction time. Once elementary students have entered the series, they must progress to the next course in sequence.

Examples:

- 3rd grade class that may or may not have taken Music previously should be enrolled in Intermediate Music 1 and progress through the series in subsequent grades.
- 4th graders beginning formal instruction in Music for the first time may be enrolled, as a class, in Intermediate Music 1, and must then progress to Intermediate Music 2 in the following year.

Special Note: This class may include opportunities to participate in extra rehearsals and performances beyond the school day.

Florida's Benchmarks for Excellent Student Thinking (B.E.S.T.) Standards
This course includes Florida's B.E.S.T. ELA Expectations (EE) and Mathematical Thinking and Reasoning Standards (MTRs) for students. Florida educators should intentionally embed these standards within the content and their instruction as applicable. For guidance on the implementation of the EEs and MTRs, please visit cpalms.org/Standards/BEST_Standards.aspx and select the appropriate B.E.S.T. Standards package.

English Language Development ELD Standards Special Notes Section:
Teachers are required to provide listening, speaking, reading and writing instruction that allows English language learners (ELL) to communicate for social and instructional purposes within the school setting. For the given level of English language proficiency and with visual, graphic, or interactive support, students will interact with grade level words, expressions, sentences and discourse to process or produce language necessary for academic success. The ELD standard should specify a relevant content area concept or topic of study chosen by curriculum developers and teachers which maximizes an ELL's need for communication and social skills. To access an ELL supporting document which delineates performance definitions and descriptors, please click on the following link: cpalms.org/uploads/docs/standards/eld/SI.pdf

GENERAL INFORMATION

Course Number: 5013110

Course Path: Section: Grades PreK to 12 Education Courses > **Grade Group:** Grades PreK to 5 Education Courses > **Subject:** Music Education > **SubSubject:** General >
Abbreviated Title: MUSIC-INTERM 3
Course Length: Year (Y)

Course Status: Draft - Course Pending Approval

Grade Level(s): K,1,2,3,4,5,PreK

Educator Certifications

Music Education (Elementary Grades 1-6)
Music (Elementary and Secondary Grades K-12)

M/J Peer Counseling 1 (#1400000) 2022 - And Beyond

Course Standards

Name	Description
HE.6.B.4.1:	Determine strategies to improve effective verbal- and nonverbal-communication skills to enhance health. **Clarifications:** Role playing, short stories, and open-ended scenarios.
HE.6.B.4.2:	Practice refusal skills and negotiation skills to reduce health risks. **Clarifications:** Assertiveness, compromising, and use of "I" messages.
HE.6.B.5.1:	Investigate health-related situations that require the application of a thoughtful decision-making process. **Clarifications:** Peer pressure, exposure to unsupervised firearms, and tobacco use.
HE.6.B.5.2:	Choose healthy alternatives over unhealthy alternatives when making a decision. **Clarifications:** Not smoking, limiting sedentary activity, and practicing good character.
HE.6.C.2.8:	Determine how social norms may impact healthy and unhealthy behavior. **Clarifications:** Alcohol, tobacco and inhalant-use, bullying behaviors, and walking/biking vs. riding in a vehicle to a close location.
HE.6.P.8.4:	Identify ways health messages and communication techniques can be targeted for different audiences. **Clarifications:** Surveys, advertisements, music, and clothing.
HE.7.B.4.1:	Apply effective communication skills when interacting with others to enhance health. **Clarifications:** Clear and concise words, nonverbal language, discussion, "I" messages, and assertive vs. passive or aggressive communication.
HE.7.B.4.2:	Demonstrate refusal, negotiation, and collaboration skills to enhance health and reduce health risks. **Clarifications:** Working together, compromise, direct statement, peer mediation, personal boundaries, and reflective listening.
HE.7.B.4.3:	Articulate the possible causes of conflict among youth in schools and communities. **Clarifications:** Ethnic prejudice and diversity, substance use, group dynamics, relationship issues/dating violence, gossip/rumors, and sexual identity.
HE.7.B.4.4:	Demonstrate how to ask for assistance to enhance the health of self and others. **Clarifications:** "I" messages, ask on behalf of a friend, written request, riding in a vehicle with someone who is intoxicated, and bullying.
HE.7.B.5.2:	Select healthy alternatives over unhealthy alternatives when making a decision. **Clarifications:** Proper prescription-drug use, using safety equipment, Internet safety, and managing stress.
HE.8.B.5.2:	Categorize healthy and unhealthy alternatives to health-related issues or problems. **Clarifications:** (Alcohol consumption, sleep requirements, physical activity, and time management.)
MA.K12.MTR.1.1:	Mathematicians who participate in effortful learning both individually and with others: • Analyze the problem in a way that makes sense given the task. • Ask questions that will help with solving the task. • Build perseverance by modifying methods as needed while solving a challenging task. • Stay engaged and maintain a positive mindset when working to solve tasks. • Help and support each other when attempting a new method or approach. **Clarifications:** Teachers who encourage students to participate actively in effortful learning both individually and with others: • Cultivate a community of growth mindset learners. • Foster perseverance in students by choosing tasks that are challenging. • Develop students' ability to analyze and problem solve. • Recognize students' effort when solving challenging problems.
	Demonstrate understanding by representing problems in multiple ways. Mathematicians who demonstrate understanding by representing problems in multiple ways: • Build understanding through modeling and using manipulatives. • Represent solutions to problems in multiple ways using objects, drawings, tables, graphs and equations. • Progress from modeling problems with objects and drawings to using algorithms and equations. • Express connections between concepts and representations.

MA.K12.MTR.2.1:

- Choose a representation based on the given context or purpose.

Clarifications:
Teachers who encourage students to demonstrate understanding by representing problems in multiple ways:

- Help students make connections between concepts and representations.
- Provide opportunities for students to use manipulatives when investigating concepts.
- Guide students from concrete to pictorial to abstract representations as understanding progresses.
- Show students that various representations can have different purposes and can be useful in different situations.

MA.K12.MTR.3.1:

Complete tasks with mathematical fluency.
Mathematicians who complete tasks with mathematical fluency:

- Select efficient and appropriate methods for solving problems within the given context.
- Maintain flexibility and accuracy while performing procedures and mental calculations.
- Complete tasks accurately and with confidence.
- Adapt procedures to apply them to a new context.
- Use feedback to improve efficiency when performing calculations.

Clarifications:
Teachers who encourage students to complete tasks with mathematical fluency:

- Provide students with the flexibility to solve problems by selecting a procedure that allows them to solve efficiently and accurately.
- Offer multiple opportunities for students to practice efficient and generalizable methods.
- Provide opportunities for students to reflect on the method they used and determine if a more efficient method could have been used.

MA.K12.MTR.4.1:

Engage in discussions that reflect on the mathematical thinking of self and others.
Mathematicians who engage in discussions that reflect on the mathematical thinking of self and others:

- Communicate mathematical ideas, vocabulary and methods effectively.
- Analyze the mathematical thinking of others.
- Compare the efficiency of a method to those expressed by others.
- Recognize errors and suggest how to correctly solve the task.
- Justify results by explaining methods and processes.
- Construct possible arguments based on evidence.

Clarifications:
Teachers who encourage students to engage in discussions that reflect on the mathematical thinking of self and others:

- Establish a culture in which students ask questions of the teacher and their peers, and error is an opportunity for learning.
- Create opportunities for students to discuss their thinking with peers.
- Select, sequence and present student work to advance and deepen understanding of correct and increasingly efficient methods.
- Develop students' ability to justify methods and compare their responses to the responses of their peers.

MA.K12.MTR.5.1:

Use patterns and structure to help understand and connect mathematical concepts.
Mathematicians who use patterns and structure to help understand and connect mathematical concepts:

- Focus on relevant details within a problem.
- Create plans and procedures to logically order events, steps or ideas to solve problems.
- Decompose a complex problem into manageable parts.
- Relate previously learned concepts to new concepts.
- Look for similarities among problems.
- Connect solutions of problems to more complicated large-scale situations.

Clarifications:
Teachers who encourage students to use patterns and structure to help understand and connect mathematical concepts:

- Help students recognize the patterns in the world around them and connect these patterns to mathematical concepts.
- Support students to develop generalizations based on the similarities found among problems.
- Provide opportunities for students to create plans and procedures to solve problems.
- Develop students' ability to construct relationships between their current understanding and more sophisticated ways of thinking.

MA.K12.MTR.6.1:

Assess the reasonableness of solutions.
Mathematicians who assess the reasonableness of solutions:

- Estimate to discover possible solutions.
- Use benchmark quantities to determine if a solution makes sense.
- Check calculations when solving problems.
- Verify possible solutions by explaining the methods used.
- Evaluate results based on the given context.

Clarifications:
Teachers who encourage students to assess the reasonableness of solutions:

- Have students estimate or predict solutions prior to solving.
- Prompt students to continually ask, "Does this solution make sense? How do you know?"
- Reinforce that students check their work as they progress within and after a task.
- Strengthen students' ability to verify solutions through justifications.

Apply mathematics to real-world contexts.
Mathematicians who apply mathematics to real-world contexts:

- Connect mathematical concepts to everyday experiences.
- Use models and methods to understand, represent and solve problems.
- Perform investigations to gather data or determine if a method is appropriate. • Redesign models and methods to improve accuracy or efficiency.

MA.K12.MTR.7.1:	**Clarifications:** Teachers who encourage students to apply mathematics to real-world contexts: • Provide opportunities for students to create models, both concrete and abstract, and perform investigations. • Challenge students to question the accuracy of their models and methods. • Support students as they validate conclusions by comparing them to the given situation. • Indicate how various concepts can be applied to other disciplines.
ELA.K12.EE.1.1:	Cite evidence to explain and justify reasoning. **Clarifications:** K-1 Students include textual evidence in their oral communication with guidance and support from adults. The evidence can consist of details from the text without naming the text. During 1st grade, students learn how to incorporate the evidence in their writing. 2-3 Students include relevant textual evidence in their written and oral communication. Students should name the text when they refer to it. In 3rd grade, students should use a combination of direct and indirect citations. 4-5 Students continue with previous skills and reference comments made by speakers and peers. Students cite texts that they've directly quoted, paraphrased, or used for information. When writing, students will use the form of citation dictated by the instructor or the style guide referenced by the instructor. 6-8 Students continue with previous skills and use a style guide to create a proper citation. 9-12 Students continue with previous skills and should be aware of existing style guides and the ways in which they differ.
ELA.K12.EE.2.1:	Read and comprehend grade-level complex texts proficiently. **Clarifications:** See Text Complexity for grade-level complexity bands and a text complexity rubric.
ELA.K12.EE.3.1:	Make inferences to support comprehension. **Clarifications:** Students will make inferences before the words infer or inference are introduced. Kindergarten students will answer questions like "Why is the girl smiling?" or make predictions about what will happen based on the title page. Students will use the terms and apply them in 2nd grade and beyond.
ELA.K12.EE.4.1:	Use appropriate collaborative techniques and active listening skills when engaging in discussions in a variety of situations. **Clarifications:** In kindergarten, students learn to listen to one another respectfully. In grades 1-2, students build upon these skills by justifying what they are thinking. For example: "I think _____ because _____." The collaborative conversations are becoming academic conversations. In grades 3-12, students engage in academic conversations discussing claims and justifying their reasoning, refining and applying skills. Students build on ideas, propel the conversation, and support claims and counterclaims with evidence.
ELA.K12.EE.5.1:	Use the accepted rules governing a specific format to create quality work. **Clarifications:** Students will incorporate skills learned into work products to produce quality work. For students to incorporate these skills appropriately, they must receive instruction. A 3rd grade student creating a poster board display must have instruction in how to effectively present information to do quality work.
ELA.K12.EE.6.1:	Use appropriate voice and tone when speaking or writing. **Clarifications:** In kindergarten and 1st grade, students learn the difference between formal and informal language. For example, the way we talk to our friends differs from the way we speak to adults. In 2nd grade and beyond, students practice appropriate social and academic language to discuss texts.
ELD.K12.ELL.SI.1:	English language learners communicate for social and instructional purposes within the school setting.

General Course Information and Notes

GENERAL NOTES

The purpose of this course is to enable students to develop awareness of self and others. Emphasis will be on acquisition of basic skills for thoughtful planning, peer facilitation, effective communication and making healthy choices.

The content should include, but not be limited to, the following:

- Peer Facilitating
- Human Needs
- Self Awareness and Expression
- Peer Pressure
- Peer and Family Relationships
- Conflict Resolution
- Goal Setting
- Social Skills
- Active Listening
- Personal Choices
- Healthy Lifestyles
- Effects of Stress

Special Notes:

Instructional Practices
Teaching from a well-written, grade-level textbook enhances students' content area knowledge and also strengthens their ability to comprehend longer, complex reading passages on any topic for any reason. Using the following instructional practices also helps student learning:

1. Reading assignments from longer text passages as well as shorter ones when text is extremely complex.
2. Making close reading and rereading of texts central to lessons.
3. Asking high-level, text-specific questions and requiring high- level, complex tasks and assignments.
4. Requiring students to support answers with evidence from the text.
5. Providing extensive text-based research and writing opportunities (claims and evidence).

Florida's Benchmarks for Excellent Student Thinking (B.E.S.T.) Standards
This course includes Florida's B.E.S.T. ELA Expectations (EE) and Mathematical Thinking and Reasoning Standards (MTRs) for students. Florida educators should intentionally embed these standards within the content and their instruction as applicable. For guidance on the implementation of the EEs and MTRs, please visit cpalms.org/Standards/BEST_Standards.aspx and select the appropriate B.E.S.T. Standards package.

English Language Development ELD Standards Special Notes Section:
Teachers are required to provide listening, speaking, reading and writing instruction that allows English language learners (ELL) to communicate for social and instructional purposes within the school setting. For the given level of English language proficiency and with visual, graphic, or interactive support, students will interact with grade level words, expressions, sentences and discourse to process or produce language necessary for academic success. The ELD standard should specify a relevant content area concept or topic of study chosen by curriculum developers and teachers which maximizes an ELL's need for communication and social skills. To access an ELL supporting document which delineates performance definitions and descriptors, please click on the following link: cpalms.org/uploads/docs/standards/eld/SI.pdf

QUALIFICATIONS

As well as any certification requirements listed on the course description, the following qualifications may also be acceptable for the course:

Any field when certification reflects a bachelor or higher degree.

GENERAL INFORMATION

Course Number: 1400000

Course Path: Section: Grades PreK to 12 Education Courses > **Grade Group:** Grades 6 to 8 Education Courses > **Subject:** Peer Counseling > **SubSubject:** General >
Abbreviated Title: M/J PEER COUN 1
Course Length: Year (Y)
Course Level: 2

Course Status: Draft - Course Pending Approval

Grade Level(s): 6,7,8

M/J Peer Counseling 2 (#1400010) 2022 - And Beyond

Course Standards

Name	Description
HE.6.B.3.1:	Examine the validity of health information, and determine the cost of health products, and services. **Clarifications:** Advertisements, Internet, infomercials, articles, flyers, diet supplements, generic vs. name brand, individual fitness plan vs. gym membership, and private lessons vs. recreational play.
HE.6.B.4.1:	Determine strategies to improve effective verbal- and nonverbal-communication skills to enhance health. **Clarifications:** Role playing, short stories, and open-ended scenarios.
HE.6.B.4.2:	Practice refusal skills and negotiation skills to reduce health risks. **Clarifications:** Assertiveness, compromising, and use of "I" messages.
HE.6.B.4.3:	Demonstrate effective conflict-management and/or resolution strategies. **Clarifications:** Talk to an adult, anger management, and conflict mediation.
HE.6.B.5.1:	Investigate health-related situations that require the application of a thoughtful decision-making process. **Clarifications:** Peer pressure, exposure to unsupervised firearms, and tobacco use.
HE.6.B.5.2:	Choose healthy alternatives over unhealthy alternatives when making a decision. **Clarifications:** Not smoking, limiting sedentary activity, and practicing good character.
HE.6.B.5.3:	Specify the potential outcomes of each option when making a health-related decision. **Clarifications:** Physical, social, emotional, financial, and legal consequences, and emergency preparedness.
HE.6.B.6.2:	Develop an individual goal to adopt, maintain, or improve a personal health practice. **Clarifications:** Physical activity, eating habits, safety habits, computer use/safety, bullying-prevention skills, and personal hygiene.
HE.6.C.1.2:	Describe how the physical, mental/emotional, social, and intellectual dimensions of health are interrelated. **Clarifications:** Nutrition/mental alertness, interpersonal conflicts/emotional stress, sleep/physical stamina, and hunger/solving problems.
HE.6.C.2.2:	Examine how peers influence the health of adolescents. **Clarifications:** Conflict resolution skills, reproductive-health misinformation, and spreading rumors.
HE.6.C.2.3:	Identify the impact of health information conveyed to students by the school and community. **Clarifications:** First-aid education program, refusal-skills practice, and healthy body composition: BMI.
HE.6.C.2.6:	Propose ways that technology can influence peer and community health behaviors. **Clarifications:** Internet social media/networking sites, heart-rate monitors, and cross-walk signals.
HE.6.C.2.9:	Identify the influence of personal values, attitudes, and beliefs about individual health practices and behaviors. **Clarifications:** Curiosity, interests, fears, likes, and dislikes.
HE.6.P.7.1:	Explain the importance of assuming responsibility for personal-health behaviors. **Clarifications:** Medical/dental checkups, resisting peer pressure, and healthy relationships.
HE.6.P.8.1:	Practice how to influence and support others when making positive health choices. **Clarifications:** Encourage others to read food labels, promote physical activity, encourage practice of universal precautions, and leading by example.
HE.6.P.8.3:	Work cooperatively to advocate for healthy individuals, families, and schools. **Clarifications:** Media campaigns, posters, skits, and PSAs.
HE.7.B.3.1:	Analyze the validity of health information, products, and services. **Clarifications:** Advertisements, health-claim articles, personal-care product claims, and tobacco-use information, internet searches, store visits, newspaper use, phonebook search, and personal call to sources for information.

HE.7.B.4.1:	Apply effective communication skills when interacting with others to enhance health. **Clarifications:** Clear and concise words, nonverbal language, discussion, "I" messages, and assertive vs. passive or aggressive communication.
HE.7.B.4.2:	Demonstrate refusal, negotiation, and collaboration skills to enhance health and reduce health risks. **Clarifications:** Working together, compromise, direct statement, peer mediation, personal boundaries, and reflective listening.
HE.7.B.4.4:	Demonstrate how to ask for assistance to enhance the health of self and others. **Clarifications:** "I" messages, ask on behalf of a friend, written request, riding in a vehicle with someone who is intoxicated, and bullying.
HE.7.B.5.2:	Select healthy alternatives over unhealthy alternatives when making a decision. **Clarifications:** Proper prescription-drug use, using safety equipment, Internet safety, and managing stress.
HE.7.C.2.9:	Explain the influence of personal values, attitudes, and beliefs about individual health practices and behaviors. **Clarifications:** Social conformity, social status/appearance, experimentation with drugs, food relationships, and spirituality.
HE.7.P.7.1:	Examine the importance of assuming responsibility for personal-health behaviors. **Clarifications:** Physical activity, eating habits, stress management, quality of life, sexual behaviors, and adequate sleep.
HE.7.P.8.3:	Work cooperatively to advocate for healthy individuals, peers, and families. **Clarifications:** Assist with or conduct needs assessments, write advocacy letters, and volunteer at information kiosks.
HE.8.B.3.2:	Analyze the accessibility, validity, and reliability of products and services that enhance home, school, and community health. **Clarifications:** Reliability of advertisements, articles, infomercials, and web-based products; health department; community agencies; and prescribed medications vs. over-the-counter.
HE.8.B.5.2:	Categorize healthy and unhealthy alternatives to health-related issues or problems. **Clarifications:** (Alcohol consumption, sleep requirements, physical activity, and time management.)
HE.8.C.2.3:	Analyze how the school and community may influence adolescent health. **Clarifications:** Drug-abuse education programs, volunteering opportunities, and availability of recreational facilities/programs.
HE.8.C.2.8:	Explain how the perceptions of norms influence healthy and unhealthy behaviors. **Clarifications:** Sexual abstinence, prescription-drug use, marijuana use, and perception that certain abusive-relationship behaviors are "normal."
HE.8.P.8.3:	Work cooperatively to advocate for healthy individuals, peers, families, and schools. **Clarifications:** Promote community initiatives; create media campaigns, peer-led prevention campaigns, and school wellness councils.
MA.K12.MTR.1.1:	Mathematicians who participate in effortful learning both individually and with others: • Analyze the problem in a way that makes sense given the task. • Ask questions that will help with solving the task. • Build perseverance by modifying methods as needed while solving a challenging task. • Stay engaged and maintain a positive mindset when working to solve tasks. • Help and support each other when attempting a new method or approach. **Clarifications:** Teachers who encourage students to participate actively in effortful learning both individually and with others: • Cultivate a community of growth mindset learners. • Foster perseverance in students by choosing tasks that are challenging. • Develop students' ability to analyze and problem solve. • Recognize students' effort when solving challenging problems.
MA.K12.MTR.2.1:	Demonstrate understanding by representing problems in multiple ways. Mathematicians who demonstrate understanding by representing problems in multiple ways: • Build understanding through modeling and using manipulatives. • Represent solutions to problems in multiple ways using objects, drawings, tables, graphs and equations. • Progress from modeling problems with objects and drawings to using algorithms and equations. • Express connections between concepts and representations. • Choose a representation based on the given context or purpose. **Clarifications:** Teachers who encourage students to demonstrate understanding by representing problems in multiple ways: • Help students make connections between concepts and representations. • Provide opportunities for students to use manipulatives when investigating concepts. • Guide students from concrete to pictorial to abstract representations as understanding progresses. • Show students that various representations can have different purposes and can be useful in different situations.
	Complete tasks with mathematical fluency. Mathematicians who complete tasks with mathematical fluency:

MA.K12.MTR.3.1:	• Select efficient and appropriate methods for solving problems within the given context. • Maintain flexibility and accuracy while performing procedures and mental calculations. • Complete tasks accurately and with confidence. • Adapt procedures to apply them to a new context. • Use feedback to improve efficiency when performing calculations. **Clarifications:** Teachers who encourage students to complete tasks with mathematical fluency: • Provide students with the flexibility to solve problems by selecting a procedure that allows them to solve efficiently and accurately. • Offer multiple opportunities for students to practice efficient and generalizable methods. • Provide opportunities for students to reflect on the method they used and determine if a more efficient method could have been used.
MA.K12.MTR.4.1:	Engage in discussions that reflect on the mathematical thinking of self and others. Mathematicians who engage in discussions that reflect on the mathematical thinking of self and others: • Communicate mathematical ideas, vocabulary and methods effectively. • Analyze the mathematical thinking of others. • Compare the efficiency of a method to those expressed by others. • Recognize errors and suggest how to correctly solve the task. • Justify results by explaining methods and processes. • Construct possible arguments based on evidence. **Clarifications:** Teachers who encourage students to engage in discussions that reflect on the mathematical thinking of self and others: • Establish a culture in which students ask questions of the teacher and their peers, and error is an opportunity for learning. • Create opportunities for students to discuss their thinking with peers. • Select, sequence and present student work to advance and deepen understanding of correct and increasingly efficient methods. • Develop students' ability to justify methods and compare their responses to the responses of their peers.
MA.K12.MTR.5.1:	Use patterns and structure to help understand and connect mathematical concepts. Mathematicians who use patterns and structure to help understand and connect mathematical concepts: • Focus on relevant details within a problem. • Create plans and procedures to logically order events, steps or ideas to solve problems. • Decompose a complex problem into manageable parts. • Relate previously learned concepts to new concepts. • Look for similarities among problems. • Connect solutions of problems to more complicated large-scale situations. **Clarifications:** Teachers who encourage students to use patterns and structure to help understand and connect mathematical concepts: • Help students recognize the patterns in the world around them and connect these patterns to mathematical concepts. • Support students to develop generalizations based on the similarities found among problems. • Provide opportunities for students to create plans and procedures to solve problems. • Develop students' ability to construct relationships between their current understanding and more sophisticated ways of thinking.
MA.K12.MTR.6.1:	Assess the reasonableness of solutions. Mathematicians who assess the reasonableness of solutions: • Estimate to discover possible solutions. • Use benchmark quantities to determine if a solution makes sense. • Check calculations when solving problems. • Verify possible solutions by explaining the methods used. • Evaluate results based on the given context. **Clarifications:** Teachers who encourage students to assess the reasonableness of solutions: • Have students estimate or predict solutions prior to solving. • Prompt students to continually ask, "Does this solution make sense? How do you know?" • Reinforce that students check their work as they progress within and after a task. • Strengthen students' ability to verify solutions through justifications.
MA.K12.MTR.7.1:	Apply mathematics to real-world contexts. Mathematicians who apply mathematics to real-world contexts: • Connect mathematical concepts to everyday experiences. • Use models and methods to understand, represent and solve problems. • Perform investigations to gather data or determine if a method is appropriate. • Redesign models and methods to improve accuracy or efficiency. **Clarifications:** Teachers who encourage students to apply mathematics to real-world contexts: • Provide opportunities for students to create models, both concrete and abstract, and perform investigations. • Challenge students to question the accuracy of their models and methods. • Support students as they validate conclusions by comparing them to the given situation. • Indicate how various concepts can be applied to other disciplines.
	Cite evidence to explain and justify reasoning. **Clarifications:** K-1 Students include textual evidence in their oral communication with guidance and support from adults. The evidence can consist of details

ELA.K12.EE.1.1:	from the text without naming the text. During 1st grade, students learn how to incorporate the evidence in their writing. 2-3 Students include relevant textual evidence in their written and oral communication. Students should name the text when they refer to it. In 3rd grade, students should use a combination of direct and indirect citations. 4-5 Students continue with previous skills and reference comments made by speakers and peers. Students cite texts that they've directly quoted, paraphrased, or used for information. When writing, students will use the form of citation dictated by the instructor or the style guide referenced by the instructor. 6-8 Students continue with previous skills and use a style guide to create a proper citation. 9-12 Students continue with previous skills and should be aware of existing style guides and the ways in which they differ.
ELA.K12.EE.2.1:	Read and comprehend grade-level complex texts proficiently. **Clarifications:** See Text Complexity for grade-level complexity bands and a text complexity rubric.
ELA.K12.EE.3.1:	Make inferences to support comprehension. **Clarifications:** Students will make inferences before the words infer or inference are introduced. Kindergarten students will answer questions like "Why is the girl smiling?" or make predictions about what will happen based on the title page. Students will use the terms and apply them in 2nd grade and beyond.
ELA.K12.EE.4.1:	Use appropriate collaborative techniques and active listening skills when engaging in discussions in a variety of situations. **Clarifications:** In kindergarten, students learn to listen to one another respectfully. In grades 1-2, students build upon these skills by justifying what they are thinking. For example: "I think _____ because _____." The collaborative conversations are becoming academic conversations. In grades 3-12, students engage in academic conversations discussing claims and justifying their reasoning, refining and applying skills. Students build on ideas, propel the conversation, and support claims and counterclaims with evidence.
ELA.K12.EE.5.1:	Use the accepted rules governing a specific format to create quality work. **Clarifications:** Students will incorporate skills learned into work products to produce quality work. For students to incorporate these skills appropriately, they must receive instruction. A 3rd grade student creating a poster board display must have instruction in how to effectively present information to do quality work.
ELA.K12.EE.6.1:	Use appropriate voice and tone when speaking or writing. **Clarifications:** In kindergarten and 1st grade, students learn the difference between formal and informal language. For example, the way we talk to our friends differs from the way we speak to adults. In 2nd grade and beyond, students practice appropriate social and academic language to discuss texts.
ELD.K12.ELL.SI.1:	English language learners communicate for social and instructional purposes within the school setting.

General Course Information and Notes

GENERAL NOTES

The purpose of this course is to enable students to further develop awareness of self and others. Emphasis will be on acquisition of intermediate level skills for thoughtful planning, peer facilitation, effective communication and making healthy choices.

The content should include, but not be limited to, the following:

- Peer Facilitating
- Behavioral Dynamics
- Human Needs
- Group Dynamics
- Leadership Skills
- Intra/Interpersonal Skills
- Peer and Family Relationships
- Conflict Resolution
- School/Community Resources
- Mediation
- Effective Communication
- Problem Solving

Special Notes:

Instructional Practices
Teaching from a well-written, grade-level textbook enhances students' content area knowledge and also strengthens their ability to comprehend longer, complex reading passages on any topic for any reason. Using the following instructional practices also helps student learning:

1. Reading assignments from longer text passages as well as shorter ones when text is extremely complex.
2. Making close reading and rereading of texts central to lessons.
3. Asking high-level, text-specific questions and requiring high-level, complex tasks and assignments.
4. Requiring students to support answers with evidence from the text.

5. Providing extensive text-based research and writing opportunities (claims and evidence).

Florida's Benchmarks for Excellent Student Thinking (B.E.S.T.) Standards
This course includes Florida's B.E.S.T. ELA Expectations (EE) and Mathematical Thinking and Reasoning Standards (MTRs) for students. Florida educators should intentionally embed these standards within the content and their instruction as applicable. For guidance on the implementation of the EEs and MTRs, please visit cpalms.org/Standards/BEST_Standards.aspx and select the appropriate B.E.S.T. Standards package.

English Language Development ELD Standards Special Notes Section:
Teachers are required to provide listening, speaking, reading and writing instruction that allows English language learners (ELL) to communicate for social and instructional purposes within the school setting. For the given level of English language proficiency and with visual, graphic, or interactive support, students will interact with grade level words, expressions, sentences and discourse to process or produce language necessary for academic success. The ELD standard should specify a relevant content area concept or topic of study chosen by curriculum developers and teachers which maximizes an ELL's need for communication and social skills. To access an ELL supporting document which delineates performance definitions and descriptors, please click on the following link: cpalms.org/uploads/docs/standards/eld/SI.pdf

QUALIFICATIONS

As well as any certification requirements listed on the course description, the following qualifications may also be acceptable for the course:

Any field when certification reflects a bachelor or higher degree.

GENERAL INFORMATION

Course Number: 1400010

Course Path: Section: Grades PreK to 12 Education Courses > **Grade Group:** Grades 6 to 8 Education Courses > **Subject:** Peer Counseling > **SubSubject:** General >

Abbreviated Title: M/J PEER COUN 2

Course Length: Year (Y)

Course Level: 2

Course Status: Draft - Course Pending Approval

Grade Level(s): 6,7,8

M/J Peers as Partners in Learning (#1400025) 2022 - And Beyond

Course Standards

Name	Description
HE.6.B.4.3:	Demonstrate effective conflict-management and/or resolution strategies. **Clarifications:** Talk to an adult, anger management, and conflict mediation.
HE.6.B.4.4:	Compile ways to ask for assistance to enhance the health of self and others. **Clarifications:** Verbalize, write, and ask others for help.
HE.6.C.2.8:	Determine how social norms may impact healthy and unhealthy behavior. **Clarifications:** Alcohol, tobacco and inhalant-use, bullying behaviors, and walking/biking vs. riding in a vehicle to a close location.
HE.7.B.4.3:	Articulate the possible causes of conflict among youth in schools and communities. **Clarifications:** Ethnic prejudice and diversity, substance use, group dynamics, relationship issues/dating violence, gossip/rumors, and sexual identity.
HE.7.B.4.4:	Demonstrate how to ask for assistance to enhance the health of self and others. **Clarifications:** "I" messages, ask on behalf of a friend, written request, riding in a vehicle with someone who is intoxicated, and bullying.
HE.7.C.2.8:	Evaluate how changes in social norms impact healthy and unhealthy behavior. **Clarifications:** Secondhand smoke, menu items at restaurants, anti-bullying behavior, and social norms that justify/promote violence.
HE.8.B.4.3:	Examine the possible causes of conflict among youth in schools and communities. **Clarifications:** Relationships, territory, jealousy, and gossip/rumors.
HE.8.B.4.4:	Compare and contrast ways to ask for and offer assistance to enhance the health of self and others. **Clarifications:** Compare responses, passive vs. assertive, written vs. spoken, and anonymous vs. face-to-face.
HE.8.C.2.8:	Explain how the perceptions of norms influence healthy and unhealthy behaviors. **Clarifications:** Sexual abstinence, prescription-drug use, marijuana use, and perception that certain abusive-relationship behaviors are "normal."
MA.K12.MTR.1.1:	Mathematicians who participate in effortful learning both individually and with others: • Analyze the problem in a way that makes sense given the task. • Ask questions that will help with solving the task. • Build perseverance by modifying methods as needed while solving a challenging task. • Stay engaged and maintain a positive mindset when working to solve tasks. • Help and support each other when attempting a new method or approach. **Clarifications:** Teachers who encourage students to participate actively in effortful learning both individually and with others: • Cultivate a community of growth mindset learners. • Foster perseverance in students by choosing tasks that are challenging. • Develop students' ability to analyze and problem solve. • Recognize students' effort when solving challenging problems.
MA.K12.MTR.2.1:	Demonstrate understanding by representing problems in multiple ways. Mathematicians who demonstrate understanding by representing problems in multiple ways: • Build understanding through modeling and using manipulatives. • Represent solutions to problems in multiple ways using objects, drawings, tables, graphs and equations. • Progress from modeling problems with objects and drawings to using algorithms and equations. • Express connections between concepts and representations. • Choose a representation based on the given context or purpose. **Clarifications:** Teachers who encourage students to demonstrate understanding by representing problems in multiple ways: • Help students make connections between concepts and representations. • Provide opportunities for students to use manipulatives when investigating concepts. • Guide students from concrete to pictorial to abstract representations as understanding progresses. • Show students that various representations can have different purposes and can be useful in different situations.
	Complete tasks with mathematical fluency. Mathematicians who complete tasks with mathematical fluency: • Select efficient and appropriate methods for solving problems within the given context.

MA.K12.MTR.3.1:	• Maintain flexibility and accuracy while performing procedures and mental calculations. • Complete tasks accurately and with confidence. • Adapt procedures to apply them to a new context. • Use feedback to improve efficiency when performing calculations. **Clarifications:** Teachers who encourage students to complete tasks with mathematical fluency: • Provide students with the flexibility to solve problems by selecting a procedure that allows them to solve efficiently and accurately. • Offer multiple opportunities for students to practice efficient and generalizable methods. • Provide opportunities for students to reflect on the method they used and determine if a more efficient method could have been used.
MA.K12.MTR.4.1:	Engage in discussions that reflect on the mathematical thinking of self and others. Mathematicians who engage in discussions that reflect on the mathematical thinking of self and others: • Communicate mathematical ideas, vocabulary and methods effectively. • Analyze the mathematical thinking of others. • Compare the efficiency of a method to those expressed by others. • Recognize errors and suggest how to correctly solve the task. • Justify results by explaining methods and processes. • Construct possible arguments based on evidence. **Clarifications:** Teachers who encourage students to engage in discussions that reflect on the mathematical thinking of self and others: • Establish a culture in which students ask questions of the teacher and their peers, and error is an opportunity for learning. • Create opportunities for students to discuss their thinking with peers. • Select, sequence and present student work to advance and deepen understanding of correct and increasingly efficient methods. • Develop students' ability to justify methods and compare their responses to the responses of their peers.
MA.K12.MTR.5.1:	Use patterns and structure to help understand and connect mathematical concepts. Mathematicians who use patterns and structure to help understand and connect mathematical concepts: • Focus on relevant details within a problem. • Create plans and procedures to logically order events, steps or ideas to solve problems. • Decompose a complex problem into manageable parts. • Relate previously learned concepts to new concepts. • Look for similarities among problems. • Connect solutions of problems to more complicated large-scale situations. **Clarifications:** Teachers who encourage students to use patterns and structure to help understand and connect mathematical concepts: • Help students recognize the patterns in the world around them and connect these patterns to mathematical concepts. • Support students to develop generalizations based on the similarities found among problems. • Provide opportunities for students to create plans and procedures to solve problems. • Develop students' ability to construct relationships between their current understanding and more sophisticated ways of thinking.
MA.K12.MTR.6.1:	Assess the reasonableness of solutions. Mathematicians who assess the reasonableness of solutions: • Estimate to discover possible solutions. • Use benchmark quantities to determine if a solution makes sense. • Check calculations when solving problems. • Verify possible solutions by explaining the methods used. • Evaluate results based on the given context. **Clarifications:** Teachers who encourage students to assess the reasonableness of solutions: • Have students estimate or predict solutions prior to solving. • Prompt students to continually ask, "Does this solution make sense? How do you know?" • Reinforce that students check their work as they progress within and after a task. • Strengthen students' ability to verify solutions through justifications.
MA.K12.MTR.7.1:	Apply mathematics to real-world contexts. Mathematicians who apply mathematics to real-world contexts: • Connect mathematical concepts to everyday experiences. • Use models and methods to understand, represent and solve problems. • Perform investigations to gather data or determine if a method is appropriate. • Redesign models and methods to improve accuracy or efficiency. **Clarifications:** Teachers who encourage students to apply mathematics to real-world contexts: • Provide opportunities for students to create models, both concrete and abstract, and perform investigations. • Challenge students to question the accuracy of their models and methods. • Support students as they validate conclusions by comparing them to the given situation. • Indicate how various concepts can be applied to other disciplines.
	Cite evidence to explain and justify reasoning. **Clarifications:** K-1 Students include textual evidence in their oral communication with guidance and support from adults. The evidence can consist of details from the text without naming the text. During 1st grade, students learn how to incorporate the evidence in their writing. 2-3 Students include relevant textual evidence in their written and oral communication. Students should name the text when they refer to it.

ELA.K12.EE.1.1:	In 3rd grade, students should use a combination of direct and indirect citations. 4-5 Students continue with previous skills and reference comments made by speakers and peers. Students cite texts that they've directly quoted, paraphrased, or used for information. When writing, students will use the form of citation dictated by the instructor or the style guide referenced by the instructor. 6-8 Students continue with previous skills and use a style guide to create a proper citation. 9-12 Students continue with previous skills and should be aware of existing style guides and the ways in which they differ.
ELA.K12.EE.2.1:	Read and comprehend grade-level complex texts proficiently. **Clarifications:** See Text Complexity for grade-level complexity bands and a text complexity rubric.
ELA.K12.EE.3.1:	Make inferences to support comprehension. **Clarifications:** Students will make inferences before the words infer or inference are introduced. Kindergarten students will answer questions like "Why is the girl smiling?" or make predictions about what will happen based on the title page. Students will use the terms and apply them in 2nd grade and beyond.
ELA.K12.EE.4.1:	Use appropriate collaborative techniques and active listening skills when engaging in discussions in a variety of situations. **Clarifications:** In kindergarten, students learn to listen to one another respectfully. In grades 1-2, students build upon these skills by justifying what they are thinking. For example: "I think _____ because _____." The collaborative conversations are becoming academic conversations. In grades 3-12, students engage in academic conversations discussing claims and justifying their reasoning, refining and applying skills. Students build on ideas, propel the conversation, and support claims and counterclaims with evidence.
ELA.K12.EE.5.1:	Use the accepted rules governing a specific format to create quality work. **Clarifications:** Students will incorporate skills learned into work products to produce quality work. For students to incorporate these skills appropriately, they must receive instruction. A 3rd grade student creating a poster board display must have instruction in how to effectively present information to do quality work.
ELA.K12.EE.6.1:	Use appropriate voice and tone when speaking or writing. **Clarifications:** In kindergarten and 1st grade, students learn the difference between formal and informal language. For example, the way we talk to our friends differs from the way we speak to adults. In 2nd grade and beyond, students practice appropriate social and academic language to discuss texts.
SS.7.C.2.11:	Analyze media and political communications (bias, symbolism, propaganda). **Clarifications:** This benchmark is annually evaluated on the Civics End-of-Course Assessment. For more information on how this benchmark is evaluated view the Civics End-of-Course Assessment Test Item Specifications pages 44-45. Additional resources may be found on the FLDOE End-of-Course (EOC) Assessments webpage and the FLDOE Social Studies webpage.
SS.7.C.2.12:	Develop a plan to resolve a state or local problem by researching public policy alternatives, identifying appropriate government agencies to address the issue, and determining a course of action. **Clarifications:** This benchmark is annually evaluated on the Civics End-of-Course Assessment. For more information on how this benchmark is evaluated view the Civics End-of-Course Assessment Test Item Specifications pages 46-47. Additional resources may be found on the FLDOE End-of-Course (EOC) Assessments webpage and the FLDOE Social Studies webpage.
SS.7.C.2.14:	Conduct a service project to further the public good. **Clarifications:** The project can be at the school, community, state, national, or international level.
SS.7.C.3.6:	Evaluate Constitutional rights and their impact on individuals and society. **Clarifications:** This benchmark is annually evaluated on the Civics End-of-Course Assessment. For more information on how this benchmark is evaluated view the Civics End-of-Course Assessment Test Item Specifications page 57. Additional resources may be found on the FLDOE End-of-Course (EOC) Assessments webpage and the FLDOE Social Studies webpage.
ELD.K12.ELL.SI.1:	English language learners communicate for social and instructional purposes within the school setting.

General Course Information and Notes

VERSION DESCRIPTION

This course is designed to provide reciprocal academic and social benefits to students with disabilities and their peers without disabilities. Students enrolled in the course will learn and apply knowledge and skilled practices in the areas of academic engagement, communication, social barriers, leadership, problem solving, and other disability-related topics such as historical perspectives, inclusion, Universal Design for Learning, person-first language, presumed competence, equitable services for students with disabilities, and media representation of diverse people.

The content and concepts should include, but not be limited to, the following:

- Know and understand the legal and human rights of people with disabilities and their families.
- Understand and apply the concepts of confidentiality and self-determination.
- Understand historical events and aspects of disability and their influence on current attitudes, beliefs, and practices.
- Build awareness and understanding, through research and communication, of disability rights issues in the local community and beyond.
- Apply methods for problem-solving and advocacy (including self-advocacy for students with disabilities).
- Apply knowledge and strategies to promote learning for people with disabilities, in inclusive settings, through academic, communication, physical and social supports.
- Facilitate meaningful peer relationships in and out of school.
- Understand and facilitate team and cooperative learning skills among all students.
- Contribute to the concept of civic responsibility by researching and communicating information about equitable services in a democratic society.
- Design and implement one or more projects to demonstrate knowledge, understanding, and application of course content and concepts.
- Assess and evaluate the impact of course efforts on self and others.

This course should be taught using the appropriate standards/benchmarks for the grade.

GENERAL INFORMATION

Course Number: 1400025

Course Path: Section: Grades PreK to 12 Education Courses > **Grade Group:** Grades 6 to 8 Education Courses > **Subject:** Peer Counseling > **SubSubject:** General >

Abbreviated Title: M/J PEERS/PART LRNG

Course Length: Multiple (M) - Course length can vary

Course Type: Elective Course

Course Level: 2

Course Status: Draft - Course Pending Approval

Educator Certifications

Exceptional Student Education (Elementary and Secondary Grades K-12)
Emotionally Handicapped (Elementary and Secondary Grades K-12)
Hearing Impaired (Grades K-12)
Mentally Handicapped (Elementary and Secondary Grades K-12)
Specific Learning Disabilities (Elementary and Secondary Grades K-12)
Speech Language Impaired (Elementary and Secondary Grades K-12)
Varying Exceptionalities (Elementary and Secondary Grades K-12)
Visually Impaired (Elementary and Secondary Grades K-12)

Peer Counseling 1 (#1400300) 2022 - And Beyond

Course Standards

Name	Description
HE.912.B.3.1:	Verify the validity of health information, products, and services. **Clarifications:** Understanding product-packaging claims, magazine articles, diet/nutritional supplements, energy drinks, exercise video or equipment, tanning salon, fitness club, health professionals, health-related community resources, CPR procedure, qualifications of service provider, type of service, type of product, product safety, and reliability.
HE.912.B.4.1:	Explain skills needed to communicate effectively with family, peers, and others to enhance health. **Clarifications:** Using "I" messages, voice pitch/volume, eye contact, journal experiences, writing letters, persuasive speech, and assertive communication.
HE.912.B.4.2:	Assess refusal, negotiation, and collaboration skills to enhance health and avoid or reduce health risks. **Clarifications:** Validate other's opinions, use direct statement, use active statement, and offer alternatives.
HE.912.B.4.3:	Demonstrate strategies to prevent, manage, or resolve interpersonal conflicts without harming self or others. **Clarifications:** Effective verbal and nonverbal communication, compromise, and conflict-resolution.
HE.912.B.4.4:	Analyze the validity of ways to ask for and offer assistance to enhance the health of self and others. **Clarifications:** Verbal and written communication, active listening, and how to seek help for a friend.
HE.912.B.5.3:	Appraise the potential short-term and long-term outcomes of each alternative on self and others. **Clarifications:** Nutrition plan based on personal needs and preferences, impact of chronic health condition on individual and family, weapons on campus, and use of stress management and coping skills.
HE.912.B.5.5:	Examine barriers that can hinder healthy decision making. **Clarifications:** Interpersonal, financial, environmental factors, and accessibility of health information.
HE.912.C.1.1:	Predict how healthy behaviors can affect health status. **Clarifications:** Making positive choices/avoiding risky behaviors: healthy food, substance abuse, and healthy relationship skills; regular medical and dental screenings; regular physical activity, and workplace safety.
HE.912.C.1.2:	Interpret the significance of interrelationships in mental/emotional, physical, and social health. **Clarifications:** Substance abuse, eating disorders, sexual behaviors, healthy/unhealthy relationships, self-esteem, stress/anger management, and regular exercise.
HE.912.C.2.6:	Evaluate the impact of technology on personal, family, and community health. **Clarifications:** Automated external defibrillator in the community, pedestrian crosswalks with audible directions, type of information requested from local 211/hotlines or websites, consumer websites, Internet safety, and disease prevention and control.
HE.912.P.8.3:	Work cooperatively as an advocate for improving personal, family, and community health. **Clarifications:** Support local availability of healthy food options; environmentally friendly shopping; victim, drug or teen court advocacy; advocate for peer-led abuse-prevention education programs, community resource information; and home/school safety.
MA.K12.MTR.1.1:	Mathematicians who participate in effortful learning both individually and with others: • Analyze the problem in a way that makes sense given the task. • Ask questions that will help with solving the task. • Build perseverance by modifying methods as needed while solving a challenging task. • Stay engaged and maintain a positive mindset when working to solve tasks. • Help and support each other when attempting a new method or approach. **Clarifications:** Teachers who encourage students to participate actively in effortful learning both individually and with others: • Cultivate a community of growth mindset learners. • Foster perseverance in students by choosing tasks that are challenging. • Develop students' ability to analyze and problem solve. • Recognize students' effort when solving challenging problems.
	Demonstrate understanding by representing problems in multiple ways. Mathematicians who demonstrate understanding by representing problems in multiple ways: • Build understanding through modeling and using manipulatives. • Represent solutions to problems in multiple ways using objects, drawings, tables, graphs and equations.

- Progress from modeling problems with objects and drawings to using algorithms and equations.
- Express connections between concepts and representations.

MA.K12.MTR.2.1:

- Choose a representation based on the given context or purpose.

Clarifications:
Teachers who encourage students to demonstrate understanding by representing problems in multiple ways:

- Help students make connections between concepts and representations.
- Provide opportunities for students to use manipulatives when investigating concepts.
- Guide students from concrete to pictorial to abstract representations as understanding progresses.
- Show students that various representations can have different purposes and can be useful in different situations.

Complete tasks with mathematical fluency.
Mathematicians who complete tasks with mathematical fluency:

- Select efficient and appropriate methods for solving problems within the given context.
- Maintain flexibility and accuracy while performing procedures and mental calculations.
- Complete tasks accurately and with confidence.
- Adapt procedures to apply them to a new context.

MA.K12.MTR.3.1:

- Use feedback to improve efficiency when performing calculations.

Clarifications:
Teachers who encourage students to complete tasks with mathematical fluency:

- Provide students with the flexibility to solve problems by selecting a procedure that allows them to solve efficiently and accurately.
- Offer multiple opportunities for students to practice efficient and generalizable methods.
- Provide opportunities for students to reflect on the method they used and determine if a more efficient method could have been used.

Engage in discussions that reflect on the mathematical thinking of self and others.
Mathematicians who engage in discussions that reflect on the mathematical thinking of self and others:

- Communicate mathematical ideas, vocabulary and methods effectively.
- Analyze the mathematical thinking of others.
- Compare the efficiency of a method to those expressed by others.
- Recognize errors and suggest how to correctly solve the task.
- Justify results by explaining methods and processes.

MA.K12.MTR.4.1:

- Construct possible arguments based on evidence.

Clarifications:
Teachers who encourage students to engage in discussions that reflect on the mathematical thinking of self and others:

- Establish a culture in which students ask questions of the teacher and their peers, and error is an opportunity for learning.
- Create opportunities for students to discuss their thinking with peers.
- Select, sequence and present student work to advance and deepen understanding of correct and increasingly efficient methods.
- Develop students' ability to justify methods and compare their responses to the responses of their peers.

Use patterns and structure to help understand and connect mathematical concepts.
Mathematicians who use patterns and structure to help understand and connect mathematical concepts:

- Focus on relevant details within a problem.
- Create plans and procedures to logically order events, steps or ideas to solve problems.
- Decompose a complex problem into manageable parts.
- Relate previously learned concepts to new concepts.
- Look for similarities among problems.

MA.K12.MTR.5.1:

- Connect solutions of problems to more complicated large-scale situations.

Clarifications:
Teachers who encourage students to use patterns and structure to help understand and connect mathematical concepts:

- Help students recognize the patterns in the world around them and connect these patterns to mathematical concepts.
- Support students to develop generalizations based on the similarities found among problems.
- Provide opportunities for students to create plans and procedures to solve problems.
- Develop students' ability to construct relationships between their current understanding and more sophisticated ways of thinking.

Assess the reasonableness of solutions.
Mathematicians who assess the reasonableness of solutions:

- Estimate to discover possible solutions.
- Use benchmark quantities to determine if a solution makes sense.
- Check calculations when solving problems.
- Verify possible solutions by explaining the methods used.

MA.K12.MTR.6.1:

- Evaluate results based on the given context.

Clarifications:
Teachers who encourage students to assess the reasonableness of solutions:

- Have students estimate or predict solutions prior to solving.
- Prompt students to continually ask, "Does this solution make sense? How do you know?"
- Reinforce that students check their work as they progress within and after a task.
- Strengthen students' ability to verify solutions through justifications.

Apply mathematics to real-world contexts.
Mathematicians who apply mathematics to real-world contexts:

- Connect mathematical concepts to everyday experiences.

MA.K12.MTR.7.1:	• Use models and methods to understand, represent and solve problems. • Perform investigations to gather data or determine if a method is appropriate. • Redesign models and methods to improve accuracy or efficiency. **Clarifications:** Teachers who encourage students to apply mathematics to real-world contexts: • Provide opportunities for students to create models, both concrete and abstract, and perform investigations. • Challenge students to question the accuracy of their models and methods. • Support students as they validate conclusions by comparing them to the given situation. • Indicate how various concepts can be applied to other disciplines.
ELA.K12.EE.1.1:	Cite evidence to explain and justify reasoning. **Clarifications:** K-1 Students include textual evidence in their oral communication with guidance and support from adults. The evidence can consist of details from the text without naming the text. During 1st grade, students learn how to incorporate the evidence in their writing. 2-3 Students include relevant textual evidence in their written and oral communication. Students should name the text when they refer to it. In 3rd grade, students should use a combination of direct and indirect citations. 4-5 Students continue with previous skills and reference comments made by speakers and peers. Students cite texts that they've directly quoted, paraphrased, or used for information. When writing, students will use the form of citation dictated by the instructor or the style guide referenced by the instructor. 6-8 Students continue with previous skills and use a style guide to create a proper citation. 9-12 Students continue with previous skills and should be aware of existing style guides and the ways in which they differ.
ELA.K12.EE.2.1:	Read and comprehend grade-level complex texts proficiently. **Clarifications:** See Text Complexity for grade-level complexity bands and a text complexity rubric.
ELA.K12.EE.3.1:	Make inferences to support comprehension. **Clarifications:** Students will make inferences before the words infer or inference are introduced. Kindergarten students will answer questions like "Why is the girl smiling?" or make predictions about what will happen based on the title page. Students will use the terms and apply them in 2nd grade and beyond.
ELA.K12.EE.4.1:	Use appropriate collaborative techniques and active listening skills when engaging in discussions in a variety of situations. **Clarifications:** In kindergarten, students learn to listen to one another respectfully. In grades 1-2, students build upon these skills by justifying what they are thinking. For example: "I think _____ because _____." The collaborative conversations are becoming academic conversations. In grades 3-12, students engage in academic conversations discussing claims and justifying their reasoning, refining and applying skills. Students build on ideas, propel the conversation, and support claims and counterclaims with evidence.
ELA.K12.EE.5.1:	Use the accepted rules governing a specific format to create quality work. **Clarifications:** Students will incorporate skills learned into work products to produce quality work. For students to incorporate these skills appropriately, they must receive instruction. A 3rd grade student creating a poster board display must have instruction in how to effectively present information to do quality work.
ELA.K12.EE.6.1:	Use appropriate voice and tone when speaking or writing. **Clarifications:** In kindergarten and 1st grade, students learn the difference between formal and informal language. For example, the way we talk to our friends differs from the way we speak to adults. In 2nd grade and beyond, students practice appropriate social and academic language to discuss texts.
ELD.K12.ELL.SI.1:	English language learners communicate for social and instructional purposes within the school setting.

General Course Information and Notes

GENERAL NOTES

The purpose of this course is to enable students to develop basic knowledge and skills in communication, meeting human needs, and conflict resolution.

The content should include the following:

- Demonstrate knowledge of the functions and responsibilities of peer facilitators (e.g., listening, confidentiality, team building, conflict resolution, intervention).
- Demonstrate awareness of varied behavioral responses to situational, environmental, and chemical elements; and the impact of subsequent decision-making on self and others.
- Demonstrate knowledge of basic human needs (e.g., food, clothing, shelter, recognition, development, security, identity) and the ways in which they can be met while developing group cohesion.
- Demonstrate use of basic facilitative communication skills (e.g., listening, questioning, feedback, paraphrasing, nonverbal communication, nonjudgmental response).
- Identify own feelings and needs and communicate them in a positive way.
- Demonstrate awareness of leadership styles (e.g., authoritarian, democratic, permissive).
- Demonstrate awareness of methods for dealing with conflict (e.g., communication, assertion, avoidance, aggression) and steps to resolution (i.e., set rules, gather perspectives, identify needs and goals, create and evaluate options, and generate agreement)
- Make inferences and justify conclusions from sample surveys, experiments, and observational studies.

Special Notes:

Instructional Practices Teaching from a well-written, grade-level textbook enhances students' content area knowledge and also strengthens their ability to comprehend longer, complex reading passages on any topic for any reason. Using the following instructional practices also helps student learning:

1. Reading assignments from longer text passages as well as shorter ones when text is extremely complex.
2. Making close reading and rereading of texts central to lesson.
3. Asking high-level, text-specific questions and requiring high-level, complex tasks and assignments.
4. Requiring students to support answers with evidence from the text.
5. Providing extensive text-based research and writing opportunities (claims and evidence).

Florida's Benchmarks for Excellent Student Thinking (B.E.S.T.) Standards
This course includes Florida's B.E.S.T. ELA Expectations (EE) and Mathematical Thinking and Reasoning Standards (MTRs) for students. Florida educators should intentionally embed these standards within the content and their instruction as applicable. For guidance on the implementation of the EEs and MTRs, please visit cpalms.org/Standards/BEST_Standards.aspx and select the appropriate B.E.S.T. Standards package.

English Language Development ELD Standards Special Notes Section:
Teachers are required to provide listening, speaking, reading and writing instruction that allows English language learners (ELL) to communicate for social and instructional purposes within the school setting. For the given level of English language proficiency and with visual, graphic, or interactive support, students will interact with grade level words, expressions, sentences and discourse to process or produce language necessary for academic success. The ELD standard should specify a relevant content area concept or topic of study chosen by curriculum developers and teachers which maximizes an ELL's need for communication and social skills. To access an ELL supporting document which delineates performance definitions and descriptors, please click on the following link: cpalms.org/uploads/docs/standards/eld/SI.pdf

QUALIFICATIONS

As well as any certification requirements listed on the course description, the following qualifications may also be acceptable for the course:

Any field when certification reflects a bachelor or higher degree.

GENERAL INFORMATION

Course Number: 1400300

Course Path: Section: Grades PreK to 12 Education Courses > **Grade Group:** Grades 9 to 12 and Adult Education Courses > **Subject:** Peer Counseling > **SubSubject:** General >
Abbreviated Title: PEER COUN 1

Number of Credits: Half credit (.5)

Course Length: Semester (S)

Course Type: Elective Course

Course Level: 2

Course Status: Draft - Course Pending Approval

Peer Counseling 2 (#1400310) 2022 - And Beyond

Course Standards

Name	Description
HE.912.B.4.1:	Explain skills needed to communicate effectively with family, peers, and others to enhance health. **Clarifications:** Using "I" messages, voice pitch/volume, eye contact, journal experiences, writing letters, persuasive speech, and assertive communication.
HE.912.B.4.2:	Assess refusal, negotiation, and collaboration skills to enhance health and avoid or reduce health risks. **Clarifications:** Validate other's opinions, use direct statement, use active statement, and offer alternatives.
HE.912.B.4.3:	Demonstrate strategies to prevent, manage, or resolve interpersonal conflicts without harming self or others. **Clarifications:** Effective verbal and nonverbal communication, compromise, and conflict-resolution.
HE.912.B.4.4:	Analyze the validity of ways to ask for and offer assistance to enhance the health of self and others. **Clarifications:** Verbal and written communication, active listening, and how to seek help for a friend.
HE.912.B.5.1:	Determine the value of applying a thoughtful decision-making process in health-related situations. **Clarifications:** Defining healthy boundaries and relationships, sexual activity, alcohol consumption, organ-donor decisions, child care, protection against infectious agents, wellness promotion, and first-aid-treatment options.
HE.912.B.5.5:	Examine barriers that can hinder healthy decision making. **Clarifications:** Interpersonal, financial, environmental factors, and accessibility of health information.
HE.912.C.1.1:	Predict how healthy behaviors can affect health status. **Clarifications:** Making positive choices/avoiding risky behaviors: healthy food, substance abuse, and healthy relationship skills; regular medical and dental screenings; regular physical activity, and workplace safety.
HE.912.C.1.2:	Interpret the significance of interrelationships in mental/emotional, physical, and social health. **Clarifications:** Substance abuse, eating disorders, sexual behaviors, healthy/unhealthy relationships, self-esteem, stress/anger management, and regular exercise.
HE.912.C.1.3:	Evaluate how environment and personal health are interrelated. **Clarifications:** Food options within a community; prenatal-care services; availability of recreational facilities; air quality; weather-safety awareness; and weather, air, and water conditions.
HE.912.C.2.1:	Analyze how the family influences the health of individuals. **Clarifications:** Nutritional management of meals, composition of and relationships within families, and health-insurance status.
HE.912.C.2.3:	Assess how the school and community can affect personal health practice and behaviors. **Clarifications:** Healthier foods, required health education, health screenings, and enforcement of "no tolerance" policies related to all forms of violence, and AED availability and training.
MA.K12.MTR.1.1:	Mathematicians who participate in effortful learning both individually and with others: • Analyze the problem in a way that makes sense given the task. • Ask questions that will help with solving the task. • Build perseverance by modifying methods as needed while solving a challenging task. • Stay engaged and maintain a positive mindset when working to solve tasks. • Help and support each other when attempting a new method or approach. **Clarifications:** Teachers who encourage students to participate actively in effortful learning both individually and with others: • Cultivate a community of growth mindset learners. • Foster perseverance in students by choosing tasks that are challenging. • Develop students' ability to analyze and problem solve. • Recognize students' effort when solving challenging problems.
	Demonstrate understanding by representing problems in multiple ways. Mathematicians who demonstrate understanding by representing problems in multiple ways: • Build understanding through modeling and using manipulatives. • Represent solutions to problems in multiple ways using objects, drawings, tables, graphs and equations. • Progress from modeling problems with objects and drawings to using algorithms and equations. • Express connections between concepts and representations.

MA.K12.MTR.2.1:	• Choose a representation based on the given context or purpose. **Clarifications:** Teachers who encourage students to demonstrate understanding by representing problems in multiple ways: • Help students make connections between concepts and representations. • Provide opportunities for students to use manipulatives when investigating concepts. • Guide students from concrete to pictorial to abstract representations as understanding progresses. • Show students that various representations can have different purposes and can be useful in different situations.
MA.K12.MTR.3.1:	Complete tasks with mathematical fluency. Mathematicians who complete tasks with mathematical fluency: • Select efficient and appropriate methods for solving problems within the given context. • Maintain flexibility and accuracy while performing procedures and mental calculations. • Complete tasks accurately and with confidence. • Adapt procedures to apply them to a new context. • Use feedback to improve efficiency when performing calculations. **Clarifications:** Teachers who encourage students to complete tasks with mathematical fluency: • Provide students with the flexibility to solve problems by selecting a procedure that allows them to solve efficiently and accurately. • Offer multiple opportunities for students to practice efficient and generalizable methods. • Provide opportunities for students to reflect on the method they used and determine if a more efficient method could have been used.
MA.K12.MTR.4.1:	Engage in discussions that reflect on the mathematical thinking of self and others. Mathematicians who engage in discussions that reflect on the mathematical thinking of self and others: • Communicate mathematical ideas, vocabulary and methods effectively. • Analyze the mathematical thinking of others. • Compare the efficiency of a method to those expressed by others. • Recognize errors and suggest how to correctly solve the task. • Justify results by explaining methods and processes. • Construct possible arguments based on evidence. **Clarifications:** Teachers who encourage students to engage in discussions that reflect on the mathematical thinking of self and others: • Establish a culture in which students ask questions of the teacher and their peers, and error is an opportunity for learning. • Create opportunities for students to discuss their thinking with peers. • Select, sequence and present student work to advance and deepen understanding of correct and increasingly efficient methods. • Develop students' ability to justify methods and compare their responses to the responses of their peers.
MA.K12.MTR.5.1:	Use patterns and structure to help understand and connect mathematical concepts. Mathematicians who use patterns and structure to help understand and connect mathematical concepts: • Focus on relevant details within a problem. • Create plans and procedures to logically order events, steps or ideas to solve problems. • Decompose a complex problem into manageable parts. • Relate previously learned concepts to new concepts. • Look for similarities among problems. • Connect solutions of problems to more complicated large-scale situations. **Clarifications:** Teachers who encourage students to use patterns and structure to help understand and connect mathematical concepts: • Help students recognize the patterns in the world around them and connect these patterns to mathematical concepts. • Support students to develop generalizations based on the similarities found among problems. • Provide opportunities for students to create plans and procedures to solve problems. • Develop students' ability to construct relationships between their current understanding and more sophisticated ways of thinking.
MA.K12.MTR.6.1:	Assess the reasonableness of solutions. Mathematicians who assess the reasonableness of solutions: • Estimate to discover possible solutions. • Use benchmark quantities to determine if a solution makes sense. • Check calculations when solving problems. • Verify possible solutions by explaining the methods used. • Evaluate results based on the given context. **Clarifications:** Teachers who encourage students to assess the reasonableness of solutions: • Have students estimate or predict solutions prior to solving. • Prompt students to continually ask, "Does this solution make sense? How do you know?" • Reinforce that students check their work as they progress within and after a task. • Strengthen students' ability to verify solutions through justifications.
	Apply mathematics to real-world contexts. Mathematicians who apply mathematics to real-world contexts: • Connect mathematical concepts to everyday experiences. • Use models and methods to understand, represent and solve problems. • Perform investigations to gather data or determine if a method is appropriate. • Redesign models and methods to improve accuracy or efficiency.

MA.K12.MTR.7.1:	**Clarifications:** Teachers who encourage students to apply mathematics to real-world contexts: • Provide opportunities for students to create models, both concrete and abstract, and perform investigations. • Challenge students to question the accuracy of their models and methods. • Support students as they validate conclusions by comparing them to the given situation. • Indicate how various concepts can be applied to other disciplines.
ELA.K12.EE.1.1:	Cite evidence to explain and justify reasoning. **Clarifications:** K-1 Students include textual evidence in their oral communication with guidance and support from adults. The evidence can consist of details from the text without naming the text. During 1st grade, students learn how to incorporate the evidence in their writing. 2-3 Students include relevant textual evidence in their written and oral communication. Students should name the text when they refer to it. In 3rd grade, students should use a combination of direct and indirect citations. 4-5 Students continue with previous skills and reference comments made by speakers and peers. Students cite texts that they've directly quoted, paraphrased, or used for information. When writing, students will use the form of citation dictated by the instructor or the style guide referenced by the instructor. 6-8 Students continue with previous skills and use a style guide to create a proper citation. 9-12 Students continue with previous skills and should be aware of existing style guides and the ways in which they differ.
ELA.K12.EE.2.1:	Read and comprehend grade-level complex texts proficiently. **Clarifications:** See Text Complexity for grade-level complexity bands and a text complexity rubric.
ELA.K12.EE.3.1:	Make inferences to support comprehension. **Clarifications:** Students will make inferences before the words infer or inference are introduced. Kindergarten students will answer questions like "Why is the girl smiling?" or make predictions about what will happen based on the title page. Students will use the terms and apply them in 2nd grade and beyond.
ELA.K12.EE.4.1:	Use appropriate collaborative techniques and active listening skills when engaging in discussions in a variety of situations. **Clarifications:** In kindergarten, students learn to listen to one another respectfully. In grades 1-2, students build upon these skills by justifying what they are thinking. For example: "I think _____ because _____." The collaborative conversations are becoming academic conversations. In grades 3-12, students engage in academic conversations discussing claims and justifying their reasoning, refining and applying skills. Students build on ideas, propel the conversation, and support claims and counterclaims with evidence.
ELA.K12.EE.5.1:	Use the accepted rules governing a specific format to create quality work. **Clarifications:** Students will incorporate skills learned into work products to produce quality work. For students to incorporate these skills appropriately, they must receive instruction. A 3rd grade student creating a poster board display must have instruction in how to effectively present information to do quality work.
ELA.K12.EE.6.1:	Use appropriate voice and tone when speaking or writing. **Clarifications:** In kindergarten and 1st grade, students learn the difference between formal and informal language. For example, the way we talk to our friends differs from the way we speak to adults. In 2nd grade and beyond, students practice appropriate social and academic language to discuss texts.
ELD.K12.ELL.SI.1:	English language learners communicate for social and instructional purposes within the school setting.

General Course Information and Notes

GENERAL NOTES

The purpose of this course is to enable students to develop intermediate-level knowledge and skills in communication, personal and group dynamics, and conflict resolution.

The content should include the following:

- Demonstrate understanding of the functions and responsibilities of peer facilitators (listening, team building, confidentiality, conflict resolution, and intervention).
- Demonstrate knowledge of varied behavioral responses to situational, environmental, and chemical elements; and the impact of subsequent decision-making on self and others.
- Demonstrate understanding of the impact of self-knowledge and interpersonal skills on relationships with peers and family.
- Demonstrate knowledge of the positive and negative impacts of peer pressure on oneself and on relationships with peers and family.
- Demonstrate use of intermediate-level facilitative communication skills (listening, questioning, feedback, paraphrasing, nonverbal communication, nonjudgmental response).
- Make inferences and justify conclusions from sample surveys, experiments, and observational studies.

Special Notes:

Instructional Practices Teaching from a well-written, grade-level textbook enhances students' content area knowledge and also strengthens their ability to comprehend longer, complex reading passages on any topic for any reason. Using the following instructional practices also helps student learning:

1. Reading assignments from longer text passages as well as shorter ones when text is extremely complex.
2. Making close reading and rereading of texts central to lessons.

3. Asking high-level, text-specific questions and requiring high-level, complex tasks and assignments.
4. Requiring students to support answers with evidence from the text.
5. Providing extensive text-based research and writing opportunities (claims and evidence).

Florida's Benchmarks for Excellent Student Thinking (B.E.S.T.) Standards
This course includes Florida's B.E.S.T. ELA Expectations (EE) and Mathematical Thinking and Reasoning Standards (MTRs) for students. Florida educators should intentionally embed these standards within the content and their instruction as applicable. For guidance on the implementation of the EEs and MTRs, please visit cpalms.org/Standards/BEST_Standards.aspx and select the appropriate B.E.S.T. Standards package.

English Language Development ELD Standards Special Notes Section:
Teachers are required to provide listening, speaking, reading and writing instruction that allows English language learners (ELL) to communicate for social and instructional purposes within the school setting. For the given level of English language proficiency and with visual, graphic, or interactive support, students will interact with grade level words, expressions, sentences and discourse to process or produce language necessary for academic success. The ELD standard should specify a relevant content area concept or topic of study chosen by curriculum developers and teachers which maximizes an ELL's need for communication and social skills. To access an ELL supporting document which delineates performance definitions and descriptors, please click on the following link: cpalms.org/uploads/docs/standards/eld/SI.pdf

QUALIFICATIONS

As well as any certification requirements listed on the course description, the following qualifications may also be acceptable for the course:

Any field when certification reflects a bachelor or higher degree.

GENERAL INFORMATION

Course Number: 1400310

Course Path: Section: Grades PreK to 12 Education Courses > **Grade Group:** Grades 9 to 12 and Adult Education Courses > **Subject:** Peer Counseling > **SubSubject:** General >
Abbreviated Title: PEER COUN 2

Number of Credits: Half credit (.5)

Course Length: Semester (S)

Course Type: Elective Course

Course Level: 2

Course Status: Draft - Course Pending Approval

Grade Level(s): 9,10,11,12

Peer Counseling 3 (#1400320) 2022 - And Beyond

Course Standards

Name	Description
HE.912.B.3.1:	Verify the validity of health information, products, and services. **Clarifications:** Understanding product-packaging claims, magazine articles, diet/nutritional supplements, energy drinks, exercise video or equipment, tanning salon, fitness club, health professionals, health-related community resources, CPR procedure, qualifications of service provider, type of service, type of product, product safety, and reliability.
HE.912.B.4.1:	Explain skills needed to communicate effectively with family, peers, and others to enhance health. **Clarifications:** Using "I" messages, voice pitch/volume, eye contact, journal experiences, writing letters, persuasive speech, and assertive communication.
HE.912.B.4.2:	Assess refusal, negotiation, and collaboration skills to enhance health and avoid or reduce health risks. **Clarifications:** Validate other's opinions, use direct statement, use active statement, and offer alternatives.
HE.912.B.4.3:	Demonstrate strategies to prevent, manage, or resolve interpersonal conflicts without harming self or others. **Clarifications:** Effective verbal and nonverbal communication, compromise, and conflict-resolution.
HE.912.B.4.4:	Analyze the validity of ways to ask for and offer assistance to enhance the health of self and others. **Clarifications:** Verbal and written communication, active listening, and how to seek help for a friend.
HE.912.B.5.1:	Determine the value of applying a thoughtful decision-making process in health-related situations. **Clarifications:** Defining healthy boundaries and relationships, sexual activity, alcohol consumption, organ-donor decisions, child care, protection against infectious agents, wellness promotion, and first-aid-treatment options.
HE.912.B.6.4:	Formulate an effective long-term personal health plan. **Clarifications:** Stress reduction, weight management, healthier eating habits, improved physical fitness, and individual responsibilities for protecting health.
HE.912.C.1.1:	Predict how healthy behaviors can affect health status. **Clarifications:** Making positive choices/avoiding risky behaviors: healthy food, substance abuse, and healthy relationship skills; regular medical and dental screenings; regular physical activity, and workplace safety.
HE.912.C.1.2:	Interpret the significance of interrelationships in mental/emotional, physical, and social health. **Clarifications:** Substance abuse, eating disorders, sexual behaviors, healthy/unhealthy relationships, self-esteem, stress/anger management, and regular exercise.
HE.912.C.1.3:	Evaluate how environment and personal health are interrelated. **Clarifications:** Food options within a community; prenatal-care services; availability of recreational facilities; air quality; weather-safety awareness; and weather, air, and water conditions.
HE.912.C.2.1:	Analyze how the family influences the health of individuals. **Clarifications:** Nutritional management of meals, composition of and relationships within families, and health-insurance status.
HE.912.C.2.2:	Compare how peers influence healthy and unhealthy behaviors. **Clarifications:** Binge drinking and social groups, sexual coercion [pressure, force, or manipulation] by a dating partner, students' recommendations for school vending machines, healthy lifestyle, review trends in current and emerging diseases, and use of helmets and seatbelts.
HE.912.C.2.3:	Assess how the school and community can affect personal health practice and behaviors. **Clarifications:** Healthier foods, required health education, health screenings, and enforcement of "no tolerance" policies related to all forms of violence, and AED availability and training.
HE.912.P.8.2:	Utilize current, accurate data/information to formulate a health-enhancing message. **Clarifications:** Validate perceptions of peers and societal norms regarding drug use, violence, sexual activity, visiting parenting-focused websites, data provided by government or community agencies, societal influences on the workplace, and teen-driving safety.
HE.912.P.8.3:	Work cooperatively as an advocate for improving personal, family, and community health. **Clarifications:** Support local availability of healthy food options; environmentally friendly shopping; victim, drug or teen court advocacy; advocate for peer-led abuse-prevention education programs, community resource information; and home/school safety.
	Mathematicians who participate in effortful learning both individually and with others:

- Analyze the problem in a way that makes sense given the task.
- Ask questions that will help with solving the task.
- Build perseverance by modifying methods as needed while solving a challenging task.
- Stay engaged and maintain a positive mindset when working to solve tasks.
- Help and support each other when attempting a new method or approach.

MA.K12.MTR.1.1:

Clarifications:
Teachers who encourage students to participate actively in effortful learning both individually and with others:
- Cultivate a community of growth mindset learners.
- Foster perseverance in students by choosing tasks that are challenging.
- Develop students' ability to analyze and problem solve.
- Recognize students' effort when solving challenging problems.

Demonstrate understanding by representing problems in multiple ways.
Mathematicians who demonstrate understanding by representing problems in multiple ways:

- Build understanding through modeling and using manipulatives.
- Represent solutions to problems in multiple ways using objects, drawings, tables, graphs and equations.
- Progress from modeling problems with objects and drawings to using algorithms and equations.
- Express connections between concepts and representations.
- Choose a representation based on the given context or purpose.

MA.K12.MTR.2.1:

Clarifications:
Teachers who encourage students to demonstrate understanding by representing problems in multiple ways:
- Help students make connections between concepts and representations.
- Provide opportunities for students to use manipulatives when investigating concepts.
- Guide students from concrete to pictorial to abstract representations as understanding progresses.
- Show students that various representations can have different purposes and can be useful in different situations.

Complete tasks with mathematical fluency.
Mathematicians who complete tasks with mathematical fluency:

- Select efficient and appropriate methods for solving problems within the given context.
- Maintain flexibility and accuracy while performing procedures and mental calculations.
- Complete tasks accurately and with confidence.
- Adapt procedures to apply them to a new context.
- Use feedback to improve efficiency when performing calculations.

MA.K12.MTR.3.1:

Clarifications:
Teachers who encourage students to complete tasks with mathematical fluency:
- Provide students with the flexibility to solve problems by selecting a procedure that allows them to solve efficiently and accurately.
- Offer multiple opportunities for students to practice efficient and generalizable methods.
- Provide opportunities for students to reflect on the method they used and determine if a more efficient method could have been used.

Engage in discussions that reflect on the mathematical thinking of self and others.
Mathematicians who engage in discussions that reflect on the mathematical thinking of self and others:

- Communicate mathematical ideas, vocabulary and methods effectively.
- Analyze the mathematical thinking of others.
- Compare the efficiency of a method to those expressed by others.
- Recognize errors and suggest how to correctly solve the task.
- Justify results by explaining methods and processes.
- Construct possible arguments based on evidence.

MA.K12.MTR.4.1:

Clarifications:
Teachers who encourage students to engage in discussions that reflect on the mathematical thinking of self and others:
- Establish a culture in which students ask questions of the teacher and their peers, and error is an opportunity for learning.
- Create opportunities for students to discuss their thinking with peers.
- Select, sequence and present student work to advance and deepen understanding of correct and increasingly efficient methods.
- Develop students' ability to justify methods and compare their responses to the responses of their peers.

Use patterns and structure to help understand and connect mathematical concepts.
Mathematicians who use patterns and structure to help understand and connect mathematical concepts:

- Focus on relevant details within a problem.
- Create plans and procedures to logically order events, steps or ideas to solve problems.
- Decompose a complex problem into manageable parts.
- Relate previously learned concepts to new concepts.
- Look for similarities among problems.
- Connect solutions of problems to more complicated large-scale situations.

MA.K12.MTR.5.1:

Clarifications:
Teachers who encourage students to use patterns and structure to help understand and connect mathematical concepts:
- Help students recognize the patterns in the world around them and connect these patterns to mathematical concepts.
- Support students to develop generalizations based on the similarities found among problems.
- Provide opportunities for students to create plans and procedures to solve problems.
- Develop students' ability to construct relationships between their current understanding and more sophisticated ways of thinking.

Assess the reasonableness of solutions.
Mathematicians who assess the reasonableness of solutions:

MA.K12.MTR.6.1:	• Estimate to discover possible solutions. • Use benchmark quantities to determine if a solution makes sense. • Check calculations when solving problems. • Verify possible solutions by explaining the methods used. • Evaluate results based on the given context. **Clarifications:** Teachers who encourage students to assess the reasonableness of solutions: • Have students estimate or predict solutions prior to solving. • Prompt students to continually ask, "Does this solution make sense? How do you know?" • Reinforce that students check their work as they progress within and after a task. • Strengthen students' ability to verify solutions through justifications.
MA.K12.MTR.7.1:	Apply mathematics to real-world contexts. Mathematicians who apply mathematics to real-world contexts: • Connect mathematical concepts to everyday experiences. • Use models and methods to understand, represent and solve problems. • Perform investigations to gather data or determine if a method is appropriate. • Redesign models and methods to improve accuracy or efficiency. **Clarifications:** Teachers who encourage students to apply mathematics to real-world contexts: • Provide opportunities for students to create models, both concrete and abstract, and perform investigations. • Challenge students to question the accuracy of their models and methods. • Support students as they validate conclusions by comparing them to the given situation. • Indicate how various concepts can be applied to other disciplines.
ELA.K12.EE.1.1:	Cite evidence to explain and justify reasoning. **Clarifications:** K-1 Students include textual evidence in their oral communication with guidance and support from adults. The evidence can consist of details from the text without naming the text. During 1st grade, students learn how to incorporate the evidence in their writing. 2-3 Students include relevant textual evidence in their written and oral communication. Students should name the text when they refer to it. In 3rd grade, students should use a combination of direct and indirect citations. 4-5 Students continue with previous skills and reference comments made by speakers and peers. Students cite texts that they've directly quoted, paraphrased, or used for information. When writing, students will use the form of citation dictated by the instructor or the style guide referenced by the instructor. 6-8 Students continue with previous skills and use a style guide to create a proper citation. 9-12 Students continue with previous skills and should be aware of existing style guides and the ways in which they differ.
ELA.K12.EE.2.1:	Read and comprehend grade-level complex texts proficiently. **Clarifications:** See Text Complexity for grade-level complexity bands and a text complexity rubric.
ELA.K12.EE.3.1:	Make inferences to support comprehension. **Clarifications:** Students will make inferences before the words infer or inference are introduced. Kindergarten students will answer questions like "Why is the girl smiling?" or make predictions about what will happen based on the title page. Students will use the terms and apply them in 2nd grade and beyond.
ELA.K12.EE.4.1:	Use appropriate collaborative techniques and active listening skills when engaging in discussions in a variety of situations. **Clarifications:** In kindergarten, students learn to listen to one another respectfully. In grades 1-2, students build upon these skills by justifying what they are thinking. For example: "I think _____ because _____." The collaborative conversations are becoming academic conversations. In grades 3-12, students engage in academic conversations discussing claims and justifying their reasoning, refining and applying skills. Students build on ideas, propel the conversation, and support claims and counterclaims with evidence.
ELA.K12.EE.5.1:	Use the accepted rules governing a specific format to create quality work. **Clarifications:** Students will incorporate skills learned into work products to produce quality work. For students to incorporate these skills appropriately, they must receive instruction. A 3rd grade student creating a poster board display must have instruction in how to effectively present information to do quality work.
ELA.K12.EE.6.1:	Use appropriate voice and tone when speaking or writing. **Clarifications:** In kindergarten and 1st grade, students learn the difference between formal and informal language. For example, the way we talk to our friends differs from the way we speak to adults. In 2nd grade and beyond, students practice appropriate social and academic language to discuss texts.
ELD.K12.ELL.SI.1:	English language learners communicate for social and instructional purposes within the school setting.

General Course Information and Notes

GENERAL NOTES

The purpose of this course is to enable students to develop proficient knowledge and skills in communication, personal and group dynamics, and conflict resolution. Emphasis will be on the issues and concerns of students within the school.

The content should include the following:

- Select and use appropriate, effective leadership and interpersonal skills and techniques in group settings.
- Demonstrate knowledge of varied behavioral responses to situational, environmental, and chemical elements; and the impact of subsequent decision-making on self and others.
- Demonstrate use of proficient facilitative communication skills (listening, feedback, nonverbal communication, nonjudgmental response, repairing communication breakdown).
- Demonstrate understanding of methods for dealing with conflict (communication, assertion, avoidance, aggression) and use strategies specific to varied types of conflict to facilitate resolution.
- Demonstrate knowledge of varied school and community resources (school counseling center, School Resource Officer, community mental health services, public health services, AIDS clinic, rape crisis center, drug and alcohol intervention/prevention programs, hotlines, Internet).
- Assess needs and issues among individuals and groups of students within the school.
- Work cooperatively to plan, implement, and evaluate effective student programs designed to address needs and issues identified through assessment.

Special Notes:

Instructional Practices Teaching from a well-written, grade-level textbook enhances students' content area knowledge and also strengthens their ability to comprehend longer, complex reading passages on any topic for any reason. Using the following instructional practices also helps student learning:

1. Reading assignments from longer text passages as well as shorter ones when text is extremely complex.
2. Making close reading and rereading of texts central to lessons.
3. Asking high-level, text-specific questions and requiring high-level, complex tasks and assignments.
4. Requiring students to support answers with evidence from the text.
5. Providing extensive text-based research and writing opportunities (claims and evidence).

Florida's Benchmarks for Excellent Student Thinking (B.E.S.T.) Standards
This course includes Florida's B.E.S.T. ELA Expectations (EE) and Mathematical Thinking and Reasoning Standards (MTRs) for students. Florida educators should intentionally embed these standards within the content and their instruction as applicable. For guidance on the implementation of the EEs and MTRs, please visit cpalms.org/Standards/BEST_Standards.aspx and select the appropriate B.E.S.T. Standards package.

English Language Development ELD Standards Special Notes Section:
Teachers are required to provide listening, speaking, reading and writing instruction that allows English language learners (ELL) to communicate for social and instructional purposes within the school setting. For the given level of English language proficiency and with visual, graphic, or interactive support, students will interact with grade level words, expressions, sentences and discourse to process or produce language necessary for academic success. The ELD standard should specify a relevant content area concept or topic of study chosen by curriculum developers and teachers which maximizes an ELL's need for communication and social skills. To access an ELL supporting document which delineates performance definitions and descriptors, please click on the following link: cpalms.org/uploads/docs/standards/eld/SI.pdf

QUALIFICATIONS

As well as any certification requirements listed on the course description, the following qualifications may also be acceptable for the course:

Any field when certification reflects a bachelor or higher degree.

GENERAL INFORMATION

Course Number: 1400320

Course Path: Section: Grades PreK to 12 Education Courses > **Grade Group:** Grades 9 to 12 and Adult Education Courses > **Subject:** Peer Counseling > **SubSubject:** General >
Abbreviated Title: PEER COUN 3

Number of Credits: Half credit (.5)

Course Length: Semester (S)

Course Type: Elective Course

Course Level: 2

Course Status: Draft - Course Pending Approval

Grade Level(s): 9,10,11,12

Peer Counseling 4 (#1400330) 2022 - And Beyond

Course Standards

Name	Description
HE.912.B.3.1:	Verify the validity of health information, products, and services. **Clarifications:** Understanding product-packaging claims, magazine articles, diet/nutritional supplements, energy drinks, exercise video or equipment, tanning salon, fitness club, health professionals, health-related community resources, CPR procedure, qualifications of service provider, type of service, type of product, product safety, and reliability.
HE.912.B.3.2:	Compile data reflecting the accessibility of resources from home, school, and community that provide valid health information. **Clarifications:** Internet, family member, nurse, guidance counselor, physician, clinic, hotline, support group, community agency, domestic/dating-violence service provider, and first-aid training location, expense, services available, eligibility, scheduling appointments, healthcare, and mental-health resources.
HE.912.B.3.4:	Justify when professional health services or providers may be required. **Clarifications:** Injury, depression, suicide, drug abuse, medical emergency, 911, child abuse, domestic and/or dating violence, and natural or man-made conditions.
HE.912.B.4.2:	Assess refusal, negotiation, and collaboration skills to enhance health and avoid or reduce health risks. **Clarifications:** Validate other's opinions, use direct statement, use active statement, and offer alternatives.
HE.912.B.4.3:	Demonstrate strategies to prevent, manage, or resolve interpersonal conflicts without harming self or others. **Clarifications:** Effective verbal and nonverbal communication, compromise, and conflict-resolution.
HE.912.B.4.4:	Analyze the validity of ways to ask for and offer assistance to enhance the health of self and others. **Clarifications:** Verbal and written communication, active listening, and how to seek help for a friend.
HE.912.B.5.3:	Appraise the potential short-term and long-term outcomes of each alternative on self and others. **Clarifications:** Nutrition plan based on personal needs and preferences, impact of chronic health condition on individual and family, weapons on campus, and use of stress management and coping skills.
HE.912.C.1.1:	Predict how healthy behaviors can affect health status. **Clarifications:** Making positive choices/avoiding risky behaviors: healthy food, substance abuse, and healthy relationship skills; regular medical and dental screenings; regular physical activity, and workplace safety.
HE.912.C.1.2:	Interpret the significance of interrelationships in mental/emotional, physical, and social health. **Clarifications:** Substance abuse, eating disorders, sexual behaviors, healthy/unhealthy relationships, self-esteem, stress/anger management, and regular exercise.
HE.912.C.2.3:	Assess how the school and community can affect personal health practice and behaviors. **Clarifications:** Healthier foods, required health education, health screenings, and enforcement of "no tolerance" policies related to all forms of violence, and AED availability and training.
HE.912.C.2.4:	Evaluate how public health policies and government regulations can influence health promotion and disease prevention. **Clarifications:** Seat-belt enforcement, underage alcohol sales, reporting communicable diseases, child care, and AED availability.
HE.912.P.8.3:	Work cooperatively as an advocate for improving personal, family, and community health. **Clarifications:** Support local availability of healthy food options; environmentally friendly shopping; victim, drug or teen court advocacy; advocate for peer-led abuse-prevention education programs, community resource information; and home/school safety.
MA.K12.MTR.1.1:	Mathematicians who participate in effortful learning both individually and with others: • Analyze the problem in a way that makes sense given the task. • Ask questions that will help with solving the task. • Build perseverance by modifying methods as needed while solving a challenging task. • Stay engaged and maintain a positive mindset when working to solve tasks. • Help and support each other when attempting a new method or approach. **Clarifications:** Teachers who encourage students to participate actively in effortful learning both individually and with others: • Cultivate a community of growth mindset learners. • Foster perseverance in students by choosing tasks that are challenging. • Develop students' ability to analyze and problem solve. • Recognize students' effort when solving challenging problems.

MA.K12.MTR.2.1:

Demonstrate understanding by representing problems in multiple ways.
Mathematicians who demonstrate understanding by representing problems in multiple ways:

- Build understanding through modeling and using manipulatives.
- Represent solutions to problems in multiple ways using objects, drawings, tables, graphs and equations.
- Progress from modeling problems with objects and drawings to using algorithms and equations.
- Express connections between concepts and representations.
- Choose a representation based on the given context or purpose.

Clarifications:
Teachers who encourage students to demonstrate understanding by representing problems in multiple ways:

- Help students make connections between concepts and representations.
- Provide opportunities for students to use manipulatives when investigating concepts.
- Guide students from concrete to pictorial to abstract representations as understanding progresses.
- Show students that various representations can have different purposes and can be useful in different situations.

MA.K12.MTR.3.1:

Complete tasks with mathematical fluency.
Mathematicians who complete tasks with mathematical fluency:

- Select efficient and appropriate methods for solving problems within the given context.
- Maintain flexibility and accuracy while performing procedures and mental calculations.
- Complete tasks accurately and with confidence.
- Adapt procedures to apply them to a new context.
- Use feedback to improve efficiency when performing calculations.

Clarifications:
Teachers who encourage students to complete tasks with mathematical fluency:

- Provide students with the flexibility to solve problems by selecting a procedure that allows them to solve efficiently and accurately.
- Offer multiple opportunities for students to practice efficient and generalizable methods.
- Provide opportunities for students to reflect on the method they used and determine if a more efficient method could have been used.

MA.K12.MTR.4.1:

Engage in discussions that reflect on the mathematical thinking of self and others.
Mathematicians who engage in discussions that reflect on the mathematical thinking of self and others:

- Communicate mathematical ideas, vocabulary and methods effectively.
- Analyze the mathematical thinking of others.
- Compare the efficiency of a method to those expressed by others.
- Recognize errors and suggest how to correctly solve the task.
- Justify results by explaining methods and processes.
- Construct possible arguments based on evidence.

Clarifications:
Teachers who encourage students to engage in discussions that reflect on the mathematical thinking of self and others:

- Establish a culture in which students ask questions of the teacher and their peers, and error is an opportunity for learning.
- Create opportunities for students to discuss their thinking with peers.
- Select, sequence and present student work to advance and deepen understanding of correct and increasingly efficient methods.
- Develop students' ability to justify methods and compare their responses to the responses of their peers.

MA.K12.MTR.5.1:

Use patterns and structure to help understand and connect mathematical concepts.
Mathematicians who use patterns and structure to help understand and connect mathematical concepts:

- Focus on relevant details within a problem.
- Create plans and procedures to logically order events, steps or ideas to solve problems.
- Decompose a complex problem into manageable parts.
- Relate previously learned concepts to new concepts.
- Look for similarities among problems.
- Connect solutions of problems to more complicated large-scale situations.

Clarifications:
Teachers who encourage students to use patterns and structure to help understand and connect mathematical concepts:

- Help students recognize the patterns in the world around them and connect these patterns to mathematical concepts.
- Support students to develop generalizations based on the similarities found among problems.
- Provide opportunities for students to create plans and procedures to solve problems.
- Develop students' ability to construct relationships between their current understanding and more sophisticated ways of thinking.

MA.K12.MTR.6.1:

Assess the reasonableness of solutions.
Mathematicians who assess the reasonableness of solutions:

- Estimate to discover possible solutions.
- Use benchmark quantities to determine if a solution makes sense.
- Check calculations when solving problems.
- Verify possible solutions by explaining the methods used.
- Evaluate results based on the given context.

Clarifications:
Teachers who encourage students to assess the reasonableness of solutions:

- Have students estimate or predict solutions prior to solving.
- Prompt students to continually ask, "Does this solution make sense? How do you know?"
- Reinforce that students check their work as they progress within and after a task.

	• Strengthen students' ability to verify solutions through justifications.
MA.K12.MTR.7.1:	Apply mathematics to real-world contexts. Mathematicians who apply mathematics to real-world contexts: • Connect mathematical concepts to everyday experiences. • Use models and methods to understand, represent and solve problems. • Perform investigations to gather data or determine if a method is appropriate. • Redesign models and methods to improve accuracy or efficiency. **Clarifications:** Teachers who encourage students to apply mathematics to real-world contexts: • Provide opportunities for students to create models, both concrete and abstract, and perform investigations. • Challenge students to question the accuracy of their models and methods. • Support students as they validate conclusions by comparing them to the given situation. • Indicate how various concepts can be applied to other disciplines.
ELA.K12.EE.1.1:	Cite evidence to explain and justify reasoning. **Clarifications:** K-1 Students include textual evidence in their oral communication with guidance and support from adults. The evidence can consist of details from the text without naming the text. During 1st grade, students learn how to incorporate the evidence in their writing. 2-3 Students include relevant textual evidence in their written and oral communication. Students should name the text when they refer to it. In 3rd grade, students should use a combination of direct and indirect citations. 4-5 Students continue with previous skills and reference comments made by speakers and peers. Students cite texts that they've directly quoted, paraphrased, or used for information. When writing, students will use the form of citation dictated by the instructor or the style guide referenced by the instructor. 6-8 Students continue with previous skills and use a style guide to create a proper citation. 9-12 Students continue with previous skills and should be aware of existing style guides and the ways in which they differ.
ELA.K12.EE.2.1:	Read and comprehend grade-level complex texts proficiently. **Clarifications:** See Text Complexity for grade-level complexity bands and a text complexity rubric.
ELA.K12.EE.3.1:	Make inferences to support comprehension. **Clarifications:** Students will make inferences before the words infer or inference are introduced. Kindergarten students will answer questions like "Why is the girl smiling?" or make predictions about what will happen based on the title page. Students will use the terms and apply them in 2nd grade and beyond.
ELA.K12.EE.4.1:	Use appropriate collaborative techniques and active listening skills when engaging in discussions in a variety of situations. **Clarifications:** In kindergarten, students learn to listen to one another respectfully. In grades 1-2, students build upon these skills by justifying what they are thinking. For example: "I think _____ because _____." The collaborative conversations are becoming academic conversations. In grades 3-12, students engage in academic conversations discussing claims and justifying their reasoning, refining and applying skills. Students build on ideas, propel the conversation, and support claims and counterclaims with evidence.
ELA.K12.EE.5.1:	Use the accepted rules governing a specific format to create quality work. **Clarifications:** Students will incorporate skills learned into work products to produce quality work. For students to incorporate these skills appropriately, they must receive instruction. A 3rd grade student creating a poster board display must have instruction in how to effectively present information to do quality work.
ELA.K12.EE.6.1:	Use appropriate voice and tone when speaking or writing. **Clarifications:** In kindergarten and 1st grade, students learn the difference between formal and informal language. For example, the way we talk to our friends differs from the way we speak to adults. In 2nd grade and beyond, students practice appropriate social and academic language to discuss texts.
ELD.K12.ELL.SI.1:	English language learners communicate for social and instructional purposes within the school setting.

General Course Information and Notes

GENERAL NOTES

The purpose of this course is to enable students to develop advanced knowledge and skills in communication, personal and group dynamics, and conflict resolution. Emphasis will be on program development and intervention for students in the school and community.

The content should include the following:

- Select and use appropriate, effective leadership and interpersonal skills and techniques in group settings.
- Demonstrate understanding of varied behavioral responses to situational, environmental, and chemical elements; and the impact of subsequent decision-making on self and others.
- Demonstrate use of advanced facilitative communication skills (listening, feedback, nonverbal communication, nonjudgmental response, repairing communication breakdown).

- Demonstrate understanding of methods for dealing with conflict (communication, assertion, avoidance, aggression) and use strategies specific to varied types of conflict to facilitate resolution.
- Demonstrate knowledge of varied school and community resources (school counseling center, School Resource Officer, community mental health services, public health services, AIDS clinic, drug and alcohol intervention/prevention programs, rape crisis center, hotlines, Internet).
- Analyze feedback and previous assessments to identify current needs and issues within the school or community.
- Work cooperatively to plan, implement, and evaluate effective student programs designed to address needs and issues identified through assessment.

Special Notes:

Instructional Practices Teaching from a well-written, grade-level textbook enhances students' content area knowledge and also strengthens their ability to comprehend longer, complex reading passages on any topic for any reason. Using the following instructional practices also helps student learning:

1. Reading assignments from longer text passages as well as shorter ones when text is extremely complex.
2. Making close reading and rereading of texts central to lessons.
3. Asking high-level, text-specific questions and requiring high-level, complex tasks and assignments.
4. Requiring students to support answers with evidence from the text.
5. Providing extensive text-based research and writing opportunities (claims and evidence).

Florida's Benchmarks for Excellent Student Thinking (B.E.S.T.) Standards
This course includes Florida's B.E.S.T. ELA Expectations (EE) and Mathematical Thinking and Reasoning Standards (MTRs) for students. Florida educators should intentionally embed these standards within the content and their instruction as applicable. For guidance on the implementation of the EEs and MTRs, please visit cpalms.org/Standards/BEST_Standards.aspx and select the appropriate B.E.S.T. Standards package.

English Language Development ELD Standards Special Notes Section:
Teachers are required to provide listening, speaking, reading and writing instruction that allows English language learners (ELL) to communicate for social and instructional purposes within the school setting. For the given level of English language proficiency and with visual, graphic, or interactive support, students will interact with grade level words, expressions, sentences and discourse to process or produce language necessary for academic success. The ELD standard should specify a relevant content area concept or topic of study chosen by curriculum developers and teachers which maximizes an ELL's need for communication and social skills. To access an ELL supporting document which delineates performance definitions and descriptors, please click on the following link: cpalms.org/uploads/docs/standards/eld/SI.pdf

QUALIFICATIONS

As well as any certification requirements listed on the course description, the following qualifications may also be acceptable for the course:

Any field when certification reflects a bachelor or higher degree.

GENERAL INFORMATION

Course Number: 1400330

Course Path: Section: Grades PreK to 12 Education Courses > **Grade Group:** Grades 9 to 12 and Adult Education Courses > **Subject:** Peer Counseling > **SubSubject:** General > **Abbreviated Title:** PEER COUN 4

Number of Credits: Half credit (.5)

Course Length: Semester (S)

Course Type: Elective Course

Course Level: 2

Course Status: Draft - Course Pending Approval

Grade Level(s): 9,10,11,12

Peers as Partners in Learning (#1400340) 2022 - And Beyond

Course Standards

Name	Description
SS.912.C.2.5:	Conduct a service project to further the public good. **Clarifications:** Examples are school, community, state, national, international.
SS.912.P.9.8:	Discuss the nature and effects of stereotyping, prejudice, and discrimination.
SS.912.P.10.3:	Discuss the relationship between culture and conceptions of self and identity.
SS.912.P.12.2:	Define processes involved in problem solving and decision making. **Clarifications:** Examples may include, but are not limited to, identification, analysis, solution generation, plan, implement, and evaluate.
SS.912.P.12.5:	Describe obstacles to decision making. **Clarifications:** Examples may include, but are not limited to, confirmation bias, counterproductive heuristics, and overconfidence.
SS.912.S.8.4:	Define a social issue to be analyzed.
SS.912.S.8.9:	Identify a community social problem and discuss appropriate actions to address the problem.
SS.912.S.8.10:	Investigate how incorrect communications, such as rumors or gossip, can influence group behavior. **Clarifications:** Examples may include, but are not limited to, Orson Welles "The War of the Worlds" radio broadcast, and rumors in the mass media, on the internet, or in the community.
MA.K12.MTR.1.1:	Mathematicians who participate in effortful learning both individually and with others: • Analyze the problem in a way that makes sense given the task. • Ask questions that will help with solving the task. • Build perseverance by modifying methods as needed while solving a challenging task. • Stay engaged and maintain a positive mindset when working to solve tasks. • Help and support each other when attempting a new method or approach. **Clarifications:** Teachers who encourage students to participate actively in effortful learning both individually and with others: • Cultivate a community of growth mindset learners. • Foster perseverance in students by choosing tasks that are challenging. • Develop students' ability to analyze and problem solve. • Recognize students' effort when solving challenging problems.
MA.K12.MTR.2.1:	Demonstrate understanding by representing problems in multiple ways. Mathematicians who demonstrate understanding by representing problems in multiple ways: • Build understanding through modeling and using manipulatives. • Represent solutions to problems in multiple ways using objects, drawings, tables, graphs and equations. • Progress from modeling problems with objects and drawings to using algorithms and equations. • Express connections between concepts and representations. • Choose a representation based on the given context or purpose. **Clarifications:** Teachers who encourage students to demonstrate understanding by representing problems in multiple ways: • Help students make connections between concepts and representations. • Provide opportunities for students to use manipulatives when investigating concepts. • Guide students from concrete to pictorial to abstract representations as understanding progresses. • Show students that various representations can have different purposes and can be useful in different situations.
MA.K12.MTR.3.1:	Complete tasks with mathematical fluency. Mathematicians who complete tasks with mathematical fluency: • Select efficient and appropriate methods for solving problems within the given context. • Maintain flexibility and accuracy while performing procedures and mental calculations. • Complete tasks accurately and with confidence. • Adapt procedures to apply them to a new context. • Use feedback to improve efficiency when performing calculations. **Clarifications:** Teachers who encourage students to complete tasks with mathematical fluency: • Provide students with the flexibility to solve problems by selecting a procedure that allows them to solve efficiently and accurately. • Offer multiple opportunities for students to practice efficient and generalizable methods. • Provide opportunities for students to reflect on the method they used and determine if a more efficient method could have been used.
	Engage in discussions that reflect on the mathematical thinking of self and others. Mathematicians who engage in discussions that reflect on the mathematical thinking of self and others:

MA.K12.MTR.4.1:	• Communicate mathematical ideas, vocabulary and methods effectively. • Analyze the mathematical thinking of others. • Compare the efficiency of a method to those expressed by others. • Recognize errors and suggest how to correctly solve the task. • Justify results by explaining methods and processes. • Construct possible arguments based on evidence. **Clarifications:** Teachers who encourage students to engage in discussions that reflect on the mathematical thinking of self and others: • Establish a culture in which students ask questions of the teacher and their peers, and error is an opportunity for learning. • Create opportunities for students to discuss their thinking with peers. • Select, sequence and present student work to advance and deepen understanding of correct and increasingly efficient methods. • Develop students' ability to justify methods and compare their responses to the responses of their peers.
MA.K12.MTR.5.1:	Use patterns and structure to help understand and connect mathematical concepts. Mathematicians who use patterns and structure to help understand and connect mathematical concepts: • Focus on relevant details within a problem. • Create plans and procedures to logically order events, steps or ideas to solve problems. • Decompose a complex problem into manageable parts. • Relate previously learned concepts to new concepts. • Look for similarities among problems. • Connect solutions of problems to more complicated large-scale situations. **Clarifications:** Teachers who encourage students to use patterns and structure to help understand and connect mathematical concepts: • Help students recognize the patterns in the world around them and connect these patterns to mathematical concepts. • Support students to develop generalizations based on the similarities found among problems. • Provide opportunities for students to create plans and procedures to solve problems. • Develop students' ability to construct relationships between their current understanding and more sophisticated ways of thinking.
MA.K12.MTR.6.1:	Assess the reasonableness of solutions. Mathematicians who assess the reasonableness of solutions: • Estimate to discover possible solutions. • Use benchmark quantities to determine if a solution makes sense. • Check calculations when solving problems. • Verify possible solutions by explaining the methods used. • Evaluate results based on the given context. **Clarifications:** Teachers who encourage students to assess the reasonableness of solutions: • Have students estimate or predict solutions prior to solving. • Prompt students to continually ask, "Does this solution make sense? How do you know?" • Reinforce that students check their work as they progress within and after a task. • Strengthen students' ability to verify solutions through justifications.
MA.K12.MTR.7.1:	Apply mathematics to real-world contexts. Mathematicians who apply mathematics to real-world contexts: • Connect mathematical concepts to everyday experiences. • Use models and methods to understand, represent and solve problems. • Perform investigations to gather data or determine if a method is appropriate. • Redesign models and methods to improve accuracy or efficiency. **Clarifications:** Teachers who encourage students to apply mathematics to real-world contexts: • Provide opportunities for students to create models, both concrete and abstract, and perform investigations. • Challenge students to question the accuracy of their models and methods. • Support students as they validate conclusions by comparing them to the given situation. • Indicate how various concepts can be applied to other disciplines.
ELA.K12.EE.1.1:	Cite evidence to explain and justify reasoning. **Clarifications:** K-1 Students include textual evidence in their oral communication with guidance and support from adults. The evidence can consist of details from the text without naming the text. During 1st grade, students learn how to incorporate the evidence in their writing. 2-3 Students include relevant textual evidence in their written and oral communication. Students should name the text when they refer to it. In 3rd grade, students should use a combination of direct and indirect citations. 4-5 Students continue with previous skills and reference comments made by speakers and peers. Students cite texts that they've directly quoted, paraphrased, or used for information. When writing, students will use the form of citation dictated by the instructor or the style guide referenced by the instructor. 6-8 Students continue with previous skills and use a style guide to create a proper citation. 9-12 Students continue with previous skills and should be aware of existing style guides and the ways in which they differ.
ELA.K12.EE.2.1:	Read and comprehend grade-level complex texts proficiently. **Clarifications:** See Text Complexity for grade-level complexity bands and a text complexity rubric.
	Make inferences to support comprehension.

ELA.K12.EE.3.1:	**Clarifications:** Students will make inferences before the words infer or inference are introduced. Kindergarten students will answer questions like "Why is the girl smiling?" or make predictions about what will happen based on the title page. Students will use the terms and apply them in 2nd grade and beyond.
ELA.K12.EE.4.1:	Use appropriate collaborative techniques and active listening skills when engaging in discussions in a variety of situations. **Clarifications:** In kindergarten, students learn to listen to one another respectfully. In grades 1-2, students build upon these skills by justifying what they are thinking. For example: "I think _____ because _____." The collaborative conversations are becoming academic conversations. In grades 3-12, students engage in academic conversations discussing claims and justifying their reasoning, refining and applying skills. Students build on ideas, propel the conversation, and support claims and counterclaims with evidence.
ELA.K12.EE.5.1:	Use the accepted rules governing a specific format to create quality work. **Clarifications:** Students will incorporate skills learned into work products to produce quality work. For students to incorporate these skills appropriately, they must receive instruction. A 3rd grade student creating a poster board display must have instruction in how to effectively present information to do quality work.
ELA.K12.EE.6.1:	Use appropriate voice and tone when speaking or writing. **Clarifications:** In kindergarten and 1st grade, students learn the difference between formal and informal language. For example, the way we talk to our friends differs from the way we speak to adults. In 2nd grade and beyond, students practice appropriate social and academic language to discuss texts.
HE.912.B.4.2:	Assess refusal, negotiation, and collaboration skills to enhance health and avoid or reduce health risks. **Clarifications:** Validate other's opinions, use direct statement, use active statement, and offer alternatives.
HE.912.B.4.3:	Demonstrate strategies to prevent, manage, or resolve interpersonal conflicts without harming self or others. **Clarifications:** Effective verbal and nonverbal communication, compromise, and conflict-resolution.
HE.912.B.4.4:	Analyze the validity of ways to ask for and offer assistance to enhance the health of self and others. **Clarifications:** Verbal and written communication, active listening, and how to seek help for a friend.
HE.912.C.2.2:	Compare how peers influence healthy and unhealthy behaviors. **Clarifications:** Binge drinking and social groups, sexual coercion [pressure, force, or manipulation] by a dating partner, students' recommendations for school vending machines, healthy lifestyle, review trends in current and emerging diseases, and use of helmets and seatbelts.
ELD.K12.ELL.SI.1:	English language learners communicate for social and instructional purposes within the school setting.

General Course Information and Notes

GENERAL NOTES

This course is designed to provide reciprocal academic and social benefits to students with disabilities and their peers without disabilities. Students enrolled in this course will learn and apply knowledge and skilled practices in the areas of academic engagement, communication, social barriers, leadership, problem solving, and other disability-related topics such as historical perspectives, inclusion, Universal Design for Learning, person-first language, presumed competence, social justice for minority populations, and media representation of diverse people.

The content and concepts should include but not limited to the following:

- Know and understand the legal and human rights of people with disabilities and their families.
- Understand and apply the concepts of confidentiality and self-determination.
- Understand historical events and aspects of disability and their influence on current attitudes, beliefs, and practices.
- Build awareness and understanding, through research and communication, of disability rights issues in the local community and beyond.
- Apply methods for problem-solving and advocacy (including self-advocacy for students with disabilities).
- Apply knowledge and strategies to promote learning for people with disabilities, in inclusive settings, through academic, communication, physical and social supports.
- Facilitate meaningful peer relationships in and out of school.
- Understand and facilitate team and cooperative learning skills among all students.
- Contribute to the concept of civic responsibility by researching and communicating information about social justice in a democratic society.
- Design and implement one or more projects to demonstrate knowledge, understanding, and application of course content and concepts.
- Assess and evaluate the impact of course efforts on self and others.

This course should be taught using the appropriate standards/benchmarks for the grade.

Florida's Benchmarks for Excellent Student Thinking (B.E.S.T.) Standards:

This course includes Florida's B.E.S.T. ELA Expectations (EE) and Mathematical Thinking and Reasoning Standards (MTRs) for students. Florida educators should intentionally embed these standards within the content and their instruction as applicable. For guidance on the implementation of the EEs and MTRs, please visit cpalms.org/Standards/BEST_Standards.aspx and select the appropriate B.E.S.T. Standards package.

English Language Development (ELD) Standards Special Notes Section:

Teachers are required to provide listening, speaking, reading and writing instruction that allows English language learners (ELL) to communicate for social and instructional

purposes within the school setting. For the given level of English language proficiency and with visual, graphic, or interactive support, students will interact with grade level words, expressions, sentences and discourse to process or produce language necessary for academic success. The ELD standard should specify a relevant content area concept or topic of study chosen by curriculum developers and teachers which maximizes an ELL's need for communication and social skills. To access an ELL supporting document which delineates performance definitions and descriptors, please click on the following link: cpalms.org/uploads/docs/standards/eld/SI.pdf.

GENERAL INFORMATION

Course Number: 1400340

Course Path: Section: Grades PreK to 12 Education Courses > **Grade Group:** Grades 9 to 12 and Adult Education Courses > **Subject:** Peer Counseling > **SubSubject:** General >

Abbreviated Title: PEER/PARTNERS LRNG

Number of Credits: Multiple Credit (more than 1 credit)

Course Length: Multiple (M) - Course length can vary

Course Type: Elective Course

Course Level: 2

Course Status: Draft - Course Pending Approval

Grade Level(s): 9,10,11,12

Educator Certifications

Exceptional Student Education (Elementary and Secondary Grades K-12)
Emotionally Handicapped (Elementary and Secondary Grades K-12)
Hearing Impaired (Grades K-12)
Mentally Handicapped (Elementary and Secondary Grades K-12)
Specific Learning Disabilities (Elementary and Secondary Grades K-12)
Speech Language Impaired (Elementary and Secondary Grades K-12)
Varying Exceptionalities (Elementary and Secondary Grades K-12)
Visually Impaired (Elementary and Secondary Grades K-12)

M/J Adaptive Physical Education IEP or 504 Plan (MC) (#1500000) 2022 - And Beyond

Course Standards

Name	Description
PE.6.C.2.2:	List safety procedures that should be followed when engaging in activities to improve the health-related components of fitness. **Clarifications:** The health-related components of fitness are cardiorespiratory endurance, muscular strength, muscular endurance, flexibility and body composition.
PE.6.C.2.6:	Classify activities as aerobic or anaerobic.
PE.6.C.2.13:	List appropriate warm-up and cool-down techniques and the reasons for using them.
PE.6.C.2.14:	List terminology and etiquette in educational gymnastics or dance.
PE.6.L.3.1:	Participate in moderate physical activity on a daily basis.
PE.6.L.3.2:	Participate in vigorous physical activity on a daily basis.
PE.6.L.4.4:	Develop a personal fitness program including a variety of physical activities.
PE.6.M.1.4:	Perform at least three activities having value for cardiorespiratory fitness.
PE.6.M.1.5:	Perform movements using a variety of equipment which lead to improved or maintained muscular strength and endurance.
PE.6.M.1.9:	Create and perform a rhythmic movement sequence while working with a partner or group.
PE.6.M.1.10:	Design and perform different group dance and rhythm sequences that incorporate equipment.
PE.6.M.1.11:	Apply proper warm-up and cool-down techniques.
PE.6.M.1.12:	Use proper safety practices. **Clarifications:** Some examples of safety practices are the use of sun screen, hydration, selection of clothing and correct biomechanics.
PE.6.R.5.1:	List ways that peer pressure can be positive and negative.
PE.6.R.5.2:	Demonstrate acceptance and respect for persons of diverse backgrounds and abilities in physical-activity settings.
PE.6.R.5.3:	Demonstrate responsible behaviors during physical activities. **Clarifications:** Some examples of responsible behaviors are controlling emotions, resolving conflicts, respecting opponents and officials and accepting both victory and defeat.
PE.6.R.5.4:	Describe the personal, social and ethical behaviors that apply to specific physical activities.
PE.6.R.5.5:	Demonstrate appropriate etiquette, care of equipment, respect for facilities and safe behaviors while participating in a variety of physical activities.
PE.6.R.6.3:	Participate in games, sports and/or physical activities from other cultures.
PE.7.C.2.1:	Identify the basic rules for team sports. **Clarifications:** Some examples are setting up to start, violating rules and keeping accurate score.
PE.7.C.2.2:	Identify the basic rules for outdoor pursuits/aquatics. **Clarifications:** Some examples are setting up to start, violating rules and keeping accurate score.
PE.7.L.3.1:	Participate in moderate physical activity on a daily basis.
PE.7.L.3.2:	Participate in vigorous physical activity on a daily basis.
PE.7.M.1.1:	Participate in modified versions of team sports demonstrating mature patterns while using a variety of manipulative skills. **Clarifications:** Some examples of manipulative skills are throwing, catching, kicking, punting, trapping, dribbling, volleying and striking.
PE.7.M.1.7:	Utilize proper equipment and implement appropriate safety procedures for participation in a variety of sports or activities.
PE.7.R.5.1:	Identify situations in which peer pressure could negatively impact one's own behavior choices.
PE.7.R.6.2:	Discuss the potential benefits of participation in a variety of physical activities. **Clarifications:** Some examples of potential benefits are physical, mental, emotional and social.
MA.K12.MTR.1.1:	Mathematicians who participate in effortful learning both individually and with others: • Analyze the problem in a way that makes sense given the task. • Ask questions that will help with solving the task. • Build perseverance by modifying methods as needed while solving a challenging task. • Stay engaged and maintain a positive mindset when working to solve tasks. • Help and support each other when attempting a new method or approach. **Clarifications:** Teachers who encourage students to participate actively in effortful learning both individually and with others: • Cultivate a community of growth mindset learners. • Foster perseverance in students by choosing tasks that are challenging. • Develop students' ability to analyze and problem solve.

- Recognize students' effort when solving challenging problems.

Demonstrate understanding by representing problems in multiple ways.
Mathematicians who demonstrate understanding by representing problems in multiple ways:

- Build understanding through modeling and using manipulatives.
- Represent solutions to problems in multiple ways using objects, drawings, tables, graphs and equations.
- Progress from modeling problems with objects and drawings to using algorithms and equations.
- Express connections between concepts and representations.

MA.K12.MTR.2.1:

- Choose a representation based on the given context or purpose.

Clarifications:
Teachers who encourage students to demonstrate understanding by representing problems in multiple ways:

- Help students make connections between concepts and representations.
- Provide opportunities for students to use manipulatives when investigating concepts.
- Guide students from concrete to pictorial to abstract representations as understanding progresses.
- Show students that various representations can have different purposes and can be useful in different situations.

Complete tasks with mathematical fluency.
Mathematicians who complete tasks with mathematical fluency:

- Select efficient and appropriate methods for solving problems within the given context.
- Maintain flexibility and accuracy while performing procedures and mental calculations.
- Complete tasks accurately and with confidence.
- Adapt procedures to apply them to a new context.

MA.K12.MTR.3.1:

- Use feedback to improve efficiency when performing calculations.

Clarifications:
Teachers who encourage students to complete tasks with mathematical fluency:

- Provide students with the flexibility to solve problems by selecting a procedure that allows them to solve efficiently and accurately.
- Offer multiple opportunities for students to practice efficient and generalizable methods.
- Provide opportunities for students to reflect on the method they used and determine if a more efficient method could have been used.

Engage in discussions that reflect on the mathematical thinking of self and others.
Mathematicians who engage in discussions that reflect on the mathematical thinking of self and others:

- Communicate mathematical ideas, vocabulary and methods effectively.
- Analyze the mathematical thinking of others.
- Compare the efficiency of a method to those expressed by others.
- Recognize errors and suggest how to correctly solve the task.
- Justify results by explaining methods and processes.

MA.K12.MTR.4.1:

- Construct possible arguments based on evidence.

Clarifications:
Teachers who encourage students to engage in discussions that reflect on the mathematical thinking of self and others:

- Establish a culture in which students ask questions of the teacher and their peers, and error is an opportunity for learning.
- Create opportunities for students to discuss their thinking with peers.
- Select, sequence and present student work to advance and deepen understanding of correct and increasingly efficient methods.
- Develop students' ability to justify methods and compare their responses to the responses of their peers.

Use patterns and structure to help understand and connect mathematical concepts.
Mathematicians who use patterns and structure to help understand and connect mathematical concepts:

- Focus on relevant details within a problem.
- Create plans and procedures to logically order events, steps or ideas to solve problems.
- Decompose a complex problem into manageable parts.
- Relate previously learned concepts to new concepts.
- Look for similarities among problems.

MA.K12.MTR.5.1:

- Connect solutions of problems to more complicated large-scale situations.

Clarifications:
Teachers who encourage students to use patterns and structure to help understand and connect mathematical concepts:

- Help students recognize the patterns in the world around them and connect these patterns to mathematical concepts.
- Support students to develop generalizations based on the similarities found among problems.
- Provide opportunities for students to create plans and procedures to solve problems.
- Develop students' ability to construct relationships between their current understanding and more sophisticated ways of thinking.

Assess the reasonableness of solutions.
Mathematicians who assess the reasonableness of solutions:

- Estimate to discover possible solutions.
- Use benchmark quantities to determine if a solution makes sense.
- Check calculations when solving problems.
- Verify possible solutions by explaining the methods used.

MA.K12.MTR.6.1:

- Evaluate results based on the given context.

Clarifications:
Teachers who encourage students to assess the reasonableness of solutions:

- Have students estimate or predict solutions prior to solving.
- Prompt students to continually ask, "Does this solution make sense? How do you know?"

	• Reinforce that students check their work as they progress within and after a task. • Strengthen students' ability to verify solutions through justifications.
MA.K12.MTR.7.1:	Apply mathematics to real-world contexts. Mathematicians who apply mathematics to real-world contexts: • Connect mathematical concepts to everyday experiences. • Use models and methods to understand, represent and solve problems. • Perform investigations to gather data or determine if a method is appropriate. • Redesign models and methods to improve accuracy or efficiency. **Clarifications:** Teachers who encourage students to apply mathematics to real-world contexts: • Provide opportunities for students to create models, both concrete and abstract, and perform investigations. • Challenge students to question the accuracy of their models and methods. • Support students as they validate conclusions by comparing them to the given situation. • Indicate how various concepts can be applied to other disciplines.
ELA.K12.EE.1.1:	Cite evidence to explain and justify reasoning. **Clarifications:** K-1 Students include textual evidence in their oral communication with guidance and support from adults. The evidence can consist of details from the text without naming the text. During 1st grade, students learn how to incorporate the evidence in their writing. 2-3 Students include relevant textual evidence in their written and oral communication. Students should name the text when they refer to it. In 3rd grade, students should use a combination of direct and indirect citations. 4-5 Students continue with previous skills and reference comments made by speakers and peers. Students cite texts that they've directly quoted, paraphrased, or used for information. When writing, students will use the form of citation dictated by the instructor or the style guide referenced by the instructor. 6-8 Students continue with previous skills and use a style guide to create a proper citation. 9-12 Students continue with previous skills and should be aware of existing style guides and the ways in which they differ.
ELA.K12.EE.2.1:	Read and comprehend grade-level complex texts proficiently. **Clarifications:** See Text Complexity for grade-level complexity bands and a text complexity rubric.
ELA.K12.EE.3.1:	Make inferences to support comprehension. **Clarifications:** Students will make inferences before the words infer or inference are introduced. Kindergarten students will answer questions like "Why is the girl smiling?" or make predictions about what will happen based on the title page. Students will use the terms and apply them in 2nd grade and beyond.
ELA.K12.EE.4.1:	Use appropriate collaborative techniques and active listening skills when engaging in discussions in a variety of situations. **Clarifications:** In kindergarten, students learn to listen to one another respectfully. In grades 1-2, students build upon these skills by justifying what they are thinking. For example: "I think _____ because _____." The collaborative conversations are becoming academic conversations. In grades 3-12, students engage in academic conversations discussing claims and justifying their reasoning, refining and applying skills. Students build on ideas, propel the conversation, and support claims and counterclaims with evidence.
ELA.K12.EE.5.1:	Use the accepted rules governing a specific format to create quality work. **Clarifications:** Students will incorporate skills learned into work products to produce quality work. For students to incorporate these skills appropriately, they must receive instruction. A 3rd grade student creating a poster board display must have instruction in how to effectively present information to do quality work.
ELA.K12.EE.6.1:	Use appropriate voice and tone when speaking or writing. **Clarifications:** In kindergarten and 1st grade, students learn the difference between formal and informal language. For example, the way we talk to our friends differs from the way we speak to adults. In 2nd grade and beyond, students practice appropriate social and academic language to discuss texts.
ELD.K12.ELL.SI.1:	English language learners communicate for social and instructional purposes within the school setting.

General Course Information and Notes

VERSION DESCRIPTION

Content for students enrolled in this course should be based upon each individual students IEP or 504 Plan.

GENERAL NOTES

Florida's Benchmarks for Excellent Student Thinking (B.E.S.T.) Standards

This course includes Florida's B.E.S.T. ELA Expectations (EE) and Mathematical Thinking and Reasoning Standards (MTRs) for students. Florida educators should intentionally embed these standards within the content and their instruction as applicable. For guidance on the implementation of the EEs and MTRs, please visit cpalms.org/Standards/BEST_Standards.aspx and select the appropriate B.E.S.T. Standards package.

English Language Development ELD Standards Special Notes Section:
Teachers are required to provide listening, speaking, reading and writing instruction that allows English language learners (ELL) to communicate for social and instructional purposes within the school setting. For the given level of English language proficiency and with visual, graphic, or interactive support, students will interact with grade level words, expressions, sentences and discourse to process or produce language necessary for academic success. The ELD standard should specify a relevant content area concept or topic of study chosen by curriculum developers and teachers which maximizes an ELL's need for communication and social skills. To access an ELL supporting document which delineates performance definitions and descriptors, please click on the following link: cpalms.org/uploads/docs/standards/eld/SI.pdf

QUALIFICATIONS

As well as any certification requirements listed on the course description, the following qualifications may also be acceptable for the course:

Any field when certification reflects a bachelor or higher degree.

GENERAL INFORMATION

Course Number: 1500000

Course Path: Section: Grades PreK to 12 Education Courses > **Grade Group:** Grades 6 to 8 Education Courses > **Subject:** Physical Education > **SubSubject:** Adaptive >
Abbreviated Title: M/J ADAP PE IEP/504
Course Length: Year (Y)

Course Status: Draft - Course Pending Approval

Grade Level(s): 6,7,8

M/J Physical Education Transfer (#1500220) 2022 - And Beyond

Course Standards

Name	Description
MA.K12.MTR.1.1:	Mathematicians who participate in effortful learning both individually and with others: • Analyze the problem in a way that makes sense given the task. • Ask questions that will help with solving the task. • Build perseverance by modifying methods as needed while solving a challenging task. • Stay engaged and maintain a positive mindset when working to solve tasks. • Help and support each other when attempting a new method or approach. **Clarifications:** Teachers who encourage students to participate actively in effortful learning both individually and with others: • Cultivate a community of growth mindset learners. • Foster perseverance in students by choosing tasks that are challenging. • Develop students' ability to analyze and problem solve. • Recognize students' effort when solving challenging problems.
MA.K12.MTR.2.1:	Demonstrate understanding by representing problems in multiple ways. Mathematicians who demonstrate understanding by representing problems in multiple ways: • Build understanding through modeling and using manipulatives. • Represent solutions to problems in multiple ways using objects, drawings, tables, graphs and equations. • Progress from modeling problems with objects and drawings to using algorithms and equations. • Express connections between concepts and representations. • Choose a representation based on the given context or purpose. **Clarifications:** Teachers who encourage students to demonstrate understanding by representing problems in multiple ways: • Help students make connections between concepts and representations. • Provide opportunities for students to use manipulatives when investigating concepts. • Guide students from concrete to pictorial to abstract representations as understanding progresses. • Show students that various representations can have different purposes and can be useful in different situations.
MA.K12.MTR.3.1:	Complete tasks with mathematical fluency. Mathematicians who complete tasks with mathematical fluency: • Select efficient and appropriate methods for solving problems within the given context. • Maintain flexibility and accuracy while performing procedures and mental calculations. • Complete tasks accurately and with confidence. • Adapt procedures to apply them to a new context. • Use feedback to improve efficiency when performing calculations. **Clarifications:** Teachers who encourage students to complete tasks with mathematical fluency: • Provide students with the flexibility to solve problems by selecting a procedure that allows them to solve efficiently and accurately. • Offer multiple opportunities for students to practice efficient and generalizable methods. • Provide opportunities for students to reflect on the method they used and determine if a more efficient method could have been used.
MA.K12.MTR.4.1:	Engage in discussions that reflect on the mathematical thinking of self and others. Mathematicians who engage in discussions that reflect on the mathematical thinking of self and others: • Communicate mathematical ideas, vocabulary and methods effectively. • Analyze the mathematical thinking of others. • Compare the efficiency of a method to those expressed by others. • Recognize errors and suggest how to correctly solve the task. • Justify results by explaining methods and processes. • Construct possible arguments based on evidence. **Clarifications:** Teachers who encourage students to engage in discussions that reflect on the mathematical thinking of self and others: • Establish a culture in which students ask questions of the teacher and their peers, and error is an opportunity for learning. • Create opportunities for students to discuss their thinking with peers. • Select, sequence and present student work to advance and deepen understanding of correct and increasingly efficient methods. • Develop students' ability to justify methods and compare their responses to the responses of their peers.
	Use patterns and structure to help understand and connect mathematical concepts. Mathematicians who use patterns and structure to help understand and connect mathematical concepts: • Focus on relevant details within a problem. • Create plans and procedures to logically order events, steps or ideas to solve problems. • Decompose a complex problem into manageable parts. • Relate previously learned concepts to new concepts.

MA.K12.MTR.5.1:	• Look for similarities among problems. • Connect solutions of problems to more complicated large-scale situations. **Clarifications:** Teachers who encourage students to use patterns and structure to help understand and connect mathematical concepts: • Help students recognize the patterns in the world around them and connect these patterns to mathematical concepts. • Support students to develop generalizations based on the similarities found among problems. • Provide opportunities for students to create plans and procedures to solve problems. • Develop students' ability to construct relationships between their current understanding and more sophisticated ways of thinking.
MA.K12.MTR.6.1:	Assess the reasonableness of solutions. Mathematicians who assess the reasonableness of solutions: • Estimate to discover possible solutions. • Use benchmark quantities to determine if a solution makes sense. • Check calculations when solving problems. • Verify possible solutions by explaining the methods used. • Evaluate results based on the given context. **Clarifications:** Teachers who encourage students to assess the reasonableness of solutions: • Have students estimate or predict solutions prior to solving. • Prompt students to continually ask, "Does this solution make sense? How do you know?" • Reinforce that students check their work as they progress within and after a task. • Strengthen students' ability to verify solutions through justifications.
MA.K12.MTR.7.1:	Apply mathematics to real-world contexts. Mathematicians who apply mathematics to real-world contexts: • Connect mathematical concepts to everyday experiences. • Use models and methods to understand, represent and solve problems. • Perform investigations to gather data or determine if a method is appropriate. • Redesign models and methods to improve accuracy or efficiency. **Clarifications:** Teachers who encourage students to apply mathematics to real-world contexts: • Provide opportunities for students to create models, both concrete and abstract, and perform investigations. • Challenge students to question the accuracy of their models and methods. • Support students as they validate conclusions by comparing them to the given situation. • Indicate how various concepts can be applied to other disciplines.
ELA.K12.EE.1.1:	Cite evidence to explain and justify reasoning. **Clarifications:** K-1 Students include textual evidence in their oral communication with guidance and support from adults. The evidence can consist of details from the text without naming the text. During 1st grade, students learn how to incorporate the evidence in their writing. 2-3 Students include relevant textual evidence in their written and oral communication. Students should name the text when they refer to it. In 3rd grade, students should use a combination of direct and indirect citations. 4-5 Students continue with previous skills and reference comments made by speakers and peers. Students cite texts that they've directly quoted, paraphrased, or used for information. When writing, students will use the form of citation dictated by the instructor or the style guide referenced by the instructor. 6-8 Students continue with previous skills and use a style guide to create a proper citation. 9-12 Students continue with previous skills and should be aware of existing style guides and the ways in which they differ.
ELA.K12.EE.2.1:	Read and comprehend grade-level complex texts proficiently. **Clarifications:** See Text Complexity for grade-level complexity bands and a text complexity rubric.
ELA.K12.EE.3.1:	Make inferences to support comprehension. **Clarifications:** Students will make inferences before the words infer or inference are introduced. Kindergarten students will answer questions like "Why is the girl smiling?" or make predictions about what will happen based on the title page. Students will use the terms and apply them in 2nd grade and beyond.
ELA.K12.EE.4.1:	Use appropriate collaborative techniques and active listening skills when engaging in discussions in a variety of situations. **Clarifications:** In kindergarten, students learn to listen to one another respectfully. In grades 1-2, students build upon these skills by justifying what they are thinking. For example: "I think _____ because _____." The collaborative conversations are becoming academic conversations. In grades 3-12, students engage in academic conversations discussing claims and justifying their reasoning, refining and applying skills. Students build on ideas, propel the conversation, and support claims and counterclaims with evidence.
ELA.K12.EE.5.1:	Use the accepted rules governing a specific format to create quality work. **Clarifications:** Students will incorporate skills learned into work products to produce quality work. For students to incorporate these skills appropriately, they must receive instruction. A 3rd grade student creating a poster board display must have instruction in how to effectively present information to do quality work.
	Use appropriate voice and tone when speaking or writing.

ELA.K12.EE.6.1:	**Clarifications:** In kindergarten and 1st grade, students learn the difference between formal and informal language. For example, the way we talk to our friends differs from the way we speak to adults. In 2nd grade and beyond, students practice appropriate social and academic language to discuss texts.

General Course Information and Notes

GENERAL NOTES

SUBJECT AREA TRANSFER NUMBERS

Each course transferred into a Florida public school by an out-of-state or non-public school student should be matched with a course title and number when such course provides substantially the same content. However, a few transfer courses may not be close enough in content to be matched. For those courses a subject area transfer number is provided.

Florida's Benchmarks for Excellent Student Thinking (B.E.S.T.) Standards
This course includes Florida's B.E.S.T. ELA Expectations (EE) and Mathematical Thinking and Reasoning Standards (MTRs) for students. Florida educators should intentionally embed these standards within the content and their instruction as applicable. For guidance on the implementation of the EEs and MTRs, please visit cpalms.org/Standards/BEST_Standards.aspx and select the appropriate B.E.S.T. Standards package.

GENERAL INFORMATION

Course Number: 1500220

Course Path: Section: Grades PreK to 12 Education Courses > **Grade Group:** Grades 6 to 8 Education Courses > **Subject:** Physical Education > **SubSubject:** Adaptive >
Abbreviated Title: M/J PHYS ED TRAN
Course Length: Not Applicable

Course Type: Transfer Course

Course Level: 2

Course Status: Draft - Course Pending Approval

Grade Level(s): 6,7,8

Completion of Interscholastic Sports Season 1 (#1500410) 2022 - And Beyond

Course Standards

Name	Description
MA.K12.MTR.1.1:	Mathematicians who participate in effortful learning both individually and with others: • Analyze the problem in a way that makes sense given the task. • Ask questions that will help with solving the task. • Build perseverance by modifying methods as needed while solving a challenging task. • Stay engaged and maintain a positive mindset when working to solve tasks. • Help and support each other when attempting a new method or approach. **Clarifications:** Teachers who encourage students to participate actively in effortful learning both individually and with others: • Cultivate a community of growth mindset learners. • Foster perseverance in students by choosing tasks that are challenging. • Develop students' ability to analyze and problem solve. • Recognize students' effort when solving challenging problems.
MA.K12.MTR.2.1:	Demonstrate understanding by representing problems in multiple ways. Mathematicians who demonstrate understanding by representing problems in multiple ways: • Build understanding through modeling and using manipulatives. • Represent solutions to problems in multiple ways using objects, drawings, tables, graphs and equations. • Progress from modeling problems with objects and drawings to using algorithms and equations. • Express connections between concepts and representations. • Choose a representation based on the given context or purpose. **Clarifications:** Teachers who encourage students to demonstrate understanding by representing problems in multiple ways: • Help students make connections between concepts and representations. • Provide opportunities for students to use manipulatives when investigating concepts. • Guide students from concrete to pictorial to abstract representations as understanding progresses. • Show students that various representations can have different purposes and can be useful in different situations.
MA.K12.MTR.3.1:	Complete tasks with mathematical fluency. Mathematicians who complete tasks with mathematical fluency: • Select efficient and appropriate methods for solving problems within the given context. • Maintain flexibility and accuracy while performing procedures and mental calculations. • Complete tasks accurately and with confidence. • Adapt procedures to apply them to a new context. • Use feedback to improve efficiency when performing calculations. **Clarifications:** Teachers who encourage students to complete tasks with mathematical fluency: • Provide students with the flexibility to solve problems by selecting a procedure that allows them to solve efficiently and accurately. • Offer multiple opportunities for students to practice efficient and generalizable methods. • Provide opportunities for students to reflect on the method they used and determine if a more efficient method could have been used.
MA.K12.MTR.4.1:	Engage in discussions that reflect on the mathematical thinking of self and others. Mathematicians who engage in discussions that reflect on the mathematical thinking of self and others: • Communicate mathematical ideas, vocabulary and methods effectively. • Analyze the mathematical thinking of others. • Compare the efficiency of a method to those expressed by others. • Recognize errors and suggest how to correctly solve the task. • Justify results by explaining methods and processes. • Construct possible arguments based on evidence. **Clarifications:** Teachers who encourage students to engage in discussions that reflect on the mathematical thinking of self and others: • Establish a culture in which students ask questions of the teacher and their peers, and error is an opportunity for learning. • Create opportunities for students to discuss their thinking with peers. • Select, sequence and present student work to advance and deepen understanding of correct and increasingly efficient methods. • Develop students' ability to justify methods and compare their responses to the responses of their peers.
	Use patterns and structure to help understand and connect mathematical concepts. Mathematicians who use patterns and structure to help understand and connect mathematical concepts: • Focus on relevant details within a problem.

MA.K12.MTR.5.1:	• Create plans and procedures to logically order events, steps or ideas to solve problems. • Decompose a complex problem into manageable parts. • Relate previously learned concepts to new concepts. • Look for similarities among problems. • Connect solutions of problems to more complicated large-scale situations. **Clarifications:** Teachers who encourage students to use patterns and structure to help understand and connect mathematical concepts: • Help students recognize the patterns in the world around them and connect these patterns to mathematical concepts. • Support students to develop generalizations based on the similarities found among problems. • Provide opportunities for students to create plans and procedures to solve problems. • Develop students' ability to construct relationships between their current understanding and more sophisticated ways of thinking.
MA.K12.MTR.6.1:	Assess the reasonableness of solutions. Mathematicians who assess the reasonableness of solutions: • Estimate to discover possible solutions. • Use benchmark quantities to determine if a solution makes sense. • Check calculations when solving problems. • Verify possible solutions by explaining the methods used. • Evaluate results based on the given context. **Clarifications:** Teachers who encourage students to assess the reasonableness of solutions: • Have students estimate or predict solutions prior to solving. • Prompt students to continually ask, "Does this solution make sense? How do you know?" • Reinforce that students check their work as they progress within and after a task. • Strengthen students' ability to verify solutions through justifications.
MA.K12.MTR.7.1:	Apply mathematics to real-world contexts. Mathematicians who apply mathematics to real-world contexts: • Connect mathematical concepts to everyday experiences. • Use models and methods to understand, represent and solve problems. • Perform investigations to gather data or determine if a method is appropriate. • Redesign models and methods to improve accuracy or efficiency. **Clarifications:** Teachers who encourage students to apply mathematics to real-world contexts: • Provide opportunities for students to create models, both concrete and abstract, and perform investigations. • Challenge students to question the accuracy of their models and methods. • Support students as they validate conclusions by comparing them to the given situation. • Indicate how various concepts can be applied to other disciplines.
ELA.K12.EE.1.1:	Cite evidence to explain and justify reasoning. **Clarifications:** K-1 Students include textual evidence in their oral communication with guidance and support from adults. The evidence can consist of details from the text without naming the text. During 1st grade, students learn how to incorporate the evidence in their writing. 2-3 Students include relevant textual evidence in their written and oral communication. Students should name the text when they refer to it. In 3rd grade, students should use a combination of direct and indirect citations. 4-5 Students continue with previous skills and reference comments made by speakers and peers. Students cite texts that they've directly quoted, paraphrased, or used for information. When writing, students will use the form of citation dictated by the instructor or the style guide referenced by the instructor. 6-8 Students continue with previous skills and use a style guide to create a proper citation. 9-12 Students continue with previous skills and should be aware of existing style guides and the ways in which they differ.
ELA.K12.EE.2.1:	Read and comprehend grade-level complex texts proficiently. **Clarifications:** See Text Complexity for grade-level complexity bands and a text complexity rubric.
ELA.K12.EE.3.1:	Make inferences to support comprehension. **Clarifications:** Students will make inferences before the words infer or inference are introduced. Kindergarten students will answer questions like "Why is the girl smiling?" or make predictions about what will happen based on the title page. Students will use the terms and apply them in 2nd grade and beyond.
ELA.K12.EE.4.1:	Use appropriate collaborative techniques and active listening skills when engaging in discussions in a variety of situations. **Clarifications:** In kindergarten, students learn to listen to one another respectfully. In grades 1-2, students build upon these skills by justifying what they are thinking. For example: "I think _____ because _____." The collaborative conversations are becoming academic conversations. In grades 3-12, students engage in academic conversations discussing claims and justifying their reasoning, refining and applying skills. Students build on ideas, propel the conversation, and support claims and counterclaims with evidence.
ELA.K12.EE.5.1:	Use the accepted rules governing a specific format to create quality work. **Clarifications:** Students will incorporate skills learned into work products to produce quality work. For students to incorporate these skills appropriately, they

	must receive instruction. A 3rd grade student creating a poster board display must have instruction in how to effectively present information to do quality work.
ELA.K12.EE.6.1:	Use appropriate voice and tone when speaking or writing. **Clarifications:** In kindergarten and 1st grade, students learn the difference between formal and informal language. For example, the way we talk to our friends differs from the way we speak to adults. In 2nd grade and beyond, students practice appropriate social and academic language to discuss texts.

General Course Information and Notes

GENERAL INFORMATION

Course Number: 1500410

Course Path: Section: Grades PreK to 12 Education Courses > **Grade Group:** Grades 9 to 12 and Adult Education Courses > **Subject:** Physical Education > **SubSubject:** Waivers >

Abbreviated Title: INTERSCH SSN 1 - COM

Course Length: Not Applicable

Course Type: Course Waiver

Course Status: Draft - Course Pending Approval

Grade Level(s): 9,10,11,12

Completion of Interscholastic Sports Season 2 (#1500420) 2022 - And Beyond

Course Standards

Name	Description
MA.K12.MTR.1.1:	Mathematicians who participate in effortful learning both individually and with others: • Analyze the problem in a way that makes sense given the task. • Ask questions that will help with solving the task. • Build perseverance by modifying methods as needed while solving a challenging task. • Stay engaged and maintain a positive mindset when working to solve tasks. • Help and support each other when attempting a new method or approach. **Clarifications:** Teachers who encourage students to participate actively in effortful learning both individually and with others: • Cultivate a community of growth mindset learners. • Foster perseverance in students by choosing tasks that are challenging. • Develop students' ability to analyze and problem solve. • Recognize students' effort when solving challenging problems.
MA.K12.MTR.2.1:	Demonstrate understanding by representing problems in multiple ways. Mathematicians who demonstrate understanding by representing problems in multiple ways: • Build understanding through modeling and using manipulatives. • Represent solutions to problems in multiple ways using objects, drawings, tables, graphs and equations. • Progress from modeling problems with objects and drawings to using algorithms and equations. • Express connections between concepts and representations. • Choose a representation based on the given context or purpose. **Clarifications:** Teachers who encourage students to demonstrate understanding by representing problems in multiple ways: • Help students make connections between concepts and representations. • Provide opportunities for students to use manipulatives when investigating concepts. • Guide students from concrete to pictorial to abstract representations as understanding progresses. • Show students that various representations can have different purposes and can be useful in different situations.
MA.K12.MTR.3.1:	Complete tasks with mathematical fluency. Mathematicians who complete tasks with mathematical fluency: • Select efficient and appropriate methods for solving problems within the given context. • Maintain flexibility and accuracy while performing procedures and mental calculations. • Complete tasks accurately and with confidence. • Adapt procedures to apply them to a new context. • Use feedback to improve efficiency when performing calculations. **Clarifications:** Teachers who encourage students to complete tasks with mathematical fluency: • Provide students with the flexibility to solve problems by selecting a procedure that allows them to solve efficiently and accurately. • Offer multiple opportunities for students to practice efficient and generalizable methods. • Provide opportunities for students to reflect on the method they used and determine if a more efficient method could have been used.
MA.K12.MTR.4.1:	Engage in discussions that reflect on the mathematical thinking of self and others. Mathematicians who engage in discussions that reflect on the mathematical thinking of self and others: • Communicate mathematical ideas, vocabulary and methods effectively. • Analyze the mathematical thinking of others. • Compare the efficiency of a method to those expressed by others. • Recognize errors and suggest how to correctly solve the task. • Justify results by explaining methods and processes. • Construct possible arguments based on evidence. **Clarifications:** Teachers who encourage students to engage in discussions that reflect on the mathematical thinking of self and others: • Establish a culture in which students ask questions of the teacher and their peers, and error is an opportunity for learning. • Create opportunities for students to discuss their thinking with peers. • Select, sequence and present student work to advance and deepen understanding of correct and increasingly efficient methods. • Develop students' ability to justify methods and compare their responses to the responses of their peers.
	Use patterns and structure to help understand and connect mathematical concepts. Mathematicians who use patterns and structure to help understand and connect mathematical concepts: • Focus on relevant details within a problem.

MA.K12.MTR.5.1:	• Create plans and procedures to logically order events, steps or ideas to solve problems. • Decompose a complex problem into manageable parts. • Relate previously learned concepts to new concepts. • Look for similarities among problems. • Connect solutions of problems to more complicated large-scale situations. **Clarifications:** Teachers who encourage students to use patterns and structure to help understand and connect mathematical concepts: • Help students recognize the patterns in the world around them and connect these patterns to mathematical concepts. • Support students to develop generalizations based on the similarities found among problems. • Provide opportunities for students to create plans and procedures to solve problems. • Develop students' ability to construct relationships between their current understanding and more sophisticated ways of thinking.
MA.K12.MTR.6.1:	Assess the reasonableness of solutions. Mathematicians who assess the reasonableness of solutions: • Estimate to discover possible solutions. • Use benchmark quantities to determine if a solution makes sense. • Check calculations when solving problems. • Verify possible solutions by explaining the methods used. • Evaluate results based on the given context. **Clarifications:** Teachers who encourage students to assess the reasonableness of solutions: • Have students estimate or predict solutions prior to solving. • Prompt students to continually ask, "Does this solution make sense? How do you know?" • Reinforce that students check their work as they progress within and after a task. • Strengthen students' ability to verify solutions through justifications.
MA.K12.MTR.7.1:	Apply mathematics to real-world contexts. Mathematicians who apply mathematics to real-world contexts: • Connect mathematical concepts to everyday experiences. • Use models and methods to understand, represent and solve problems. • Perform investigations to gather data or determine if a method is appropriate. • Redesign models and methods to improve accuracy or efficiency. **Clarifications:** Teachers who encourage students to apply mathematics to real-world contexts: • Provide opportunities for students to create models, both concrete and abstract, and perform investigations. • Challenge students to question the accuracy of their models and methods. • Support students as they validate conclusions by comparing them to the given situation. • Indicate how various concepts can be applied to other disciplines.
ELA.K12.EE.1.1:	Cite evidence to explain and justify reasoning. **Clarifications:** K-1 Students include textual evidence in their oral communication with guidance and support from adults. The evidence can consist of details from the text without naming the text. During 1st grade, students learn how to incorporate the evidence in their writing. 2-3 Students include relevant textual evidence in their written and oral communication. Students should name the text when they refer to it. In 3rd grade, students should use a combination of direct and indirect citations. 4-5 Students continue with previous skills and reference comments made by speakers and peers. Students cite texts that they've directly quoted, paraphrased, or used for information. When writing, students will use the form of citation dictated by the instructor or the style guide referenced by the instructor. 6-8 Students continue with previous skills and use a style guide to create a proper citation. 9-12 Students continue with previous skills and should be aware of existing style guides and the ways in which they differ.
ELA.K12.EE.2.1:	Read and comprehend grade-level complex texts proficiently. **Clarifications:** See Text Complexity for grade-level complexity bands and a text complexity rubric.
ELA.K12.EE.3.1:	Make inferences to support comprehension. **Clarifications:** Students will make inferences before the words infer or inference are introduced. Kindergarten students will answer questions like "Why is the girl smiling?" or make predictions about what will happen based on the title page. Students will use the terms and apply them in 2nd grade and beyond.
ELA.K12.EE.4.1:	Use appropriate collaborative techniques and active listening skills when engaging in discussions in a variety of situations. **Clarifications:** In kindergarten, students learn to listen to one another respectfully. In grades 1-2, students build upon these skills by justifying what they are thinking. For example: "I think _____ because _____." The collaborative conversations are becoming academic conversations. In grades 3-12, students engage in academic conversations discussing claims and justifying their reasoning, refining and applying skills. Students build on ideas, propel the conversation, and support claims and counterclaims with evidence.
ELA.K12.EE.5.1:	Use the accepted rules governing a specific format to create quality work. **Clarifications:** Students will incorporate skills learned into work products to produce quality work. For students to incorporate these skills appropriately, they

	must receive instruction. A 3rd grade student creating a poster board display must have instruction in how to effectively present information to do quality work.
ELA.K12.EE.6.1:	Use appropriate voice and tone when speaking or writing. **Clarifications:** In kindergarten and 1st grade, students learn the difference between formal and informal language. For example, the way we talk to our friends differs from the way we speak to adults. In 2nd grade and beyond, students practice appropriate social and academic language to discuss texts.

General Course Information and Notes

GENERAL INFORMATION

Course Number: 1500420

Course Path: Section: Grades PreK to 12 Education Courses > **Grade Group:** Grades 9 to 12 and Adult Education Courses > **Subject:** Physical Education > **SubSubject:** Waivers >

Abbreviated Title: INTERSCH SSN 2 - COM

Course Length: Not Applicable

Course Type: Course Waiver

Course Status: Draft - Course Pending Approval

Grade Level(s): 9,10,11,12

Marching Band PE Waiver (must be combined with Personal Fitness course) (#1500440) 2022 - And Beyond

Course Standards

Name	Description
MA.K12.MTR.1.1:	Mathematicians who participate in effortful learning both individually and with others: • Analyze the problem in a way that makes sense given the task. • Ask questions that will help with solving the task. • Build perseverance by modifying methods as needed while solving a challenging task. • Stay engaged and maintain a positive mindset when working to solve tasks. • Help and support each other when attempting a new method or approach. **Clarifications:** Teachers who encourage students to participate actively in effortful learning both individually and with others: • Cultivate a community of growth mindset learners. • Foster perseverance in students by choosing tasks that are challenging. • Develop students' ability to analyze and problem solve. • Recognize students' effort when solving challenging problems.
MA.K12.MTR.2.1:	Demonstrate understanding by representing problems in multiple ways. Mathematicians who demonstrate understanding by representing problems in multiple ways: • Build understanding through modeling and using manipulatives. • Represent solutions to problems in multiple ways using objects, drawings, tables, graphs and equations. • Progress from modeling problems with objects and drawings to using algorithms and equations. • Express connections between concepts and representations. • Choose a representation based on the given context or purpose. **Clarifications:** Teachers who encourage students to demonstrate understanding by representing problems in multiple ways: • Help students make connections between concepts and representations. • Provide opportunities for students to use manipulatives when investigating concepts. • Guide students from concrete to pictorial to abstract representations as understanding progresses. • Show students that various representations can have different purposes and can be useful in different situations.
MA.K12.MTR.3.1:	Complete tasks with mathematical fluency. Mathematicians who complete tasks with mathematical fluency: • Select efficient and appropriate methods for solving problems within the given context. • Maintain flexibility and accuracy while performing procedures and mental calculations. • Complete tasks accurately and with confidence. • Adapt procedures to apply them to a new context. • Use feedback to improve efficiency when performing calculations. **Clarifications:** Teachers who encourage students to complete tasks with mathematical fluency: • Provide students with the flexibility to solve problems by selecting a procedure that allows them to solve efficiently and accurately. • Offer multiple opportunities for students to practice efficient and generalizable methods. • Provide opportunities for students to reflect on the method they used and determine if a more efficient method could have been used.
MA.K12.MTR.4.1:	Engage in discussions that reflect on the mathematical thinking of self and others. Mathematicians who engage in discussions that reflect on the mathematical thinking of self and others: • Communicate mathematical ideas, vocabulary and methods effectively. • Analyze the mathematical thinking of others. • Compare the efficiency of a method to those expressed by others. • Recognize errors and suggest how to correctly solve the task. • Justify results by explaining methods and processes. • Construct possible arguments based on evidence. **Clarifications:** Teachers who encourage students to engage in discussions that reflect on the mathematical thinking of self and others: • Establish a culture in which students ask questions of the teacher and their peers, and error is an opportunity for learning. • Create opportunities for students to discuss their thinking with peers. • Select, sequence and present student work to advance and deepen understanding of correct and increasingly efficient methods. • Develop students' ability to justify methods and compare their responses to the responses of their peers.
	Use patterns and structure to help understand and connect mathematical concepts. Mathematicians who use patterns and structure to help understand and connect mathematical concepts: • Focus on relevant details within a problem.

MA.K12.MTR.5.1:	• Create plans and procedures to logically order events, steps or ideas to solve problems. • Decompose a complex problem into manageable parts. • Relate previously learned concepts to new concepts. • Look for similarities among problems. • Connect solutions of problems to more complicated large-scale situations. **Clarifications:** Teachers who encourage students to use patterns and structure to help understand and connect mathematical concepts: • Help students recognize the patterns in the world around them and connect these patterns to mathematical concepts. • Support students to develop generalizations based on the similarities found among problems. • Provide opportunities for students to create plans and procedures to solve problems. • Develop students' ability to construct relationships between their current understanding and more sophisticated ways of thinking.
MA.K12.MTR.6.1:	Assess the reasonableness of solutions. Mathematicians who assess the reasonableness of solutions: • Estimate to discover possible solutions. • Use benchmark quantities to determine if a solution makes sense. • Check calculations when solving problems. • Verify possible solutions by explaining the methods used. • Evaluate results based on the given context. **Clarifications:** Teachers who encourage students to assess the reasonableness of solutions: • Have students estimate or predict solutions prior to solving. • Prompt students to continually ask, "Does this solution make sense? How do you know?" • Reinforce that students check their work as they progress within and after a task. • Strengthen students' ability to verify solutions through justifications.
MA.K12.MTR.7.1:	Apply mathematics to real-world contexts. Mathematicians who apply mathematics to real-world contexts: • Connect mathematical concepts to everyday experiences. • Use models and methods to understand, represent and solve problems. • Perform investigations to gather data or determine if a method is appropriate. • Redesign models and methods to improve accuracy or efficiency. **Clarifications:** Teachers who encourage students to apply mathematics to real-world contexts: • Provide opportunities for students to create models, both concrete and abstract, and perform investigations. • Challenge students to question the accuracy of their models and methods. • Support students as they validate conclusions by comparing them to the given situation. • Indicate how various concepts can be applied to other disciplines.
ELA.K12.EE.1.1:	Cite evidence to explain and justify reasoning. **Clarifications:** K-1 Students include textual evidence in their oral communication with guidance and support from adults. The evidence can consist of details from the text without naming the text. During 1st grade, students learn how to incorporate the evidence in their writing. 2-3 Students include relevant textual evidence in their written and oral communication. Students should name the text when they refer to it. In 3rd grade, students should use a combination of direct and indirect citations. 4-5 Students continue with previous skills and reference comments made by speakers and peers. Students cite texts that they've directly quoted, paraphrased, or used for information. When writing, students will use the form of citation dictated by the instructor or the style guide referenced by the instructor. 6-8 Students continue with previous skills and use a style guide to create a proper citation. 9-12 Students continue with previous skills and should be aware of existing style guides and the ways in which they differ.
ELA.K12.EE.2.1:	Read and comprehend grade-level complex texts proficiently. **Clarifications:** See Text Complexity for grade-level complexity bands and a text complexity rubric.
ELA.K12.EE.3.1:	Make inferences to support comprehension. **Clarifications:** Students will make inferences before the words infer or inference are introduced. Kindergarten students will answer questions like "Why is the girl smiling?" or make predictions about what will happen based on the title page. Students will use the terms and apply them in 2nd grade and beyond.
ELA.K12.EE.4.1:	Use appropriate collaborative techniques and active listening skills when engaging in discussions in a variety of situations. **Clarifications:** In kindergarten, students learn to listen to one another respectfully. In grades 1-2, students build upon these skills by justifying what they are thinking. For example: "I think _____ because _____." The collaborative conversations are becoming academic conversations. In grades 3-12, students engage in academic conversations discussing claims and justifying their reasoning, refining and applying skills. Students build on ideas, propel the conversation, and support claims and counterclaims with evidence.
ELA.K12.EE.5.1:	Use the accepted rules governing a specific format to create quality work. **Clarifications:** Students will incorporate skills learned into work products to produce quality work. For students to incorporate these skills appropriately, they

	must receive instruction. A 3rd grade student creating a poster board display must have instruction in how to effectively present information to do quality work.
ELA.K12.EE.6.1:	Use appropriate voice and tone when speaking or writing. **Clarifications:** In kindergarten and 1st grade, students learn the difference between formal and informal language. For example, the way we talk to our friends differs from the way we speak to adults. In 2nd grade and beyond, students practice appropriate social and academic language to discuss texts.

General Course Information and Notes

GENERAL INFORMATION

Course Number: 1500440

Course Path: Section: Grades PreK to 12 Education Courses > **Grade Group:** Grades 9 to 12 and Adult Education Courses > **Subject:** Physical Education > **SubSubject:** Waivers >

Abbreviated Title: MCHG BAND PE WAIVER

Course Length: Not Applicable

Course Type: Course Waiver

Course Status: Draft - Course Pending Approval

Grade Level(s): 9,10,11,12

Dance Waiver (must be combined with Personal Fitness course) (#1500445) 2022 - And Beyond

Course Standards

Name	Description
MA.K12.MTR.1.1:	Mathematicians who participate in effortful learning both individually and with others: • Analyze the problem in a way that makes sense given the task. • Ask questions that will help with solving the task. • Build perseverance by modifying methods as needed while solving a challenging task. • Stay engaged and maintain a positive mindset when working to solve tasks. • Help and support each other when attempting a new method or approach. **Clarifications:** Teachers who encourage students to participate actively in effortful learning both individually and with others: • Cultivate a community of growth mindset learners. • Foster perseverance in students by choosing tasks that are challenging. • Develop students' ability to analyze and problem solve. • Recognize students' effort when solving challenging problems.
MA.K12.MTR.2.1:	Demonstrate understanding by representing problems in multiple ways. Mathematicians who demonstrate understanding by representing problems in multiple ways: • Build understanding through modeling and using manipulatives. • Represent solutions to problems in multiple ways using objects, drawings, tables, graphs and equations. • Progress from modeling problems with objects and drawings to using algorithms and equations. • Express connections between concepts and representations. • Choose a representation based on the given context or purpose. **Clarifications:** Teachers who encourage students to demonstrate understanding by representing problems in multiple ways: • Help students make connections between concepts and representations. • Provide opportunities for students to use manipulatives when investigating concepts. • Guide students from concrete to pictorial to abstract representations as understanding progresses. • Show students that various representations can have different purposes and can be useful in different situations.
MA.K12.MTR.3.1:	Complete tasks with mathematical fluency. Mathematicians who complete tasks with mathematical fluency: • Select efficient and appropriate methods for solving problems within the given context. • Maintain flexibility and accuracy while performing procedures and mental calculations. • Complete tasks accurately and with confidence. • Adapt procedures to apply them to a new context. • Use feedback to improve efficiency when performing calculations. **Clarifications:** Teachers who encourage students to complete tasks with mathematical fluency: • Provide students with the flexibility to solve problems by selecting a procedure that allows them to solve efficiently and accurately. • Offer multiple opportunities for students to practice efficient and generalizable methods. • Provide opportunities for students to reflect on the method they used and determine if a more efficient method could have been used.
MA.K12.MTR.4.1:	Engage in discussions that reflect on the mathematical thinking of self and others. Mathematicians who engage in discussions that reflect on the mathematical thinking of self and others: • Communicate mathematical ideas, vocabulary and methods effectively. • Analyze the mathematical thinking of others. • Compare the efficiency of a method to those expressed by others. • Recognize errors and suggest how to correctly solve the task. • Justify results by explaining methods and processes. • Construct possible arguments based on evidence. **Clarifications:** Teachers who encourage students to engage in discussions that reflect on the mathematical thinking of self and others: • Establish a culture in which students ask questions of the teacher and their peers, and error is an opportunity for learning. • Create opportunities for students to discuss their thinking with peers. • Select, sequence and present student work to advance and deepen understanding of correct and increasingly efficient methods. • Develop students' ability to justify methods and compare their responses to the responses of their peers.
	Use patterns and structure to help understand and connect mathematical concepts. Mathematicians who use patterns and structure to help understand and connect mathematical concepts: • Focus on relevant details within a problem.

MA.K12.MTR.5.1:	• Create plans and procedures to logically order events, steps or ideas to solve problems. • Decompose a complex problem into manageable parts. • Relate previously learned concepts to new concepts. • Look for similarities among problems. • Connect solutions of problems to more complicated large-scale situations. **Clarifications:** Teachers who encourage students to use patterns and structure to help understand and connect mathematical concepts: • Help students recognize the patterns in the world around them and connect these patterns to mathematical concepts. • Support students to develop generalizations based on the similarities found among problems. • Provide opportunities for students to create plans and procedures to solve problems. • Develop students' ability to construct relationships between their current understanding and more sophisticated ways of thinking.
MA.K12.MTR.6.1:	Assess the reasonableness of solutions. Mathematicians who assess the reasonableness of solutions: • Estimate to discover possible solutions. • Use benchmark quantities to determine if a solution makes sense. • Check calculations when solving problems. • Verify possible solutions by explaining the methods used. • Evaluate results based on the given context. **Clarifications:** Teachers who encourage students to assess the reasonableness of solutions: • Have students estimate or predict solutions prior to solving. • Prompt students to continually ask, "Does this solution make sense? How do you know?" • Reinforce that students check their work as they progress within and after a task. • Strengthen students' ability to verify solutions through justifications.
MA.K12.MTR.7.1:	Apply mathematics to real-world contexts. Mathematicians who apply mathematics to real-world contexts: • Connect mathematical concepts to everyday experiences. • Use models and methods to understand, represent and solve problems. • Perform investigations to gather data or determine if a method is appropriate. • Redesign models and methods to improve accuracy or efficiency. **Clarifications:** Teachers who encourage students to apply mathematics to real-world contexts: • Provide opportunities for students to create models, both concrete and abstract, and perform investigations. • Challenge students to question the accuracy of their models and methods. • Support students as they validate conclusions by comparing them to the given situation. • Indicate how various concepts can be applied to other disciplines.
ELA.K12.EE.1.1:	Cite evidence to explain and justify reasoning. **Clarifications:** K-1 Students include textual evidence in their oral communication with guidance and support from adults. The evidence can consist of details from the text without naming the text. During 1st grade, students learn how to incorporate the evidence in their writing. 2-3 Students include relevant textual evidence in their written and oral communication. Students should name the text when they refer to it. In 3rd grade, students should use a combination of direct and indirect citations. 4-5 Students continue with previous skills and reference comments made by speakers and peers. Students cite texts that they've directly quoted, paraphrased, or used for information. When writing, students will use the form of citation dictated by the instructor or the style guide referenced by the instructor. 6-8 Students continue with previous skills and use a style guide to create a proper citation. 9-12 Students continue with previous skills and should be aware of existing style guides and the ways in which they differ.
ELA.K12.EE.2.1:	Read and comprehend grade-level complex texts proficiently. **Clarifications:** See Text Complexity for grade-level complexity bands and a text complexity rubric.
ELA.K12.EE.3.1:	Make inferences to support comprehension. **Clarifications:** Students will make inferences before the words infer or inference are introduced. Kindergarten students will answer questions like "Why is the girl smiling?" or make predictions about what will happen based on the title page. Students will use the terms and apply them in 2nd grade and beyond.
ELA.K12.EE.4.1:	Use appropriate collaborative techniques and active listening skills when engaging in discussions in a variety of situations. **Clarifications:** In kindergarten, students learn to listen to one another respectfully. In grades 1-2, students build upon these skills by justifying what they are thinking. For example: "I think _____ because _____." The collaborative conversations are becoming academic conversations. In grades 3-12, students engage in academic conversations discussing claims and justifying their reasoning, refining and applying skills. Students build on ideas, propel the conversation, and support claims and counterclaims with evidence.
ELA.K12.EE.5.1:	Use the accepted rules governing a specific format to create quality work. **Clarifications:** Students will incorporate skills learned into work products to produce quality work. For students to incorporate these skills appropriately, they

	must receive instruction. A 3rd grade student creating a poster board display must have instruction in how to effectively present information to do quality work.
ELA.K12.EE.6.1:	Use appropriate voice and tone when speaking or writing. **Clarifications:** In kindergarten and 1st grade, students learn the difference between formal and informal language. For example, the way we talk to our friends differs from the way we speak to adults. In 2nd grade and beyond, students practice appropriate social and academic language to discuss texts.

General Course Information and Notes

GENERAL INFORMATION

Course Number: 1500445

Course Path: Section: Grades PreK to 12 Education Courses > **Grade Group:** Grades 9 to 12 and Adult Education Courses > **Subject:** Physical Education > **SubSubject:** Waivers >

Abbreviated Title: DANCE WAIVER

Course Length: Not Applicable

Course Type: Course Waiver

Course Status: Draft - Course Pending Approval

Grade Level(s): 9,10,11,12

JROTC/Physical Education Waiver - Completion of Year 1 (#1500450) 2022 - And Beyond

Course Standards

Name	Description
MA.K12.MTR.1.1:	Mathematicians who participate in effortful learning both individually and with others: • Analyze the problem in a way that makes sense given the task. • Ask questions that will help with solving the task. • Build perseverance by modifying methods as needed while solving a challenging task. • Stay engaged and maintain a positive mindset when working to solve tasks. • Help and support each other when attempting a new method or approach. **Clarifications:** Teachers who encourage students to participate actively in effortful learning both individually and with others: • Cultivate a community of growth mindset learners. • Foster perseverance in students by choosing tasks that are challenging. • Develop students' ability to analyze and problem solve. • Recognize students' effort when solving challenging problems.
MA.K12.MTR.2.1:	Demonstrate understanding by representing problems in multiple ways. Mathematicians who demonstrate understanding by representing problems in multiple ways: • Build understanding through modeling and using manipulatives. • Represent solutions to problems in multiple ways using objects, drawings, tables, graphs and equations. • Progress from modeling problems with objects and drawings to using algorithms and equations. • Express connections between concepts and representations. • Choose a representation based on the given context or purpose. **Clarifications:** Teachers who encourage students to demonstrate understanding by representing problems in multiple ways: • Help students make connections between concepts and representations. • Provide opportunities for students to use manipulatives when investigating concepts. • Guide students from concrete to pictorial to abstract representations as understanding progresses. • Show students that various representations can have different purposes and can be useful in different situations.
MA.K12.MTR.3.1:	Complete tasks with mathematical fluency. Mathematicians who complete tasks with mathematical fluency: • Select efficient and appropriate methods for solving problems within the given context. • Maintain flexibility and accuracy while performing procedures and mental calculations. • Complete tasks accurately and with confidence. • Adapt procedures to apply them to a new context. • Use feedback to improve efficiency when performing calculations. **Clarifications:** Teachers who encourage students to complete tasks with mathematical fluency: • Provide students with the flexibility to solve problems by selecting a procedure that allows them to solve efficiently and accurately. • Offer multiple opportunities for students to practice efficient and generalizable methods. • Provide opportunities for students to reflect on the method they used and determine if a more efficient method could have been used.
MA.K12.MTR.4.1:	Engage in discussions that reflect on the mathematical thinking of self and others. Mathematicians who engage in discussions that reflect on the mathematical thinking of self and others: • Communicate mathematical ideas, vocabulary and methods effectively. • Analyze the mathematical thinking of others. • Compare the efficiency of a method to those expressed by others. • Recognize errors and suggest how to correctly solve the task. • Justify results by explaining methods and processes. • Construct possible arguments based on evidence. **Clarifications:** Teachers who encourage students to engage in discussions that reflect on the mathematical thinking of self and others: • Establish a culture in which students ask questions of the teacher and their peers, and error is an opportunity for learning. • Create opportunities for students to discuss their thinking with peers. • Select, sequence and present student work to advance and deepen understanding of correct and increasingly efficient methods. • Develop students' ability to justify methods and compare their responses to the responses of their peers.
	Use patterns and structure to help understand and connect mathematical concepts. Mathematicians who use patterns and structure to help understand and connect mathematical concepts: • Focus on relevant details within a problem.

MA.K12.MTR.5.1:	• Create plans and procedures to logically order events, steps or ideas to solve problems. • Decompose a complex problem into manageable parts. • Relate previously learned concepts to new concepts. • Look for similarities among problems. • Connect solutions of problems to more complicated large-scale situations. **Clarifications:** Teachers who encourage students to use patterns and structure to help understand and connect mathematical concepts: • Help students recognize the patterns in the world around them and connect these patterns to mathematical concepts. • Support students to develop generalizations based on the similarities found among problems. • Provide opportunities for students to create plans and procedures to solve problems. • Develop students' ability to construct relationships between their current understanding and more sophisticated ways of thinking.
MA.K12.MTR.6.1:	Assess the reasonableness of solutions. Mathematicians who assess the reasonableness of solutions: • Estimate to discover possible solutions. • Use benchmark quantities to determine if a solution makes sense. • Check calculations when solving problems. • Verify possible solutions by explaining the methods used. • Evaluate results based on the given context. **Clarifications:** Teachers who encourage students to assess the reasonableness of solutions: • Have students estimate or predict solutions prior to solving. • Prompt students to continually ask, "Does this solution make sense? How do you know?" • Reinforce that students check their work as they progress within and after a task. • Strengthen students' ability to verify solutions through justifications.
MA.K12.MTR.7.1:	Apply mathematics to real-world contexts. Mathematicians who apply mathematics to real-world contexts: • Connect mathematical concepts to everyday experiences. • Use models and methods to understand, represent and solve problems. • Perform investigations to gather data or determine if a method is appropriate. • Redesign models and methods to improve accuracy or efficiency. **Clarifications:** Teachers who encourage students to apply mathematics to real-world contexts: • Provide opportunities for students to create models, both concrete and abstract, and perform investigations. • Challenge students to question the accuracy of their models and methods. • Support students as they validate conclusions by comparing them to the given situation. • Indicate how various concepts can be applied to other disciplines.
ELA.K12.EE.1.1:	Cite evidence to explain and justify reasoning. **Clarifications:** K-1 Students include textual evidence in their oral communication with guidance and support from adults. The evidence can consist of details from the text without naming the text. During 1st grade, students learn how to incorporate the evidence in their writing. 2-3 Students include relevant textual evidence in their written and oral communication. Students should name the text when they refer to it. In 3rd grade, students should use a combination of direct and indirect citations. 4-5 Students continue with previous skills and reference comments made by speakers and peers. Students cite texts that they've directly quoted, paraphrased, or used for information. When writing, students will use the form of citation dictated by the instructor or the style guide referenced by the instructor. 6-8 Students continue with previous skills and use a style guide to create a proper citation. 9-12 Students continue with previous skills and should be aware of existing style guides and the ways in which they differ.
ELA.K12.EE.2.1:	Read and comprehend grade-level complex texts proficiently. **Clarifications:** See Text Complexity for grade-level complexity bands and a text complexity rubric.
ELA.K12.EE.3.1:	Make inferences to support comprehension. **Clarifications:** Students will make inferences before the words infer or inference are introduced. Kindergarten students will answer questions like "Why is the girl smiling?" or make predictions about what will happen based on the title page. Students will use the terms and apply them in 2nd grade and beyond.
ELA.K12.EE.4.1:	Use appropriate collaborative techniques and active listening skills when engaging in discussions in a variety of situations. **Clarifications:** In kindergarten, students learn to listen to one another respectfully. In grades 1-2, students build upon these skills by justifying what they are thinking. For example: "I think _____ because _____." The collaborative conversations are becoming academic conversations. In grades 3-12, students engage in academic conversations discussing claims and justifying their reasoning, refining and applying skills. Students build on ideas, propel the conversation, and support claims and counterclaims with evidence.
ELA.K12.EE.5.1:	Use the accepted rules governing a specific format to create quality work. **Clarifications:** Students will incorporate skills learned into work products to produce quality work. For students to incorporate these skills appropriately, they

	must receive instruction. A 3rd grade student creating a poster board display must have instruction in how to effectively present information to do quality work.
ELA.K12.EE.6.1:	Use appropriate voice and tone when speaking or writing. **Clarifications:** In kindergarten and 1st grade, students learn the difference between formal and informal language. For example, the way we talk to our friends differs from the way we speak to adults. In 2nd grade and beyond, students practice appropriate social and academic language to discuss texts.

General Course Information and Notes

GENERAL INFORMATION

Course Number: 1500450

Course Path: Section: Grades PreK to 12 Education Courses > **Grade Group:** Grades 9 to 12 and Adult Education Courses > **Subject:** Physical Education > **SubSubject:** Waivers >

Abbreviated Title: JROTC/PE YR1 WAIVER

Course Length: Not Applicable

Course Type: Course Waiver

Course Status: Draft - Course Pending Approval

Grade Level(s): 9,10,11,12

JROTC/Physical Education Waiver - Completion of Year 2 (#1500460) 2022 - And Beyond

Course Standards

Name	Description
MA.K12.MTR.1.1:	Mathematicians who participate in effortful learning both individually and with others: • Analyze the problem in a way that makes sense given the task. • Ask questions that will help with solving the task. • Build perseverance by modifying methods as needed while solving a challenging task. • Stay engaged and maintain a positive mindset when working to solve tasks. • Help and support each other when attempting a new method or approach. **Clarifications:** Teachers who encourage students to participate actively in effortful learning both individually and with others: • Cultivate a community of growth mindset learners. • Foster perseverance in students by choosing tasks that are challenging. • Develop students' ability to analyze and problem solve. • Recognize students' effort when solving challenging problems.
MA.K12.MTR.2.1:	Demonstrate understanding by representing problems in multiple ways. Mathematicians who demonstrate understanding by representing problems in multiple ways: • Build understanding through modeling and using manipulatives. • Represent solutions to problems in multiple ways using objects, drawings, tables, graphs and equations. • Progress from modeling problems with objects and drawings to using algorithms and equations. • Express connections between concepts and representations. • Choose a representation based on the given context or purpose. **Clarifications:** Teachers who encourage students to demonstrate understanding by representing problems in multiple ways: • Help students make connections between concepts and representations. • Provide opportunities for students to use manipulatives when investigating concepts. • Guide students from concrete to pictorial to abstract representations as understanding progresses. • Show students that various representations can have different purposes and can be useful in different situations.
MA.K12.MTR.3.1:	Complete tasks with mathematical fluency. Mathematicians who complete tasks with mathematical fluency: • Select efficient and appropriate methods for solving problems within the given context. • Maintain flexibility and accuracy while performing procedures and mental calculations. • Complete tasks accurately and with confidence. • Adapt procedures to apply them to a new context. • Use feedback to improve efficiency when performing calculations. **Clarifications:** Teachers who encourage students to complete tasks with mathematical fluency: • Provide students with the flexibility to solve problems by selecting a procedure that allows them to solve efficiently and accurately. • Offer multiple opportunities for students to practice efficient and generalizable methods. • Provide opportunities for students to reflect on the method they used and determine if a more efficient method could have been used.
MA.K12.MTR.4.1:	Engage in discussions that reflect on the mathematical thinking of self and others. Mathematicians who engage in discussions that reflect on the mathematical thinking of self and others: • Communicate mathematical ideas, vocabulary and methods effectively. • Analyze the mathematical thinking of others. • Compare the efficiency of a method to those expressed by others. • Recognize errors and suggest how to correctly solve the task. • Justify results by explaining methods and processes. • Construct possible arguments based on evidence. **Clarifications:** Teachers who encourage students to engage in discussions that reflect on the mathematical thinking of self and others: • Establish a culture in which students ask questions of the teacher and their peers, and error is an opportunity for learning. • Create opportunities for students to discuss their thinking with peers. • Select, sequence and present student work to advance and deepen understanding of correct and increasingly efficient methods. • Develop students' ability to justify methods and compare their responses to the responses of their peers.
	Use patterns and structure to help understand and connect mathematical concepts. Mathematicians who use patterns and structure to help understand and connect mathematical concepts: • Focus on relevant details within a problem.

MA.K12.MTR.5.1:	• Create plans and procedures to logically order events, steps or ideas to solve problems. • Decompose a complex problem into manageable parts. • Relate previously learned concepts to new concepts. • Look for similarities among problems. • Connect solutions of problems to more complicated large-scale situations. **Clarifications:** Teachers who encourage students to use patterns and structure to help understand and connect mathematical concepts: • Help students recognize the patterns in the world around them and connect these patterns to mathematical concepts. • Support students to develop generalizations based on the similarities found among problems. • Provide opportunities for students to create plans and procedures to solve problems. • Develop students' ability to construct relationships between their current understanding and more sophisticated ways of thinking.
MA.K12.MTR.6.1:	Assess the reasonableness of solutions. Mathematicians who assess the reasonableness of solutions: • Estimate to discover possible solutions. • Use benchmark quantities to determine if a solution makes sense. • Check calculations when solving problems. • Verify possible solutions by explaining the methods used. • Evaluate results based on the given context. **Clarifications:** Teachers who encourage students to assess the reasonableness of solutions: • Have students estimate or predict solutions prior to solving. • Prompt students to continually ask, "Does this solution make sense? How do you know?" • Reinforce that students check their work as they progress within and after a task. • Strengthen students' ability to verify solutions through justifications.
MA.K12.MTR.7.1:	Apply mathematics to real-world contexts. Mathematicians who apply mathematics to real-world contexts: • Connect mathematical concepts to everyday experiences. • Use models and methods to understand, represent and solve problems. • Perform investigations to gather data or determine if a method is appropriate. • Redesign models and methods to improve accuracy or efficiency. **Clarifications:** Teachers who encourage students to apply mathematics to real-world contexts: • Provide opportunities for students to create models, both concrete and abstract, and perform investigations. • Challenge students to question the accuracy of their models and methods. • Support students as they validate conclusions by comparing them to the given situation. • Indicate how various concepts can be applied to other disciplines.
ELA.K12.EE.1.1:	Cite evidence to explain and justify reasoning. **Clarifications:** K-1 Students include textual evidence in their oral communication with guidance and support from adults. The evidence can consist of details from the text without naming the text. During 1st grade, students learn how to incorporate the evidence in their writing. 2-3 Students include relevant textual evidence in their written and oral communication. Students should name the text when they refer to it. In 3rd grade, students should use a combination of direct and indirect citations. 4-5 Students continue with previous skills and reference comments made by speakers and peers. Students cite texts that they've directly quoted, paraphrased, or used for information. When writing, students will use the form of citation dictated by the instructor or the style guide referenced by the instructor. 6-8 Students continue with previous skills and use a style guide to create a proper citation. 9-12 Students continue with previous skills and should be aware of existing style guides and the ways in which they differ.
ELA.K12.EE.2.1:	Read and comprehend grade-level complex texts proficiently. **Clarifications:** See Text Complexity for grade-level complexity bands and a text complexity rubric.
ELA.K12.EE.3.1:	Make inferences to support comprehension. **Clarifications:** Students will make inferences before the words infer or inference are introduced. Kindergarten students will answer questions like "Why is the girl smiling?" or make predictions about what will happen based on the title page. Students will use the terms and apply them in 2nd grade and beyond.
ELA.K12.EE.4.1:	Use appropriate collaborative techniques and active listening skills when engaging in discussions in a variety of situations. **Clarifications:** In kindergarten, students learn to listen to one another respectfully. In grades 1-2, students build upon these skills by justifying what they are thinking. For example: "I think _____ because _____." The collaborative conversations are becoming academic conversations. In grades 3-12, students engage in academic conversations discussing claims and justifying their reasoning, refining and applying skills. Students build on ideas, propel the conversation, and support claims and counterclaims with evidence.
ELA.K12.EE.5.1:	Use the accepted rules governing a specific format to create quality work. **Clarifications:** Students will incorporate skills learned into work products to produce quality work. For students to incorporate these skills appropriately, they

	must receive instruction. A 3rd grade student creating a poster board display must have instruction in how to effectively present information to do quality work.
ELA.K12.EE.6.1:	Use appropriate voice and tone when speaking or writing. **Clarifications:** In kindergarten and 1st grade, students learn the difference between formal and informal language. For example, the way we talk to our friends differs from the way we speak to adults. In 2nd grade and beyond, students practice appropriate social and academic language to discuss texts.

General Course Information and Notes

GENERAL INFORMATION

Course Number: 1500460

Course Path: Section: Grades PreK to 12 Education Courses > **Grade Group:** Grades 9 to 12 and Adult Education Courses > **Subject:** Physical Education > **SubSubject:** Waivers >

Abbreviated Title: JROTC/PE YR2 WAIVER

Course Length: Not Applicable

Course Type: Course Waiver

Course Status: Draft - Course Pending Approval

Grade Level(s): 9,10,11,12

JROTC/Physical Education Waiver-Complete JROTC Y1,Y2 & Personal Fitness (#1500470) 2022 - And Beyond

Course Standards

Name	Description
MA.K12.MTR.1.1:	Mathematicians who participate in effortful learning both individually and with others: • Analyze the problem in a way that makes sense given the task. • Ask questions that will help with solving the task. • Build perseverance by modifying methods as needed while solving a challenging task. • Stay engaged and maintain a positive mindset when working to solve tasks. • Help and support each other when attempting a new method or approach. **Clarifications:** Teachers who encourage students to participate actively in effortful learning both individually and with others: • Cultivate a community of growth mindset learners. • Foster perseverance in students by choosing tasks that are challenging. • Develop students' ability to analyze and problem solve. • Recognize students' effort when solving challenging problems.
MA.K12.MTR.2.1:	Demonstrate understanding by representing problems in multiple ways. Mathematicians who demonstrate understanding by representing problems in multiple ways: • Build understanding through modeling and using manipulatives. • Represent solutions to problems in multiple ways using objects, drawings, tables, graphs and equations. • Progress from modeling problems with objects and drawings to using algorithms and equations. • Express connections between concepts and representations. • Choose a representation based on the given context or purpose. **Clarifications:** Teachers who encourage students to demonstrate understanding by representing problems in multiple ways: • Help students make connections between concepts and representations. • Provide opportunities for students to use manipulatives when investigating concepts. • Guide students from concrete to pictorial to abstract representations as understanding progresses. • Show students that various representations can have different purposes and can be useful in different situations.
MA.K12.MTR.3.1:	Complete tasks with mathematical fluency. Mathematicians who complete tasks with mathematical fluency: • Select efficient and appropriate methods for solving problems within the given context. • Maintain flexibility and accuracy while performing procedures and mental calculations. • Complete tasks accurately and with confidence. • Adapt procedures to apply them to a new context. • Use feedback to improve efficiency when performing calculations. **Clarifications:** Teachers who encourage students to complete tasks with mathematical fluency: • Provide students with the flexibility to solve problems by selecting a procedure that allows them to solve efficiently and accurately. • Offer multiple opportunities for students to practice efficient and generalizable methods. • Provide opportunities for students to reflect on the method they used and determine if a more efficient method could have been used.
MA.K12.MTR.4.1:	Engage in discussions that reflect on the mathematical thinking of self and others. Mathematicians who engage in discussions that reflect on the mathematical thinking of self and others: • Communicate mathematical ideas, vocabulary and methods effectively. • Analyze the mathematical thinking of others. • Compare the efficiency of a method to those expressed by others. • Recognize errors and suggest how to correctly solve the task. • Justify results by explaining methods and processes. • Construct possible arguments based on evidence. **Clarifications:** Teachers who encourage students to engage in discussions that reflect on the mathematical thinking of self and others: • Establish a culture in which students ask questions of the teacher and their peers, and error is an opportunity for learning. • Create opportunities for students to discuss their thinking with peers. • Select, sequence and present student work to advance and deepen understanding of correct and increasingly efficient methods. • Develop students' ability to justify methods and compare their responses to the responses of their peers.
	Use patterns and structure to help understand and connect mathematical concepts. Mathematicians who use patterns and structure to help understand and connect mathematical concepts: • Focus on relevant details within a problem.

MA.K12.MTR.5.1:	• Create plans and procedures to logically order events, steps or ideas to solve problems. • Decompose a complex problem into manageable parts. • Relate previously learned concepts to new concepts. • Look for similarities among problems. • Connect solutions of problems to more complicated large-scale situations. **Clarifications:** Teachers who encourage students to use patterns and structure to help understand and connect mathematical concepts: • Help students recognize the patterns in the world around them and connect these patterns to mathematical concepts. • Support students to develop generalizations based on the similarities found among problems. • Provide opportunities for students to create plans and procedures to solve problems. • Develop students' ability to construct relationships between their current understanding and more sophisticated ways of thinking.
MA.K12.MTR.6.1:	Assess the reasonableness of solutions. Mathematicians who assess the reasonableness of solutions: • Estimate to discover possible solutions. • Use benchmark quantities to determine if a solution makes sense. • Check calculations when solving problems. • Verify possible solutions by explaining the methods used. • Evaluate results based on the given context. **Clarifications:** Teachers who encourage students to assess the reasonableness of solutions: • Have students estimate or predict solutions prior to solving. • Prompt students to continually ask, "Does this solution make sense? How do you know?" • Reinforce that students check their work as they progress within and after a task. • Strengthen students' ability to verify solutions through justifications.
MA.K12.MTR.7.1:	Apply mathematics to real-world contexts. Mathematicians who apply mathematics to real-world contexts: • Connect mathematical concepts to everyday experiences. • Use models and methods to understand, represent and solve problems. • Perform investigations to gather data or determine if a method is appropriate. • Redesign models and methods to improve accuracy or efficiency. **Clarifications:** Teachers who encourage students to apply mathematics to real-world contexts: • Provide opportunities for students to create models, both concrete and abstract, and perform investigations. • Challenge students to question the accuracy of their models and methods. • Support students as they validate conclusions by comparing them to the given situation. • Indicate how various concepts can be applied to other disciplines.
ELA.K12.EE.1.1:	Cite evidence to explain and justify reasoning. **Clarifications:** K-1 Students include textual evidence in their oral communication with guidance and support from adults. The evidence can consist of details from the text without naming the text. During 1st grade, students learn how to incorporate the evidence in their writing. 2-3 Students include relevant textual evidence in their written and oral communication. Students should name the text when they refer to it. In 3rd grade, students should use a combination of direct and indirect citations. 4-5 Students continue with previous skills and reference comments made by speakers and peers. Students cite texts that they've directly quoted, paraphrased, or used for information. When writing, students will use the form of citation dictated by the instructor or the style guide referenced by the instructor. 6-8 Students continue with previous skills and use a style guide to create a proper citation. 9-12 Students continue with previous skills and should be aware of existing style guides and the ways in which they differ.
ELA.K12.EE.2.1:	Read and comprehend grade-level complex texts proficiently. **Clarifications:** See Text Complexity for grade-level complexity bands and a text complexity rubric.
ELA.K12.EE.3.1:	Make inferences to support comprehension. **Clarifications:** Students will make inferences before the words infer or inference are introduced. Kindergarten students will answer questions like "Why is the girl smiling?" or make predictions about what will happen based on the title page. Students will use the terms and apply them in 2nd grade and beyond.
ELA.K12.EE.4.1:	Use appropriate collaborative techniques and active listening skills when engaging in discussions in a variety of situations. **Clarifications:** In kindergarten, students learn to listen to one another respectfully. In grades 1-2, students build upon these skills by justifying what they are thinking. For example: "I think _____ because _____." The collaborative conversations are becoming academic conversations. In grades 3-12, students engage in academic conversations discussing claims and justifying their reasoning, refining and applying skills. Students build on ideas, propel the conversation, and support claims and counterclaims with evidence.
ELA.K12.EE.5.1:	Use the accepted rules governing a specific format to create quality work. **Clarifications:** Students will incorporate skills learned into work products to produce quality work. For students to incorporate these skills appropriately, they

	must receive instruction. A 3rd grade student creating a poster board display must have instruction in how to effectively present information to do quality work.
ELA.K12.EE.6.1:	Use appropriate voice and tone when speaking or writing. **Clarifications:** In kindergarten and 1st grade, students learn the difference between formal and informal language. For example, the way we talk to our friends differs from the way we speak to adults. In 2nd grade and beyond, students practice appropriate social and academic language to discuss texts.

General Course Information and Notes

GENERAL INFORMATION

Course Number: 1500470

Course Path: Section: Grades PreK to 12 Education Courses > **Grade Group:** Grades 9 to 12 and Adult Education Courses > **Subject:** Physical Education > **SubSubject:** Waivers >

Abbreviated Title: JROTC/PE WAIVER COMP

Course Length: Not Applicable

Course Type: Course Waiver

Course Status: Draft - Course Pending Approval

Grade Level(s): 9,10,11,12

JROTC/PE/Performing Arts Waiver-HOPE & Personal Fitness/PE Elective (#1500480) 2022 - And Beyond

Course Standards

Name	Description
MA.K12.MTR.1.1:	Mathematicians who participate in effortful learning both individually and with others: • Analyze the problem in a way that makes sense given the task. • Ask questions that will help with solving the task. • Build perseverance by modifying methods as needed while solving a challenging task. • Stay engaged and maintain a positive mindset when working to solve tasks. • Help and support each other when attempting a new method or approach. **Clarifications:** Teachers who encourage students to participate actively in effortful learning both individually and with others: • Cultivate a community of growth mindset learners. • Foster perseverance in students by choosing tasks that are challenging. • Develop students' ability to analyze and problem solve. • Recognize students' effort when solving challenging problems.
MA.K12.MTR.2.1:	Demonstrate understanding by representing problems in multiple ways. Mathematicians who demonstrate understanding by representing problems in multiple ways: • Build understanding through modeling and using manipulatives. • Represent solutions to problems in multiple ways using objects, drawings, tables, graphs and equations. • Progress from modeling problems with objects and drawings to using algorithms and equations. • Express connections between concepts and representations. • Choose a representation based on the given context or purpose. **Clarifications:** Teachers who encourage students to demonstrate understanding by representing problems in multiple ways: • Help students make connections between concepts and representations. • Provide opportunities for students to use manipulatives when investigating concepts. • Guide students from concrete to pictorial to abstract representations as understanding progresses. • Show students that various representations can have different purposes and can be useful in different situations.
MA.K12.MTR.3.1:	Complete tasks with mathematical fluency. Mathematicians who complete tasks with mathematical fluency: • Select efficient and appropriate methods for solving problems within the given context. • Maintain flexibility and accuracy while performing procedures and mental calculations. • Complete tasks accurately and with confidence. • Adapt procedures to apply them to a new context. • Use feedback to improve efficiency when performing calculations. **Clarifications:** Teachers who encourage students to complete tasks with mathematical fluency: • Provide students with the flexibility to solve problems by selecting a procedure that allows them to solve efficiently and accurately. • Offer multiple opportunities for students to practice efficient and generalizable methods. • Provide opportunities for students to reflect on the method they used and determine if a more efficient method could have been used.
MA.K12.MTR.4.1:	Engage in discussions that reflect on the mathematical thinking of self and others. Mathematicians who engage in discussions that reflect on the mathematical thinking of self and others: • Communicate mathematical ideas, vocabulary and methods effectively. • Analyze the mathematical thinking of others. • Compare the efficiency of a method to those expressed by others. • Recognize errors and suggest how to correctly solve the task. • Justify results by explaining methods and processes. • Construct possible arguments based on evidence. **Clarifications:** Teachers who encourage students to engage in discussions that reflect on the mathematical thinking of self and others: • Establish a culture in which students ask questions of the teacher and their peers, and error is an opportunity for learning. • Create opportunities for students to discuss their thinking with peers. • Select, sequence and present student work to advance and deepen understanding of correct and increasingly efficient methods. • Develop students' ability to justify methods and compare their responses to the responses of their peers.
	Use patterns and structure to help understand and connect mathematical concepts. Mathematicians who use patterns and structure to help understand and connect mathematical concepts: • Focus on relevant details within a problem.

MA.K12.MTR.5.1:	• Create plans and procedures to logically order events, steps or ideas to solve problems. • Decompose a complex problem into manageable parts. • Relate previously learned concepts to new concepts. • Look for similarities among problems. • Connect solutions of problems to more complicated large-scale situations. **Clarifications:** Teachers who encourage students to use patterns and structure to help understand and connect mathematical concepts: • Help students recognize the patterns in the world around them and connect these patterns to mathematical concepts. • Support students to develop generalizations based on the similarities found among problems. • Provide opportunities for students to create plans and procedures to solve problems. • Develop students' ability to construct relationships between their current understanding and more sophisticated ways of thinking.
MA.K12.MTR.6.1:	Assess the reasonableness of solutions. Mathematicians who assess the reasonableness of solutions: • Estimate to discover possible solutions. • Use benchmark quantities to determine if a solution makes sense. • Check calculations when solving problems. • Verify possible solutions by explaining the methods used. • Evaluate results based on the given context. **Clarifications:** Teachers who encourage students to assess the reasonableness of solutions: • Have students estimate or predict solutions prior to solving. • Prompt students to continually ask, "Does this solution make sense? How do you know?" • Reinforce that students check their work as they progress within and after a task. • Strengthen students' ability to verify solutions through justifications.
MA.K12.MTR.7.1:	Apply mathematics to real-world contexts. Mathematicians who apply mathematics to real-world contexts: • Connect mathematical concepts to everyday experiences. • Use models and methods to understand, represent and solve problems. • Perform investigations to gather data or determine if a method is appropriate. • Redesign models and methods to improve accuracy or efficiency. **Clarifications:** Teachers who encourage students to apply mathematics to real-world contexts: • Provide opportunities for students to create models, both concrete and abstract, and perform investigations. • Challenge students to question the accuracy of their models and methods. • Support students as they validate conclusions by comparing them to the given situation. • Indicate how various concepts can be applied to other disciplines.
ELA.K12.EE.1.1:	Cite evidence to explain and justify reasoning. **Clarifications:** K-1 Students include textual evidence in their oral communication with guidance and support from adults. The evidence can consist of details from the text without naming the text. During 1st grade, students learn how to incorporate the evidence in their writing. 2-3 Students include relevant textual evidence in their written and oral communication. Students should name the text when they refer to it. In 3rd grade, students should use a combination of direct and indirect citations. 4-5 Students continue with previous skills and reference comments made by speakers and peers. Students cite texts that they've directly quoted, paraphrased, or used for information. When writing, students will use the form of citation dictated by the instructor or the style guide referenced by the instructor. 6-8 Students continue with previous skills and use a style guide to create a proper citation. 9-12 Students continue with previous skills and should be aware of existing style guides and the ways in which they differ.
ELA.K12.EE.2.1:	Read and comprehend grade-level complex texts proficiently. **Clarifications:** See Text Complexity for grade-level complexity bands and a text complexity rubric.
ELA.K12.EE.3.1:	Make inferences to support comprehension. **Clarifications:** Students will make inferences before the words infer or inference are introduced. Kindergarten students will answer questions like "Why is the girl smiling?" or make predictions about what will happen based on the title page. Students will use the terms and apply them in 2nd grade and beyond.
ELA.K12.EE.4.1:	Use appropriate collaborative techniques and active listening skills when engaging in discussions in a variety of situations. **Clarifications:** In kindergarten, students learn to listen to one another respectfully. In grades 1-2, students build upon these skills by justifying what they are thinking. For example: "I think _____ because _____." The collaborative conversations are becoming academic conversations. In grades 3-12, students engage in academic conversations discussing claims and justifying their reasoning, refining and applying skills. Students build on ideas, propel the conversation, and support claims and counterclaims with evidence.
ELA.K12.EE.5.1:	Use the accepted rules governing a specific format to create quality work. **Clarifications:** Students will incorporate skills learned into work products to produce quality work. For students to incorporate these skills appropriately, they

	must receive instruction. A 3rd grade student creating a poster board display must have instruction in how to effectively present information to do quality work.
ELA.K12.EE.6.1:	Use appropriate voice and tone when speaking or writing. **Clarifications:** In kindergarten and 1st grade, students learn the difference between formal and informal language. For example, the way we talk to our friends differs from the way we speak to adults. In 2nd grade and beyond, students practice appropriate social and academic language to discuss texts.

General Course Information and Notes

GENERAL INFORMATION

Course Number: 1500480

Course Path: Section: Grades PreK to 12 Education Courses > **Grade Group:** Grades 9 to 12 and Adult Education Courses > **Subject:** Physical Education > **SubSubject:** Waivers >

Abbreviated Title: JROTC/PE/PF WAIVER

Course Length: Not Applicable

Course Type: Course Waiver

Course Status: Draft - Course Pending Approval

Grade Level(s): 9,10,11,12

Physical Education Transfer (#1500990) 2022 - And Beyond

Course Standards

Name	Description
MA.K12.MTR.1.1:	Mathematicians who participate in effortful learning both individually and with others: • Analyze the problem in a way that makes sense given the task. • Ask questions that will help with solving the task. • Build perseverance by modifying methods as needed while solving a challenging task. • Stay engaged and maintain a positive mindset when working to solve tasks. • Help and support each other when attempting a new method or approach. **Clarifications:** Teachers who encourage students to participate actively in effortful learning both individually and with others: • Cultivate a community of growth mindset learners. • Foster perseverance in students by choosing tasks that are challenging. • Develop students' ability to analyze and problem solve. • Recognize students' effort when solving challenging problems.
MA.K12.MTR.2.1:	Demonstrate understanding by representing problems in multiple ways. Mathematicians who demonstrate understanding by representing problems in multiple ways: • Build understanding through modeling and using manipulatives. • Represent solutions to problems in multiple ways using objects, drawings, tables, graphs and equations. • Progress from modeling problems with objects and drawings to using algorithms and equations. • Express connections between concepts and representations. • Choose a representation based on the given context or purpose. **Clarifications:** Teachers who encourage students to demonstrate understanding by representing problems in multiple ways: • Help students make connections between concepts and representations. • Provide opportunities for students to use manipulatives when investigating concepts. • Guide students from concrete to pictorial to abstract representations as understanding progresses. • Show students that various representations can have different purposes and can be useful in different situations.
MA.K12.MTR.3.1:	Complete tasks with mathematical fluency. Mathematicians who complete tasks with mathematical fluency: • Select efficient and appropriate methods for solving problems within the given context. • Maintain flexibility and accuracy while performing procedures and mental calculations. • Complete tasks accurately and with confidence. • Adapt procedures to apply them to a new context. • Use feedback to improve efficiency when performing calculations. **Clarifications:** Teachers who encourage students to complete tasks with mathematical fluency: • Provide students with the flexibility to solve problems by selecting a procedure that allows them to solve efficiently and accurately. • Offer multiple opportunities for students to practice efficient and generalizable methods. • Provide opportunities for students to reflect on the method they used and determine if a more efficient method could have been used.
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	Use patterns and structure to help understand and connect mathematical concepts. Mathematicians who use patterns and structure to help understand and connect mathematical concepts: • Focus on relevant details within a problem. • Create plans and procedures to logically order events, steps or ideas to solve problems. • Decompose a complex problem into manageable parts. • Relate previously learned concepts to new concepts.

MA.K12.MTR.5.1:	• Look for similarities among problems. • Connect solutions of problems to more complicated large-scale situations. **Clarifications:** Teachers who encourage students to use patterns and structure to help understand and connect mathematical concepts: • Help students recognize the patterns in the world around them and connect these patterns to mathematical concepts. • Support students to develop generalizations based on the similarities found among problems. • Provide opportunities for students to create plans and procedures to solve problems. • Develop students' ability to construct relationships between their current understanding and more sophisticated ways of thinking.
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MA.K12.MTR.7.1:	Apply mathematics to real-world contexts. Mathematicians who apply mathematics to real-world contexts: • Connect mathematical concepts to everyday experiences. • Use models and methods to understand, represent and solve problems. • Perform investigations to gather data or determine if a method is appropriate. • Redesign models and methods to improve accuracy or efficiency. **Clarifications:** Teachers who encourage students to apply mathematics to real-world contexts: • Provide opportunities for students to create models, both concrete and abstract, and perform investigations. • Challenge students to question the accuracy of their models and methods. • Support students as they validate conclusions by comparing them to the given situation. • Indicate how various concepts can be applied to other disciplines.
ELA.K12.EE.1.1:	Cite evidence to explain and justify reasoning. **Clarifications:** K-1 Students include textual evidence in their oral communication with guidance and support from adults. The evidence can consist of details from the text without naming the text. During 1st grade, students learn how to incorporate the evidence in their writing. 2-3 Students include relevant textual evidence in their written and oral communication. Students should name the text when they refer to it. In 3rd grade, students should use a combination of direct and indirect citations. 4-5 Students continue with previous skills and reference comments made by speakers and peers. Students cite texts that they've directly quoted, paraphrased, or used for information. When writing, students will use the form of citation dictated by the instructor or the style guide referenced by the instructor. 6-8 Students continue with previous skills and use a style guide to create a proper citation. 9-12 Students continue with previous skills and should be aware of existing style guides and the ways in which they differ.
ELA.K12.EE.2.1:	Read and comprehend grade-level complex texts proficiently. **Clarifications:** See Text Complexity for grade-level complexity bands and a text complexity rubric.
ELA.K12.EE.3.1:	Make inferences to support comprehension. **Clarifications:** Students will make inferences before the words infer or inference are introduced. Kindergarten students will answer questions like "Why is the girl smiling?" or make predictions about what will happen based on the title page. Students will use the terms and apply them in 2nd grade and beyond.
ELA.K12.EE.4.1:	Use appropriate collaborative techniques and active listening skills when engaging in discussions in a variety of situations. **Clarifications:** In kindergarten, students learn to listen to one another respectfully. In grades 1-2, students build upon these skills by justifying what they are thinking. For example: "I think _____ because _____." The collaborative conversations are becoming academic conversations. In grades 3-12, students engage in academic conversations discussing claims and justifying their reasoning, refining and applying skills. Students build on ideas, propel the conversation, and support claims and counterclaims with evidence.
ELA.K12.EE.5.1:	Use the accepted rules governing a specific format to create quality work. **Clarifications:** Students will incorporate skills learned into work products to produce quality work. For students to incorporate these skills appropriately, they must receive instruction. A 3rd grade student creating a poster board display must have instruction in how to effectively present information to do quality work.
	Use appropriate voice and tone when speaking or writing.

ELA.K12.EE.6.1:	**Clarifications:** In kindergarten and 1st grade, students learn the difference between formal and informal language. For example, the way we talk to our friends differs from the way we speak to adults. In 2nd grade and beyond, students practice appropriate social and academic language to discuss texts.

General Course Information and Notes

VERSION DESCRIPTION

SUBJECT AREA TRANSFER NUMBERS

Each course transferred into a Florida public school by an out-of-state or non-public school student should be matched with a course title and number when such course provides substantially the same content. However, a few transfer courses may not be close enough in content to be matched. For those courses a subject area transfer number is provided.

GENERAL INFORMATION

Course Number: 1500990

Course Path: Section: Grades PreK to 12 Education Courses > **Grade Group:** Grades 9 to 12 and Adult Education Courses > **Subject:** Physical Education > **SubSubject:** Waivers >
Abbreviated Title: PE TRAN
Course Length: Not Applicable

Course Type: Transfer Course
Course Status: Draft - Course Pending Approval
Grade Level(s): 9,10,11,12

Personal Fitness (#1501300) 2022 - And Beyond

Course Standards

Name	Description
PE.912.C.2.15:	Calculate individual target heart-rate zone and analyze how to adjust intensity level to stay within the desired range.
PE.912.C.2.16:	Explain the methods of monitoring levels of intensity during aerobic activity. **Clarifications:** Some examples are a talk test, rate of perceived exertion and checking one's heart rate/pulse.
PE.912.C.2.17:	Assess physiological effects of exercise during and after physical activity. **Clarifications:** Some examples are breathing, resting heart rate and blood pressure.
PE.912.C.2.18:	Differentiate between fact and fallacy as it relates to consumer physical fitness products and programs. **Clarifications:** Some examples are weight-loss pills, food labels and exercise equipment.
PE.912.C.2.22:	Explain the skill-related components of fitness and how they enhance performance levels. **Clarifications:** The skill-related components of fitness are speed, coordination, balance, power, agility and reaction time.
PE.912.C.2.23:	Apply appropriate technology and analyze data to evaluate, monitor and/or improve performance.
PE.912.L.3.1:	Participate in a variety of physical activities to meet the recommended number of minutes of moderate to vigorous physical activity beyond physical education on five or more days of the week.
PE.912.L.3.2:	Participate in a variety of activities that promote the health-related components of fitness. **Clarifications:** The health-related components of fitness are cardiorespiratory endurance, muscular strength, muscular endurance, flexibility and body composition.
PE.912.L.3.3:	Identify a variety of activities that promote effective stress management.
PE.912.L.3.6:	Identify risks and safety factors that may affect physical activity throughout life.
PE.912.L.4.1:	Design a personal fitness program. **Clarifications:** Some examples of things to consider when designing a personal fitness program are timelines and current fitness level.
PE.912.L.4.2:	Identify ways to self-assess and modify a personal fitness program.
PE.912.L.4.3:	Identify strategies for setting goals when developing a personal fitness program.
PE.912.L.4.4:	Use available technology to assess, design and evaluate a personal fitness program.
PE.912.L.4.5:	Apply the principles of training to personal fitness goals. **Clarifications:** Some examples of training principles are overload, specificity and progression.
PE.912.L.4.6:	Identify health-related problems associated with low levels of cardiorespiratory endurance, muscular strength and endurance, flexibility and body composition.
PE.912.L.4.7:	Evaluate how to make changes in an individual wellness plan as lifestyle changes occur.
PE.912.M.1.5:	Apply strategies for self improvement based on individual strengths and needs.
PE.912.M.1.12:	Select and perform complex movements using a variety of equipment which lead to improved or maintained muscular strength and endurance. **Clarifications:** An example is performing plyometrics.
PE.912.M.1.13:	Perform a student-designed cardiorespiratory enhancing workout.
PE.912.M.1.14:	Utilize technology to assess, enhance and maintain health and skill-related fitness levels. **Clarifications:** Some examples of technology are Excel spreadsheets or web based programs to chart or log activities, heart rate monitors, videotapes or digital cameras.
PE.912.M.1.15:	Select and apply sport/activity specific warm-up and cool-down techniques.
PE.912.M.1.19:	Use correct body alignment, strength, flexibility and coordination in the performance of technical movements.
PE.912.M.1.34:	Demonstrate use of the mechanical principles as they apply to specific course activities. **Clarifications:** Some examples are balance, force and leverage.
PE.912.M.1.35:	Select proper equipment and apply all appropriate safety procedures necessary for participation.
PE.912.R.5.2:	Develop strategies for including persons of diverse backgrounds and abilities while participating in a variety of physical activities.
PE.912.R.5.3:	Demonstrate sportsmanship during game situations. **Clarifications:** Some examples are controlling emotions, resolving conflicts, respecting opponents and officials, and accepting both victory and defeat.
PE.912.R.5.5:	Demonstrate appropriate etiquette, care of equipment, respect for facilities and safe behaviors while participating in a variety of physical activities.
PE.912.R.6.1:	Discuss opportunities for participation in a variety of physical activities outside of the school setting that contribute to personal enjoyment and the attainment or maintenance of a healthy lifestyle.

PE.912.R.6.2:	Analyze physical activities from which benefits can be derived. **Clarifications:** Some examples of potential benefits are physical, mental, emotional and social.
PE.912.R.6.3:	Analyze the roles of games, sports and/or physical activities in other cultures.
HE.912.B.6.4:	Formulate an effective long-term personal health plan. **Clarifications:** Stress reduction, weight management, healthier eating habits, improved physical fitness, and individual responsibilities for protecting health.
HE.912.C.1.1:	Predict how healthy behaviors can affect health status. **Clarifications:** Making positive choices/avoiding risky behaviors: healthy food, substance abuse, and healthy relationship skills; regular medical and dental screenings; regular physical activity, and workplace safety.
HE.912.C.1.3:	Evaluate how environment and personal health are interrelated. **Clarifications:** Food options within a community; prenatal-care services; availability of recreational facilities; air quality; weather-safety awareness; and weather, air, and water conditions.
HE.912.C.1.4:	Propose strategies to reduce or prevent injuries and health problems. **Clarifications:** Mandatory passenger-restraint/helmet laws, refusal skills, mandatory immunizations, healthy relationship skills, and improved inspection of food sources.
HE.912.C.2.2:	Compare how peers influence healthy and unhealthy behaviors. **Clarifications:** Binge drinking and social groups, sexual coercion [pressure, force, or manipulation] by a dating partner, students' recommendations for school vending machines, healthy lifestyle, review trends in current and emerging diseases, and use of helmets and seatbelts.
HE.912.C.2.5:	Evaluate the effect of media on personal and family health. **Clarifications:** Compares brand-name/store-brand items in home, analyzes television viewing habits, identifies effective PSAs, consumer skills, advertisements of health-related community resources, participation in risky behaviors, and deconstructs media to identify promotion of unhealthy stereotypes, and normalization of violence.
HE.912.P.7.1:	Analyze the role of individual responsibility in enhancing health. **Clarifications:** Food choices, media messages, future impact of lifestyle choices, individual responsibility for health protection, and stress management.
HE.912.P.7.2:	Evaluate healthy practices and behaviors that will maintain or improve health and reduce health risks. **Clarifications:** Lifestyle choices: drug use/abuse, healthy diet, controlling modes of transmission of infectious agents, riding with impaired drivers, seeking mental-health services when needed, sexual behavior, and engaging in healthy relationships.
MA.K12.MTR.1.1:	Mathematicians who participate in effortful learning both individually and with others: • Analyze the problem in a way that makes sense given the task. • Ask questions that will help with solving the task. • Build perseverance by modifying methods as needed while solving a challenging task. • Stay engaged and maintain a positive mindset when working to solve tasks. • Help and support each other when attempting a new method or approach. **Clarifications:** Teachers who encourage students to participate actively in effortful learning both individually and with others: • Cultivate a community of growth mindset learners. • Foster perseverance in students by choosing tasks that are challenging. • Develop students' ability to analyze and problem solve. • Recognize students' effort when solving challenging problems.
MA.K12.MTR.2.1:	Demonstrate understanding by representing problems in multiple ways. Mathematicians who demonstrate understanding by representing problems in multiple ways: • Build understanding through modeling and using manipulatives. • Represent solutions to problems in multiple ways using objects, drawings, tables, graphs and equations. • Progress from modeling problems with objects and drawings to using algorithms and equations. • Express connections between concepts and representations. • Choose a representation based on the given context or purpose. **Clarifications:** Teachers who encourage students to demonstrate understanding by representing problems in multiple ways: • Help students make connections between concepts and representations. • Provide opportunities for students to use manipulatives when investigating concepts. • Guide students from concrete to pictorial to abstract representations as understanding progresses. • Show students that various representations can have different purposes and can be useful in different situations.
	Complete tasks with mathematical fluency. Mathematicians who complete tasks with mathematical fluency: • Select efficient and appropriate methods for solving problems within the given context. • Maintain flexibility and accuracy while performing procedures and mental calculations. • Complete tasks accurately and with confidence.

MA.K12.MTR.3.1:	• Adapt procedures to apply them to a new context. • Use feedback to improve efficiency when performing calculations. **Clarifications:** Teachers who encourage students to complete tasks with mathematical fluency: • Provide students with the flexibility to solve problems by selecting a procedure that allows them to solve efficiently and accurately. • Offer multiple opportunities for students to practice efficient and generalizable methods. • Provide opportunities for students to reflect on the method they used and determine if a more efficient method could have been used.
MA.K12.MTR.4.1:	Engage in discussions that reflect on the mathematical thinking of self and others. Mathematicians who engage in discussions that reflect on the mathematical thinking of self and others: • Communicate mathematical ideas, vocabulary and methods effectively. • Analyze the mathematical thinking of others. • Compare the efficiency of a method to those expressed by others. • Recognize errors and suggest how to correctly solve the task. • Justify results by explaining methods and processes. • Construct possible arguments based on evidence. **Clarifications:** Teachers who encourage students to engage in discussions that reflect on the mathematical thinking of self and others: • Establish a culture in which students ask questions of the teacher and their peers, and error is an opportunity for learning. • Create opportunities for students to discuss their thinking with peers. • Select, sequence and present student work to advance and deepen understanding of correct and increasingly efficient methods. • Develop students' ability to justify methods and compare their responses to the responses of their peers.
MA.K12.MTR.5.1:	Use patterns and structure to help understand and connect mathematical concepts. Mathematicians who use patterns and structure to help understand and connect mathematical concepts: • Focus on relevant details within a problem. • Create plans and procedures to logically order events, steps or ideas to solve problems. • Decompose a complex problem into manageable parts. • Relate previously learned concepts to new concepts. • Look for similarities among problems. • Connect solutions of problems to more complicated large-scale situations. **Clarifications:** Teachers who encourage students to use patterns and structure to help understand and connect mathematical concepts: • Help students recognize the patterns in the world around them and connect these patterns to mathematical concepts. • Support students to develop generalizations based on the similarities found among problems. • Provide opportunities for students to create plans and procedures to solve problems. • Develop students' ability to construct relationships between their current understanding and more sophisticated ways of thinking.
MA.K12.MTR.6.1:	Assess the reasonableness of solutions. Mathematicians who assess the reasonableness of solutions: • Estimate to discover possible solutions. • Use benchmark quantities to determine if a solution makes sense. • Check calculations when solving problems. • Verify possible solutions by explaining the methods used. • Evaluate results based on the given context. **Clarifications:** Teachers who encourage students to assess the reasonableness of solutions: • Have students estimate or predict solutions prior to solving. • Prompt students to continually ask, "Does this solution make sense? How do you know?" • Reinforce that students check their work as they progress within and after a task. • Strengthen students' ability to verify solutions through justifications.
MA.K12.MTR.7.1:	Apply mathematics to real-world contexts. Mathematicians who apply mathematics to real-world contexts: • Connect mathematical concepts to everyday experiences. • Use models and methods to understand, represent and solve problems. • Perform investigations to gather data or determine if a method is appropriate. • Redesign models and methods to improve accuracy or efficiency. **Clarifications:** Teachers who encourage students to apply mathematics to real-world contexts: • Provide opportunities for students to create models, both concrete and abstract, and perform investigations. • Challenge students to question the accuracy of their models and methods. • Support students as they validate conclusions by comparing them to the given situation. • Indicate how various concepts can be applied to other disciplines.
ELA.K12.EE.1.1:	Cite evidence to explain and justify reasoning. **Clarifications:** K-1 Students include textual evidence in their oral communication with guidance and support from adults. The evidence can consist of details from the text without naming the text. During 1st grade, students learn how to incorporate the evidence in their writing. 2-3 Students include relevant textual evidence in their written and oral communication. Students should name the text when they refer to it. In 3rd grade, students should use a combination of direct and indirect citations. 4-5 Students continue with previous skills and reference comments made by speakers and peers. Students cite texts that they've directly

	quoted, paraphrased, or used for information. When writing, students will use the form of citation dictated by the instructor or the style guide referenced by the instructor. 6-8 Students continue with previous skills and use a style guide to create a proper citation. 9-12 Students continue with previous skills and should be aware of existing style guides and the ways in which they differ.
ELA.K12.EE.2.1:	Read and comprehend grade-level complex texts proficiently. **Clarifications:** See Text Complexity for grade-level complexity bands and a text complexity rubric.
ELA.K12.EE.3.1:	Make inferences to support comprehension. **Clarifications:** Students will make inferences before the words infer or inference are introduced. Kindergarten students will answer questions like "Why is the girl smiling?" or make predictions about what will happen based on the title page. Students will use the terms and apply them in 2nd grade and beyond.
ELA.K12.EE.4.1:	Use appropriate collaborative techniques and active listening skills when engaging in discussions in a variety of situations. **Clarifications:** In kindergarten, students learn to listen to one another respectfully. In grades 1-2, students build upon these skills by justifying what they are thinking. For example: "I think _____ because _____." The collaborative conversations are becoming academic conversations. In grades 3-12, students engage in academic conversations discussing claims and justifying their reasoning, refining and applying skills. Students build on ideas, propel the conversation, and support claims and counterclaims with evidence.
ELA.K12.EE.5.1:	Use the accepted rules governing a specific format to create quality work. **Clarifications:** Students will incorporate skills learned into work products to produce quality work. For students to incorporate these skills appropriately, they must receive instruction. A 3rd grade student creating a poster board display must have instruction in how to effectively present information to do quality work.
ELA.K12.EE.6.1:	Use appropriate voice and tone when speaking or writing. **Clarifications:** In kindergarten and 1st grade, students learn the difference between formal and informal language. For example, the way we talk to our friends differs from the way we speak to adults. In 2nd grade and beyond, students practice appropriate social and academic language to discuss texts.
ELD.K12.ELL.SI.1:	English language learners communicate for social and instructional purposes within the school setting.

General Course Information and Notes

VERSION DESCRIPTION

The purpose of this course is to provide students with the knowledge, skills, and values they need to become healthy and physically active for a lifetime. This course addresses both the health and skill-related components of physical fitness which are critical for students' success.

GENERAL NOTES

Florida's Benchmarks for Excellent Student Thinking (B.E.S.T.) Standards
This course includes Florida's B.E.S.T. ELA Expectations (EE) and Mathematical Thinking and Reasoning Standards (MTRs) for students. Florida educators should intentionally embed these standards within the content and their instruction as applicable. For guidance on the implementation of the EEs and MTRs, please visit cpalms.org/Standards/BEST_Standards.aspx and select the appropriate B.E.S.T. Standards package.

English Language Development ELD Standards Special Notes Section:
Teachers are required to provide listening, speaking, reading and writing instruction that allows English language learners (ELL) to communicate for social and instructional purposes within the school setting. For the given level of English language proficiency and with visual, graphic, or interactive support, students will interact with grade level words, expressions, sentences and discourse to process or produce language necessary for academic success. The ELD standard should specify a relevant content area concept or topic of study chosen by curriculum developers and teachers which maximizes an ELL's need for communication and social skills. To access an ELL supporting document which delineates performance definitions and descriptors, please click on the following link: cpalms.org/uploads/docs/standards/eld/SI.pdf

GENERAL INFORMATION

Course Number: 1501300

Course Path: Section: Grades PreK to 12 Education Courses > **Grade Group:** Grades 9 to 12 and Adult Education Courses > **Subject:** Physical Education > **SubSubject:** Fitness >
Abbreviated Title: PERS FIT

Number of Credits: Half credit (.5)

Course Length: Semester (S)

Course Type: Core Academic Course

Course Level: 2

Course Status: Draft - Course Pending Approval

Grade Level(s): 9,10,11,12

Graduation Requirement: Physical Education

Educator Certifications

Physical Education (Grades 6-12)
Physical Education (Elementary and Secondary Grades K-12)

Fitness Lifestyle Design (#1501310) 2022 - And Beyond

Course Standards

Name	Description
PE.912.C.2.7:	Evaluate the effectiveness of specific warm-up and cool-down activities.
PE.912.C.2.10:	Analyze long-term benefits of regularly participating in physical activity.
PE.912.C.2.13:	Document food intake, calories consumed and energy expended through physical activity and analyze the results.
PE.912.C.2.23:	Apply appropriate technology and analyze data to evaluate, monitor and/or improve performance.
PE.912.C.2.24:	Analyze the mechanical principles as they apply to specific course activities. **Clarifications:** Some examples are balance, force and leverage.
PE.912.C.2.25:	Analyze and evaluate the risks, safety procedures, rules and equipment associated with specific course activities.
PE.912.C.2.26:	Evaluate skill patterns of self and/or partner by detecting and correcting mechanical errors.
PE.912.C.2.27:	Compare and contrast how movement skills from one physical activity can be transferred and used in other physical activities. **Clarifications:** Some examples are volleyball and tennis serve, surfing and skate boarding.
PE.912.L.3.1:	Participate in a variety of physical activities to meet the recommended number of minutes of moderate to vigorous physical activity beyond physical education on five or more days of the week.
PE.912.L.3.3:	Identify a variety of activities that promote effective stress management.
PE.912.L.3.4:	Identify the in-school opportunities for participation in a variety of physical activities.
PE.912.L.3.5:	Identify the community opportunities for participation in a variety of physical activities.
PE.912.L.3.6:	Identify risks and safety factors that may affect physical activity throughout life.
PE.912.L.4.7:	Evaluate how to make changes in an individual wellness plan as lifestyle changes occur.
PE.912.M.1.5:	Apply strategies for self improvement based on individual strengths and needs.
PE.912.M.1.13:	Perform a student-designed cardiorespiratory enhancing workout.
PE.912.M.1.14:	Utilize technology to assess, enhance and maintain health and skill-related fitness levels. **Clarifications:** Some examples of technology are Excel spreadsheets or web based programs to chart or log activities, heart rate monitors, videotapes or digital cameras.
PE.912.M.1.15:	Select and apply sport/activity specific warm-up and cool-down techniques.
PE.912.M.1.16:	Apply the principles of training and conditioning to accommodate individual needs and strengths. **Clarifications:** Some examples of training principles are overload, specificity and progression.
PE.912.M.1.34:	Demonstrate use of the mechanical principles as they apply to specific course activities. **Clarifications:** Some examples are balance, force and leverage.
PE.912.M.1.35:	Select proper equipment and apply all appropriate safety procedures necessary for participation.
PE.912.R.5.2:	Develop strategies for including persons of diverse backgrounds and abilities while participating in a variety of physical activities.
PE.912.R.5.4:	Maintain appropriate personal, social and ethical behavior while participating in a variety of physical activities. **Clarifications:** Some examples are respecting teammates, opponents and officials, and accepting both victory and defeat.
PE.912.R.5.5:	Demonstrate appropriate etiquette, care of equipment, respect for facilities and safe behaviors while participating in a variety of physical activities.
PE.912.R.6.2:	Analyze physical activities from which benefits can be derived. **Clarifications:** Some examples of potential benefits are physical, mental, emotional and social.
PE.912.R.6.3:	Analyze the roles of games, sports and/or physical activities in other cultures.
MA.K12.MTR.1.1:	Mathematicians who participate in effortful learning both individually and with others: • Analyze the problem in a way that makes sense given the task. • Ask questions that will help with solving the task. • Build perseverance by modifying methods as needed while solving a challenging task. • Stay engaged and maintain a positive mindset when working to solve tasks. • Help and support each other when attempting a new method or approach. **Clarifications:** Teachers who encourage students to participate actively in effortful learning both individually and with others: • Cultivate a community of growth mindset learners. • Foster perseverance in students by choosing tasks that are challenging. • Develop students' ability to analyze and problem solve. • Recognize students' effort when solving challenging problems.
	Demonstrate understanding by representing problems in multiple ways. Mathematicians who demonstrate understanding by representing problems in multiple ways:

- Build understanding through modeling and using manipulatives.
- Represent solutions to problems in multiple ways using objects, drawings, tables, graphs and equations.
- Progress from modeling problems with objects and drawings to using algorithms and equations.
- Express connections between concepts and representations.

MA.K12.MTR.2.1:

- Choose a representation based on the given context or purpose.

Clarifications:
Teachers who encourage students to demonstrate understanding by representing problems in multiple ways:

- Help students make connections between concepts and representations.
- Provide opportunities for students to use manipulatives when investigating concepts.
- Guide students from concrete to pictorial to abstract representations as understanding progresses.
- Show students that various representations can have different purposes and can be useful in different situations.

Complete tasks with mathematical fluency.
Mathematicians who complete tasks with mathematical fluency:

- Select efficient and appropriate methods for solving problems within the given context.
- Maintain flexibility and accuracy while performing procedures and mental calculations.
- Complete tasks accurately and with confidence.
- Adapt procedures to apply them to a new context.

MA.K12.MTR.3.1:

- Use feedback to improve efficiency when performing calculations.

Clarifications:
Teachers who encourage students to complete tasks with mathematical fluency:

- Provide students with the flexibility to solve problems by selecting a procedure that allows them to solve efficiently and accurately.
- Offer multiple opportunities for students to practice efficient and generalizable methods.
- Provide opportunities for students to reflect on the method they used and determine if a more efficient method could have been used.

Engage in discussions that reflect on the mathematical thinking of self and others.
Mathematicians who engage in discussions that reflect on the mathematical thinking of self and others:

- Communicate mathematical ideas, vocabulary and methods effectively.
- Analyze the mathematical thinking of others.
- Compare the efficiency of a method to those expressed by others.
- Recognize errors and suggest how to correctly solve the task.
- Justify results by explaining methods and processes.

MA.K12.MTR.4.1:

- Construct possible arguments based on evidence.

Clarifications:
Teachers who encourage students to engage in discussions that reflect on the mathematical thinking of self and others:

- Establish a culture in which students ask questions of the teacher and their peers, and error is an opportunity for learning.
- Create opportunities for students to discuss their thinking with peers.
- Select, sequence and present student work to advance and deepen understanding of correct and increasingly efficient methods.
- Develop students' ability to justify methods and compare their responses to the responses of their peers.

Use patterns and structure to help understand and connect mathematical concepts.
Mathematicians who use patterns and structure to help understand and connect mathematical concepts:

- Focus on relevant details within a problem.
- Create plans and procedures to logically order events, steps or ideas to solve problems.
- Decompose a complex problem into manageable parts.
- Relate previously learned concepts to new concepts.
- Look for similarities among problems.

MA.K12.MTR.5.1:

- Connect solutions of problems to more complicated large-scale situations.

Clarifications:
Teachers who encourage students to use patterns and structure to help understand and connect mathematical concepts:

- Help students recognize the patterns in the world around them and connect these patterns to mathematical concepts.
- Support students to develop generalizations based on the similarities found among problems.
- Provide opportunities for students to create plans and procedures to solve problems.
- Develop students' ability to construct relationships between their current understanding and more sophisticated ways of thinking.

Assess the reasonableness of solutions.
Mathematicians who assess the reasonableness of solutions:

- Estimate to discover possible solutions.
- Use benchmark quantities to determine if a solution makes sense.
- Check calculations when solving problems.
- Verify possible solutions by explaining the methods used.

MA.K12.MTR.6.1:

- Evaluate results based on the given context.

Clarifications:
Teachers who encourage students to assess the reasonableness of solutions:

- Have students estimate or predict solutions prior to solving.
- Prompt students to continually ask, "Does this solution make sense? How do you know?"
- Reinforce that students check their work as they progress within and after a task.
- Strengthen students' ability to verify solutions through justifications.

Apply mathematics to real-world contexts.
Mathematicians who apply mathematics to real-world contexts:

	• Connect mathematical concepts to everyday experiences. • Use models and methods to understand, represent and solve problems. • Perform investigations to gather data or determine if a method is appropriate. • Redesign models and methods to improve accuracy or efficiency.
MA.K12.MTR.7.1:	**Clarifications:** Teachers who encourage students to apply mathematics to real-world contexts: • Provide opportunities for students to create models, both concrete and abstract, and perform investigations. • Challenge students to question the accuracy of their models and methods. • Support students as they validate conclusions by comparing them to the given situation. • Indicate how various concepts can be applied to other disciplines.
	Cite evidence to explain and justify reasoning.
ELA.K12.EE.1.1:	**Clarifications:** K-1 Students include textual evidence in their oral communication with guidance and support from adults. The evidence can consist of details from the text without naming the text. During 1st grade, students learn how to incorporate the evidence in their writing. 2-3 Students include relevant textual evidence in their written and oral communication. Students should name the text when they refer to it. In 3rd grade, students should use a combination of direct and indirect citations. 4-5 Students continue with previous skills and reference comments made by speakers and peers. Students cite texts that they've directly quoted, paraphrased, or used for information. When writing, students will use the form of citation dictated by the instructor or the style guide referenced by the instructor. 6-8 Students continue with previous skills and use a style guide to create a proper citation. 9-12 Students continue with previous skills and should be aware of existing style guides and the ways in which they differ.
	Read and comprehend grade-level complex texts proficiently.
ELA.K12.EE.2.1:	**Clarifications:** See Text Complexity for grade-level complexity bands and a text complexity rubric.
	Make inferences to support comprehension.
ELA.K12.EE.3.1:	**Clarifications:** Students will make inferences before the words infer or inference are introduced. Kindergarten students will answer questions like "Why is the girl smiling?" or make predictions about what will happen based on the title page. Students will use the terms and apply them in 2nd grade and beyond.
	Use appropriate collaborative techniques and active listening skills when engaging in discussions in a variety of situations.
ELA.K12.EE.4.1:	**Clarifications:** In kindergarten, students learn to listen to one another respectfully. In grades 1-2, students build upon these skills by justifying what they are thinking. For example: "I think _____ because _____." The collaborative conversations are becoming academic conversations. In grades 3-12, students engage in academic conversations discussing claims and justifying their reasoning, refining and applying skills. Students build on ideas, propel the conversation, and support claims and counterclaims with evidence.
	Use the accepted rules governing a specific format to create quality work.
ELA.K12.EE.5.1:	**Clarifications:** Students will incorporate skills learned into work products to produce quality work. For students to incorporate these skills appropriately, they must receive instruction. A 3rd grade student creating a poster board display must have instruction in how to effectively present information to do quality work.
	Use appropriate voice and tone when speaking or writing.
ELA.K12.EE.6.1:	**Clarifications:** In kindergarten and 1st grade, students learn the difference between formal and informal language. For example, the way we talk to our friends differs from the way we speak to adults. In 2nd grade and beyond, students practice appropriate social and academic language to discuss texts.
ELD.K12.ELL.SI.1:	English language learners communicate for social and instructional purposes within the school setting.

General Course Information and Notes

GENERAL NOTES

Florida's Benchmarks for Excellent Student Thinking (B.E.S.T.) Standards
This course includes Florida's B.E.S.T. ELA Expectations (EE) and Mathematical Thinking and Reasoning Standards (MTRs) for students. Florida educators should intentionally embed these standards within the content and their instruction as applicable. For guidance on the implementation of the EEs and MTRs, please visit cpalms.org/Standards/BEST_Standards.aspx and select the appropriate B.E.S.T. Standards package.

English Language Development ELD Standards Special Notes Section:
Teachers are required to provide listening, speaking, reading and writing instruction that allows English language learners (ELL) to communicate for social and instructional purposes within the school setting. For the given level of English language proficiency and with visual, graphic, or interactive support, students will interact with grade level words, expressions, sentences and discourse to process or produce language necessary for academic success. The ELD standard should specify a relevant content area concept or topic of study chosen by curriculum developers and teachers which maximizes an ELL's need for communication and social skills. To access an ELL supporting document which delineates performance definitions and descriptors, please click on the following link: cpalms.org/uploads/docs/standards/eld/SI.pdf

GENERAL INFORMATION

Course Number: 1501310

Course Path: Section: Grades PreK to 12 Education Courses > **Grade Group:** Grades 9 to 12 and Adult Education Courses > **Subject:** Physical Education > **SubSubject:** Fitness >

Abbreviated Title: FIT LIFST DESIGN

Number of Credits: Half credit (.5)

Course Length: Semester (S)

Course Type: Core Academic Course

Course Level: 2

Course Status: Draft - Course Pending Approval

Grade Level(s): 9,10,11,12

Graduation Requirement: Physical Education

Educator Certifications

Physical Education (Grades 6-12)
Physical Education (Elementary and Secondary Grades K-12)

Fitness Issues for Adolescence (#1501320) 2022 - And Beyond

Course Standards

Name	Description
PE.912.C.2.9:	Explain the precautions to be taken when exercising in extreme weather and/or environmental conditions. **Clarifications:** Some examples of precautions are hydration and appropriate attire.
PE.912.C.2.10:	Analyze long-term benefits of regularly participating in physical activity.
PE.912.C.2.13:	Document food intake, calories consumed and energy expended through physical activity and analyze the results.
PE.912.C.2.15:	Calculate individual target heart-rate zone and analyze how to adjust intensity level to stay within the desired range.
PE.912.C.2.18:	Differentiate between fact and fallacy as it relates to consumer physical fitness products and programs. **Clarifications:** Some examples are weight-loss pills, food labels and exercise equipment.
PE.912.L.3.1:	Participate in a variety of physical activities to meet the recommended number of minutes of moderate to vigorous physical activity beyond physical education on five or more days of the week.
PE.912.L.3.2:	Participate in a variety of activities that promote the health-related components of fitness. **Clarifications:** The health-related components of fitness are cardiorespiratory endurance, muscular strength, muscular endurance, flexibility and body composition.
PE.912.L.3.3:	Identify a variety of activities that promote effective stress management.
PE.912.L.3.6:	Identify risks and safety factors that may affect physical activity throughout life.
PE.912.L.4.1:	Design a personal fitness program. **Clarifications:** Some examples of things to consider when designing a personal fitness program are timelines and current fitness level.
PE.912.L.4.2:	Identify ways to self-assess and modify a personal fitness program.
PE.912.L.4.4:	Use available technology to assess, design and evaluate a personal fitness program.
PE.912.L.4.5:	Apply the principles of training to personal fitness goals. **Clarifications:** Some examples of training principles are overload, specificity and progression.
PE.912.L.4.7:	Evaluate how to make changes in an individual wellness plan as lifestyle changes occur.
PE.912.M.1.5:	Apply strategies for self improvement based on individual strengths and needs.
PE.912.M.1.12:	Select and perform complex movements using a variety of equipment which lead to improved or maintained muscular strength and endurance. **Clarifications:** An example is performing plyometrics.
PE.912.M.1.13:	Perform a student-designed cardiorespiratory enhancing workout.
PE.912.M.1.14:	Utilize technology to assess, enhance and maintain health and skill-related fitness levels. **Clarifications:** Some examples of technology are Excel spreadsheets or web based programs to chart or log activities, heart rate monitors, videotapes or digital cameras.
PE.912.M.1.15:	Select and apply sport/activity specific warm-up and cool-down techniques.
PE.912.M.1.35:	Select proper equipment and apply all appropriate safety procedures necessary for participation.
PE.912.R.5.1:	Describe ways to act independently of peer pressure during physical activities.
PE.912.R.5.4:	Maintain appropriate personal, social and ethical behavior while participating in a variety of physical activities. **Clarifications:** Some examples are respecting teammates, opponents and officials, and accepting both victory and defeat.
PE.912.R.5.5:	Demonstrate appropriate etiquette, care of equipment, respect for facilities and safe behaviors while participating in a variety of physical activities.
PE.912.R.6.1:	Discuss opportunities for participation in a variety of physical activities outside of the school setting that contribute to personal enjoyment and the attainment or maintenance of a healthy lifestyle.
PE.912.R.6.2:	Analyze physical activities from which benefits can be derived. **Clarifications:** Some examples of potential benefits are physical, mental, emotional and social.
PE.912.R.6.3:	Analyze the roles of games, sports and/or physical activities in other cultures.
MA.K12.MTR.1.1:	Mathematicians who participate in effortful learning both individually and with others: • Analyze the problem in a way that makes sense given the task. • Ask questions that will help with solving the task. • Build perseverance by modifying methods as needed while solving a challenging task. • Stay engaged and maintain a positive mindset when working to solve tasks. • Help and support each other when attempting a new method or approach. **Clarifications:** Teachers who encourage students to participate actively in effortful learning both individually and with others:

- Cultivate a community of growth mindset learners.
- Foster perseverance in students by choosing tasks that are challenging.
- Develop students' ability to analyze and problem solve.
- Recognize students' effort when solving challenging problems.

MA.K12.MTR.2.1:

Demonstrate understanding by representing problems in multiple ways.
Mathematicians who demonstrate understanding by representing problems in multiple ways:

- Build understanding through modeling and using manipulatives.
- Represent solutions to problems in multiple ways using objects, drawings, tables, graphs and equations.
- Progress from modeling problems with objects and drawings to using algorithms and equations.
- Express connections between concepts and representations.
- Choose a representation based on the given context or purpose.

Clarifications:
Teachers who encourage students to demonstrate understanding by representing problems in multiple ways:

- Help students make connections between concepts and representations.
- Provide opportunities for students to use manipulatives when investigating concepts.
- Guide students from concrete to pictorial to abstract representations as understanding progresses.
- Show students that various representations can have different purposes and can be useful in different situations.

MA.K12.MTR.3.1:

Complete tasks with mathematical fluency.
Mathematicians who complete tasks with mathematical fluency:

- Select efficient and appropriate methods for solving problems within the given context.
- Maintain flexibility and accuracy while performing procedures and mental calculations.
- Complete tasks accurately and with confidence.
- Adapt procedures to apply them to a new context.
- Use feedback to improve efficiency when performing calculations.

Clarifications:
Teachers who encourage students to complete tasks with mathematical fluency:

- Provide students with the flexibility to solve problems by selecting a procedure that allows them to solve efficiently and accurately.
- Offer multiple opportunities for students to practice efficient and generalizable methods.
- Provide opportunities for students to reflect on the method they used and determine if a more efficient method could have been used.

MA.K12.MTR.4.1:

Engage in discussions that reflect on the mathematical thinking of self and others.
Mathematicians who engage in discussions that reflect on the mathematical thinking of self and others:

- Communicate mathematical ideas, vocabulary and methods effectively.
- Analyze the mathematical thinking of others.
- Compare the efficiency of a method to those expressed by others.
- Recognize errors and suggest how to correctly solve the task.
- Justify results by explaining methods and processes.
- Construct possible arguments based on evidence.

Clarifications:
Teachers who encourage students to engage in discussions that reflect on the mathematical thinking of self and others:

- Establish a culture in which students ask questions of the teacher and their peers, and error is an opportunity for learning.
- Create opportunities for students to discuss their thinking with peers.
- Select, sequence and present student work to advance and deepen understanding of correct and increasingly efficient methods.
- Develop students' ability to justify methods and compare their responses to the responses of their peers.

MA.K12.MTR.5.1:

Use patterns and structure to help understand and connect mathematical concepts.
Mathematicians who use patterns and structure to help understand and connect mathematical concepts:

- Focus on relevant details within a problem.
- Create plans and procedures to logically order events, steps or ideas to solve problems.
- Decompose a complex problem into manageable parts.
- Relate previously learned concepts to new concepts.
- Look for similarities among problems.
- Connect solutions of problems to more complicated large-scale situations.

Clarifications:
Teachers who encourage students to use patterns and structure to help understand and connect mathematical concepts:

- Help students recognize the patterns in the world around them and connect these patterns to mathematical concepts.
- Support students to develop generalizations based on the similarities found among problems.
- Provide opportunities for students to create plans and procedures to solve problems.
- Develop students' ability to construct relationships between their current understanding and more sophisticated ways of thinking.

MA.K12.MTR.6.1:

Assess the reasonableness of solutions.
Mathematicians who assess the reasonableness of solutions:

- Estimate to discover possible solutions.
- Use benchmark quantities to determine if a solution makes sense.
- Check calculations when solving problems.
- Verify possible solutions by explaining the methods used.
- Evaluate results based on the given context.

Clarifications:

	Teachers who encourage students to assess the reasonableness of solutions: • Have students estimate or predict solutions prior to solving. • Prompt students to continually ask, "Does this solution make sense? How do you know?" • Reinforce that students check their work as they progress within and after a task. • Strengthen students' ability to verify solutions through justifications.
MA.K12.MTR.7.1:	Apply mathematics to real-world contexts. Mathematicians who apply mathematics to real-world contexts: • Connect mathematical concepts to everyday experiences. • Use models and methods to understand, represent and solve problems. • Perform investigations to gather data or determine if a method is appropriate. • Redesign models and methods to improve accuracy or efficiency. **Clarifications:** Teachers who encourage students to apply mathematics to real-world contexts: • Provide opportunities for students to create models, both concrete and abstract, and perform investigations. • Challenge students to question the accuracy of their models and methods. • Support students as they validate conclusions by comparing them to the given situation. • Indicate how various concepts can be applied to other disciplines.
ELA.K12.EE.1.1:	Cite evidence to explain and justify reasoning. **Clarifications:** K-1 Students include textual evidence in their oral communication with guidance and support from adults. The evidence can consist of details from the text without naming the text. During 1st grade, students learn how to incorporate the evidence in their writing. 2-3 Students include relevant textual evidence in their written and oral communication. Students should name the text when they refer to it. In 3rd grade, students should use a combination of direct and indirect citations. 4-5 Students continue with previous skills and reference comments made by speakers and peers. Students cite texts that they've directly quoted, paraphrased, or used for information. When writing, students will use the form of citation dictated by the instructor or the style guide referenced by the instructor. 6-8 Students continue with previous skills and use a style guide to create a proper citation. 9-12 Students continue with previous skills and should be aware of existing style guides and the ways in which they differ.
ELA.K12.EE.2.1:	Read and comprehend grade-level complex texts proficiently. **Clarifications:** See Text Complexity for grade-level complexity bands and a text complexity rubric.
ELA.K12.EE.3.1:	Make inferences to support comprehension. **Clarifications:** Students will make inferences before the words infer or inference are introduced. Kindergarten students will answer questions like "Why is the girl smiling?" or make predictions about what will happen based on the title page. Students will use the terms and apply them in 2nd grade and beyond.
ELA.K12.EE.4.1:	Use appropriate collaborative techniques and active listening skills when engaging in discussions in a variety of situations. **Clarifications:** In kindergarten, students learn to listen to one another respectfully. In grades 1-2, students build upon these skills by justifying what they are thinking. For example: "I think _____ because _____." The collaborative conversations are becoming academic conversations. In grades 3-12, students engage in academic conversations discussing claims and justifying their reasoning, refining and applying skills. Students build on ideas, propel the conversation, and support claims and counterclaims with evidence.
ELA.K12.EE.5.1:	Use the accepted rules governing a specific format to create quality work. **Clarifications:** Students will incorporate skills learned into work products to produce quality work. For students to incorporate these skills appropriately, they must receive instruction. A 3rd grade student creating a poster board display must have instruction in how to effectively present information to do quality work.
ELA.K12.EE.6.1:	Use appropriate voice and tone when speaking or writing. **Clarifications:** In kindergarten and 1st grade, students learn the difference between formal and informal language. For example, the way we talk to our friends differs from the way we speak to adults. In 2nd grade and beyond, students practice appropriate social and academic language to discuss texts.
ELD.K12.ELL.SI.1:	English language learners communicate for social and instructional purposes within the school setting.

General Course Information and Notes

GENERAL NOTES

Florida's Benchmarks for Excellent Student Thinking (B.E.S.T.) Standards
This course includes Florida's B.E.S.T. ELA Expectations (EE) and Mathematical Thinking and Reasoning Standards (MTRs) for students. Florida educators should intentionally embed these standards within the content and their instruction as applicable. For guidance on the implementation of the EEs and MTRs, please visit cpalms.org/Standards/BEST_Standards.aspx and select the appropriate B.E.S.T. Standards package.

English Language Development ELD Standards Special Notes Section:

Teachers are required to provide listening, speaking, reading and writing instruction that allows English language learners (ELL) to communicate for social and instructional purposes within the school setting. For the given level of English language proficiency and with visual, graphic, or interactive support, students will interact with grade level words, expressions, sentences and discourse to process or produce language necessary for academic success. The ELD standard should specify a relevant content area concept or topic of study chosen by curriculum developers and teachers which maximizes an ELL's need for communication and social skills. To access an ELL supporting document which delineates performance definitions and descriptors, please click on the following link: cpalms.org/uploads/docs/standards/eld/SI.pdf

GENERAL INFORMATION

Course Number: 1501320

Course Path: Section: Grades PreK to 12 Education Courses > **Grade Group:** Grades 9 to 12 and Adult Education Courses > **Subject:** Physical Education > **SubSubject:** Fitness >

Abbreviated Title: FIT ISSUES FOR ADOL

Number of Credits: Half credit (.5)

Course Length: Semester (S)

Course Type: Core Academic Course

Course Level: 2

Course Status: Draft - Course Pending Approval

Grade Level(s): 9,10,11,12

Graduation Requirement: Physical Education

Educator Certifications

Physical Education (Grades 6-12)
Physical Education (Elementary and Secondary Grades K-12)

Weight Training 1 (#1501340) 2022 - And Beyond

Course Standards

Name	Description
PE.912.C.2.3:	Analyze the movement performance of self and others. **Clarifications:** Some examples are video analysis and checklist.
PE.912.C.2.6:	Compare and contrast the health-related benefits of various physical activities.
PE.912.C.2.16:	Explain the methods of monitoring levels of intensity during aerobic activity. **Clarifications:** Some examples are a talk test, rate of perceived exertion and checking one's heart rate/pulse.
PE.912.C.2.23:	Apply appropriate technology and analyze data to evaluate, monitor and/or improve performance.
PE.912.C.2.25:	Analyze and evaluate the risks, safety procedures, rules and equipment associated with specific course activities.
PE.912.C.2.26:	Evaluate skill patterns of self and/or partner by detecting and correcting mechanical errors.
PE.912.L.3.2:	Participate in a variety of activities that promote the health-related components of fitness. **Clarifications:** The health-related components of fitness are cardiorespiratory endurance, muscular strength, muscular endurance, flexibility and body composition.
PE.912.L.3.3:	Identify a variety of activities that promote effective stress management.
PE.912.L.3.6:	Identify risks and safety factors that may affect physical activity throughout life.
PE.912.L.4.2:	Identify ways to self-assess and modify a personal fitness program.
PE.912.L.4.4:	Use available technology to assess, design and evaluate a personal fitness program.
PE.912.L.4.5:	Apply the principles of training to personal fitness goals. **Clarifications:** Some examples of training principles are overload, specificity and progression.
PE.912.M.1.5:	Apply strategies for self improvement based on individual strengths and needs.
PE.912.M.1.12:	Select and perform complex movements using a variety of equipment which lead to improved or maintained muscular strength and endurance. **Clarifications:** An example is performing plyometrics.
PE.912.M.1.15:	Select and apply sport/activity specific warm-up and cool-down techniques.
PE.912.M.1.16:	Apply the principles of training and conditioning to accommodate individual needs and strengths. **Clarifications:** Some examples of training principles are overload, specificity and progression.
PE.912.M.1.19:	Use correct body alignment, strength, flexibility and coordination in the performance of technical movements.
PE.912.M.1.30:	Combine and apply movement patterns from simple to complex.
PE.912.M.1.34:	Demonstrate use of the mechanical principles as they apply to specific course activities. **Clarifications:** Some examples are balance, force and leverage.
PE.912.M.1.35:	Select proper equipment and apply all appropriate safety procedures necessary for participation.
PE.912.R.5.5:	Demonstrate appropriate etiquette, care of equipment, respect for facilities and safe behaviors while participating in a variety of physical activities.
PE.912.R.6.2:	Analyze physical activities from which benefits can be derived. **Clarifications:** Some examples of potential benefits are physical, mental, emotional and social.
PE.912.R.6.3:	Analyze the roles of games, sports and/or physical activities in other cultures.
MA.K12.MTR.1.1:	Mathematicians who participate in effortful learning both individually and with others: • Analyze the problem in a way that makes sense given the task. • Ask questions that will help with solving the task. • Build perseverance by modifying methods as needed while solving a challenging task. • Stay engaged and maintain a positive mindset when working to solve tasks. • Help and support each other when attempting a new method or approach. **Clarifications:** Teachers who encourage students to participate actively in effortful learning both individually and with others: • Cultivate a community of growth mindset learners. • Foster perseverance in students by choosing tasks that are challenging. • Develop students' ability to analyze and problem solve. • Recognize students' effort when solving challenging problems.
	Demonstrate understanding by representing problems in multiple ways. Mathematicians who demonstrate understanding by representing problems in multiple ways: • Build understanding through modeling and using manipulatives. • Represent solutions to problems in multiple ways using objects, drawings, tables, graphs and equations.

- Progress from modeling problems with objects and drawings to using algorithms and equations.
- Express connections between concepts and representations.

MA.K12.MTR.2.1:

- Choose a representation based on the given context or purpose.

Clarifications:
Teachers who encourage students to demonstrate understanding by representing problems in multiple ways:

- Help students make connections between concepts and representations.
- Provide opportunities for students to use manipulatives when investigating concepts.
- Guide students from concrete to pictorial to abstract representations as understanding progresses.
- Show students that various representations can have different purposes and can be useful in different situations.

Complete tasks with mathematical fluency.
Mathematicians who complete tasks with mathematical fluency:

- Select efficient and appropriate methods for solving problems within the given context.
- Maintain flexibility and accuracy while performing procedures and mental calculations.
- Complete tasks accurately and with confidence.
- Adapt procedures to apply them to a new context.

MA.K12.MTR.3.1:

- Use feedback to improve efficiency when performing calculations.

Clarifications:
Teachers who encourage students to complete tasks with mathematical fluency:

- Provide students with the flexibility to solve problems by selecting a procedure that allows them to solve efficiently and accurately.
- Offer multiple opportunities for students to practice efficient and generalizable methods.
- Provide opportunities for students to reflect on the method they used and determine if a more efficient method could have been used.

Engage in discussions that reflect on the mathematical thinking of self and others.
Mathematicians who engage in discussions that reflect on the mathematical thinking of self and others:

- Communicate mathematical ideas, vocabulary and methods effectively.
- Analyze the mathematical thinking of others.
- Compare the efficiency of a method to those expressed by others.
- Recognize errors and suggest how to correctly solve the task.
- Justify results by explaining methods and processes.

MA.K12.MTR.4.1:

- Construct possible arguments based on evidence.

Clarifications:
Teachers who encourage students to engage in discussions that reflect on the mathematical thinking of self and others:

- Establish a culture in which students ask questions of the teacher and their peers, and error is an opportunity for learning.
- Create opportunities for students to discuss their thinking with peers.
- Select, sequence and present student work to advance and deepen understanding of correct and increasingly efficient methods.
- Develop students' ability to justify methods and compare their responses to the responses of their peers.

Use patterns and structure to help understand and connect mathematical concepts.
Mathematicians who use patterns and structure to help understand and connect mathematical concepts:

- Focus on relevant details within a problem.
- Create plans and procedures to logically order events, steps or ideas to solve problems.
- Decompose a complex problem into manageable parts.
- Relate previously learned concepts to new concepts.
- Look for similarities among problems.

MA.K12.MTR.5.1:

- Connect solutions of problems to more complicated large-scale situations.

Clarifications:
Teachers who encourage students to use patterns and structure to help understand and connect mathematical concepts:

- Help students recognize the patterns in the world around them and connect these patterns to mathematical concepts.
- Support students to develop generalizations based on the similarities found among problems.
- Provide opportunities for students to create plans and procedures to solve problems.
- Develop students' ability to construct relationships between their current understanding and more sophisticated ways of thinking.

Assess the reasonableness of solutions.
Mathematicians who assess the reasonableness of solutions:

- Estimate to discover possible solutions.
- Use benchmark quantities to determine if a solution makes sense.
- Check calculations when solving problems.
- Verify possible solutions by explaining the methods used.

MA.K12.MTR.6.1:

- Evaluate results based on the given context.

Clarifications:
Teachers who encourage students to assess the reasonableness of solutions:

- Have students estimate or predict solutions prior to solving.
- Prompt students to continually ask, "Does this solution make sense? How do you know?"
- Reinforce that students check their work as they progress within and after a task.
- Strengthen students' ability to verify solutions through justifications.

Apply mathematics to real-world contexts.
Mathematicians who apply mathematics to real-world contexts:

- Connect mathematical concepts to everyday experiences.

MA.K12.MTR.7.1:	• Use models and methods to understand, represent and solve problems. • Perform investigations to gather data or determine if a method is appropriate. • Redesign models and methods to improve accuracy or efficiency. **Clarifications:** Teachers who encourage students to apply mathematics to real-world contexts: • Provide opportunities for students to create models, both concrete and abstract, and perform investigations. • Challenge students to question the accuracy of their models and methods. • Support students as they validate conclusions by comparing them to the given situation. • Indicate how various concepts can be applied to other disciplines.
ELA.K12.EE.1.1:	Cite evidence to explain and justify reasoning. **Clarifications:** K-1 Students include textual evidence in their oral communication with guidance and support from adults. The evidence can consist of details from the text without naming the text. During 1st grade, students learn how to incorporate the evidence in their writing. 2-3 Students include relevant textual evidence in their written and oral communication. Students should name the text when they refer to it. In 3rd grade, students should use a combination of direct and indirect citations. 4-5 Students continue with previous skills and reference comments made by speakers and peers. Students cite texts that they've directly quoted, paraphrased, or used for information. When writing, students will use the form of citation dictated by the instructor or the style guide referenced by the instructor. 6-8 Students continue with previous skills and use a style guide to create a proper citation. 9-12 Students continue with previous skills and should be aware of existing style guides and the ways in which they differ.
ELA.K12.EE.2.1:	Read and comprehend grade-level complex texts proficiently. **Clarifications:** See Text Complexity for grade-level complexity bands and a text complexity rubric.
ELA.K12.EE.3.1:	Make inferences to support comprehension. **Clarifications:** Students will make inferences before the words infer or inference are introduced. Kindergarten students will answer questions like "Why is the girl smiling?" or make predictions about what will happen based on the title page. Students will use the terms and apply them in 2nd grade and beyond.
ELA.K12.EE.4.1:	Use appropriate collaborative techniques and active listening skills when engaging in discussions in a variety of situations. **Clarifications:** In kindergarten, students learn to listen to one another respectfully. In grades 1-2, students build upon these skills by justifying what they are thinking. For example: "I think _____ because _____." The collaborative conversations are becoming academic conversations. In grades 3-12, students engage in academic conversations discussing claims and justifying their reasoning, refining and applying skills. Students build on ideas, propel the conversation, and support claims and counterclaims with evidence.
ELA.K12.EE.5.1:	Use the accepted rules governing a specific format to create quality work. **Clarifications:** Students will incorporate skills learned into work products to produce quality work. For students to incorporate these skills appropriately, they must receive instruction. A 3rd grade student creating a poster board display must have instruction in how to effectively present information to do quality work.
ELA.K12.EE.6.1:	Use appropriate voice and tone when speaking or writing. **Clarifications:** In kindergarten and 1st grade, students learn the difference between formal and informal language. For example, the way we talk to our friends differs from the way we speak to adults. In 2nd grade and beyond, students practice appropriate social and academic language to discuss texts.
ELD.K12.ELL.SI.1:	English language learners communicate for social and instructional purposes within the school setting.

General Course Information and Notes

VERSION DESCRIPTION

The purpose of this course is to develop the physical skills necessary to be competent in many forms of movement as it relates to weight training. The integration of fitness concepts throughout the content is critical to the success of this course.

GENERAL NOTES

Florida's Benchmarks for Excellent Student Thinking (B.E.S.T.) Standards
This course includes Florida's B.E.S.T. ELA Expectations (EE) and Mathematical Thinking and Reasoning Standards (MTRs) for students. Florida educators should intentionally embed these standards within the content and their instruction as applicable. For guidance on the implementation of the EEs and MTRs, please visit cpalms.org/Standards/BEST_Standards.aspx and select the appropriate B.E.S.T. Standards package.

English Language Development ELD Standards Special Notes Section:
Teachers are required to provide listening, speaking, reading and writing instruction that allows English language learners (ELL) to communicate for social and instructional purposes within the school setting. For the given level of English language proficiency and with visual, graphic, or interactive support, students will interact with grade level

words, expressions, sentences and discourse to process or produce language necessary for academic success. The ELD standard should specify a relevant content area concept or topic of study chosen by curriculum developers and teachers which maximizes an ELL's need for communication and social skills. To access an ELL supporting document which delineates performance definitions and descriptors, please click on the following link: cpalms.org/uploads/docs/standards/eld/SI.pdf

GENERAL INFORMATION

Course Number: 1501340

Course Path: Section: Grades PreK to 12 Education Courses > **Grade Group:** Grades 9 to 12 and Adult Education Courses > **Subject:** Physical Education > **SubSubject:** Fitness >

Abbreviated Title: WEIGHT TRAIN 1

Number of Credits: Half credit (.5)

Course Length: Semester (S)

Course Type: Core Academic Course

Course Level: 2

Course Status: Draft - Course Pending Approval

Grade Level(s): 9,10,11,12

Graduation Requirement: Physical Education

Educator Certifications

Physical Education (Grades 6-12)
Physical Education (Elementary and Secondary Grades K-12)

Weight Training 2 (#1501350) 2022 - And Beyond

Course Standards

Name	Description
PE.912.C.2.7:	Evaluate the effectiveness of specific warm-up and cool-down activities.
PE.912.C.2.16:	Explain the methods of monitoring levels of intensity during aerobic activity. **Clarifications:** Some examples are a talk test, rate of perceived exertion and checking one's heart rate/pulse.
PE.912.C.2.17:	Assess physiological effects of exercise during and after physical activity. **Clarifications:** Some examples are breathing, resting heart rate and blood pressure.
PE.912.C.2.23:	Apply appropriate technology and analyze data to evaluate, monitor and/or improve performance.
PE.912.C.2.24:	Analyze the mechanical principles as they apply to specific course activities. **Clarifications:** Some examples are balance, force and leverage.
PE.912.C.2.25:	Analyze and evaluate the risks, safety procedures, rules and equipment associated with specific course activities.
PE.912.C.2.26:	Evaluate skill patterns of self and/or partner by detecting and correcting mechanical errors.
PE.912.L.3.2:	Participate in a variety of activities that promote the health-related components of fitness. **Clarifications:** The health-related components of fitness are cardiorespiratory endurance, muscular strength, muscular endurance, flexibility and body composition.
PE.912.L.3.3:	Identify a variety of activities that promote effective stress management.
PE.912.L.3.6:	Identify risks and safety factors that may affect physical activity throughout life.
PE.912.L.4.2:	Identify ways to self-assess and modify a personal fitness program.
PE.912.L.4.4:	Use available technology to assess, design and evaluate a personal fitness program.
PE.912.L.4.5:	Apply the principles of training to personal fitness goals. **Clarifications:** Some examples of training principles are overload, specificity and progression.
PE.912.M.1.5:	Apply strategies for self improvement based on individual strengths and needs.
PE.912.M.1.12:	Select and perform complex movements using a variety of equipment which lead to improved or maintained muscular strength and endurance. **Clarifications:** An example is performing plyometrics.
PE.912.M.1.16:	Apply the principles of training and conditioning to accommodate individual needs and strengths. **Clarifications:** Some examples of training principles are overload, specificity and progression.
PE.912.M.1.19:	Use correct body alignment, strength, flexibility and coordination in the performance of technical movements.
PE.912.M.1.30:	Combine and apply movement patterns from simple to complex.
PE.912.M.1.33:	Practice complex motor activities in order to improve performance.
PE.912.M.1.34:	Demonstrate use of the mechanical principles as they apply to specific course activities. **Clarifications:** Some examples are balance, force and leverage.
PE.912.M.1.35:	Select proper equipment and apply all appropriate safety procedures necessary for participation.
PE.912.R.5.5:	Demonstrate appropriate etiquette, care of equipment, respect for facilities and safe behaviors while participating in a variety of physical activities.
PE.912.R.6.2:	Analyze physical activities from which benefits can be derived. **Clarifications:** Some examples of potential benefits are physical, mental, emotional and social.
PE.912.R.6.3:	Analyze the roles of games, sports and/or physical activities in other cultures.
MA.K12.MTR.1.1:	Mathematicians who participate in effortful learning both individually and with others: • Analyze the problem in a way that makes sense given the task. • Ask questions that will help with solving the task. • Build perseverance by modifying methods as needed while solving a challenging task. • Stay engaged and maintain a positive mindset when working to solve tasks. • Help and support each other when attempting a new method or approach. **Clarifications:** Teachers who encourage students to participate actively in effortful learning both individually and with others: • Cultivate a community of growth mindset learners. • Foster perseverance in students by choosing tasks that are challenging. • Develop students' ability to analyze and problem solve. • Recognize students' effort when solving challenging problems.
	Demonstrate understanding by representing problems in multiple ways.

Mathematicians who demonstrate understanding by representing problems in multiple ways:

- Build understanding through modeling and using manipulatives.
- Represent solutions to problems in multiple ways using objects, drawings, tables, graphs and equations.
- Progress from modeling problems with objects and drawings to using algorithms and equations.
- Express connections between concepts and representations.

MA.K12.MTR.2.1:

- Choose a representation based on the given context or purpose.

Clarifications:
Teachers who encourage students to demonstrate understanding by representing problems in multiple ways:

- Help students make connections between concepts and representations.
- Provide opportunities for students to use manipulatives when investigating concepts.
- Guide students from concrete to pictorial to abstract representations as understanding progresses.
- Show students that various representations can have different purposes and can be useful in different situations.

Complete tasks with mathematical fluency.
Mathematicians who complete tasks with mathematical fluency:

- Select efficient and appropriate methods for solving problems within the given context.
- Maintain flexibility and accuracy while performing procedures and mental calculations.
- Complete tasks accurately and with confidence.
- Adapt procedures to apply them to a new context.

MA.K12.MTR.3.1:

- Use feedback to improve efficiency when performing calculations.

Clarifications:
Teachers who encourage students to complete tasks with mathematical fluency:

- Provide students with the flexibility to solve problems by selecting a procedure that allows them to solve efficiently and accurately.
- Offer multiple opportunities for students to practice efficient and generalizable methods.
- Provide opportunities for students to reflect on the method they used and determine if a more efficient method could have been used.

Engage in discussions that reflect on the mathematical thinking of self and others.
Mathematicians who engage in discussions that reflect on the mathematical thinking of self and others:

- Communicate mathematical ideas, vocabulary and methods effectively.
- Analyze the mathematical thinking of others.
- Compare the efficiency of a method to those expressed by others.
- Recognize errors and suggest how to correctly solve the task.
- Justify results by explaining methods and processes.

MA.K12.MTR.4.1:

- Construct possible arguments based on evidence.

Clarifications:
Teachers who encourage students to engage in discussions that reflect on the mathematical thinking of self and others:

- Establish a culture in which students ask questions of the teacher and their peers, and error is an opportunity for learning.
- Create opportunities for students to discuss their thinking with peers.
- Select, sequence and present student work to advance and deepen understanding of correct and increasingly efficient methods.
- Develop students' ability to justify methods and compare their responses to the responses of their peers.

Use patterns and structure to help understand and connect mathematical concepts.
Mathematicians who use patterns and structure to help understand and connect mathematical concepts:

- Focus on relevant details within a problem.
- Create plans and procedures to logically order events, steps or ideas to solve problems.
- Decompose a complex problem into manageable parts.
- Relate previously learned concepts to new concepts.
- Look for similarities among problems.

MA.K12.MTR.5.1:

- Connect solutions of problems to more complicated large-scale situations.

Clarifications:
Teachers who encourage students to use patterns and structure to help understand and connect mathematical concepts:

- Help students recognize the patterns in the world around them and connect these patterns to mathematical concepts.
- Support students to develop generalizations based on the similarities found among problems.
- Provide opportunities for students to create plans and procedures to solve problems.
- Develop students' ability to construct relationships between their current understanding and more sophisticated ways of thinking.

Assess the reasonableness of solutions.
Mathematicians who assess the reasonableness of solutions:

- Estimate to discover possible solutions.
- Use benchmark quantities to determine if a solution makes sense.
- Check calculations when solving problems.
- Verify possible solutions by explaining the methods used.

MA.K12.MTR.6.1:

- Evaluate results based on the given context.

Clarifications:
Teachers who encourage students to assess the reasonableness of solutions:

- Have students estimate or predict solutions prior to solving.
- Prompt students to continually ask, "Does this solution make sense? How do you know?"
- Reinforce that students check their work as they progress within and after a task.
- Strengthen students' ability to verify solutions through justifications.

Apply mathematics to real-world contexts

	Apply mathematics to real-world contexts. Mathematicians who apply mathematics to real-world contexts: • Connect mathematical concepts to everyday experiences. • Use models and methods to understand, represent and solve problems. • Perform investigations to gather data or determine if a method is appropriate. • Redesign models and methods to improve accuracy or efficiency.
MA.K12.MTR.7.1:	**Clarifications:** Teachers who encourage students to apply mathematics to real-world contexts: • Provide opportunities for students to create models, both concrete and abstract, and perform investigations. • Challenge students to question the accuracy of their models and methods. • Support students as they validate conclusions by comparing them to the given situation. • Indicate how various concepts can be applied to other disciplines.
	Cite evidence to explain and justify reasoning.
ELA.K12.EE.1.1:	**Clarifications:** K-1 Students include textual evidence in their oral communication with guidance and support from adults. The evidence can consist of details from the text without naming the text. During 1st grade, students learn how to incorporate the evidence in their writing. 2-3 Students include relevant textual evidence in their written and oral communication. Students should name the text when they refer to it. In 3rd grade, students should use a combination of direct and indirect citations. 4-5 Students continue with previous skills and reference comments made by speakers and peers. Students cite texts that they've directly quoted, paraphrased, or used for information. When writing, students will use the form of citation dictated by the instructor or the style guide referenced by the instructor. 6-8 Students continue with previous skills and use a style guide to create a proper citation. 9-12 Students continue with previous skills and should be aware of existing style guides and the ways in which they differ.
	Read and comprehend grade-level complex texts proficiently.
ELA.K12.EE.2.1:	**Clarifications:** See Text Complexity for grade-level complexity bands and a text complexity rubric.
	Make inferences to support comprehension.
ELA.K12.EE.3.1:	**Clarifications:** Students will make inferences before the words infer or inference are introduced. Kindergarten students will answer questions like "Why is the girl smiling?" or make predictions about what will happen based on the title page. Students will use the terms and apply them in 2nd grade and beyond.
	Use appropriate collaborative techniques and active listening skills when engaging in discussions in a variety of situations.
ELA.K12.EE.4.1:	**Clarifications:** In kindergarten, students learn to listen to one another respectfully. In grades 1-2, students build upon these skills by justifying what they are thinking. For example: "I think _____ because _____." The collaborative conversations are becoming academic conversations. In grades 3-12, students engage in academic conversations discussing claims and justifying their reasoning, refining and applying skills. Students build on ideas, propel the conversation, and support claims and counterclaims with evidence.
	Use the accepted rules governing a specific format to create quality work.
ELA.K12.EE.5.1:	**Clarifications:** Students will incorporate skills learned into work products to produce quality work. For students to incorporate these skills appropriately, they must receive instruction. A 3rd grade student creating a poster board display must have instruction in how to effectively present information to do quality work.
	Use appropriate voice and tone when speaking or writing.
ELA.K12.EE.6.1:	**Clarifications:** In kindergarten and 1st grade, students learn the difference between formal and informal language. For example, the way we talk to our friends differs from the way we speak to adults. In 2nd grade and beyond, students practice appropriate social and academic language to discuss texts.
ELD.K12.ELL.SI.1:	English language learners communicate for social and instructional purposes within the school setting.

General Course Information and Notes

GENERAL NOTES

Florida's Benchmarks for Excellent Student Thinking (B.E.S.T.) Standards
This course includes Florida's B.E.S.T. ELA Expectations (EE) and Mathematical Thinking and Reasoning Standards (MTRs) for students. Florida educators should intentionally embed these standards within the content and their instruction as applicable. For guidance on the implementation of the EEs and MTRs, please visit cpalms.org/Standards/BEST_Standards.aspx and select the appropriate B.E.S.T. Standards package.

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Teachers are required to provide listening, speaking, reading and writing instruction that allows English language learners (ELL) to communicate for social and instructional purposes within the school setting. For the given level of English language proficiency and with visual, graphic, or interactive support, students will interact with grade level words, expressions, sentences and discourse to process or produce language necessary for academic success. The ELD standard should specify a relevant content area concept or topic of study chosen by curriculum developers and teachers which maximizes an ELL's need for communication and social skills. To access an ELL supporting document which delineates performance definitions and descriptors, please click on the following link: cpalms.org/uploads/docs/standards/eld/SI.pdf

GENERAL INFORMATION

Course Number: 1501350

Course Path: Section: Grades PreK to 12 Education Courses > **Grade Group:** Grades 9 to 12 and Adult Education Courses > **Subject:** Physical Education > **SubSubject:** Fitness >

Abbreviated Title: WEIGHT TRAIN 2

Number of Credits: Half credit (.5)

Course Length: Semester (S)

Course Type: Core Academic Course

Course Level: 2

Course Status: Draft - Course Pending Approval

Grade Level(s): 9,10,11,12

Graduation Requirement: Physical Education

Educator Certifications

Physical Education (Grades 6-12)
Physical Education (Elementary and Secondary Grades K-12)

Weight Training 3 (#1501360) 2022 - And Beyond

Course Standards

Name	Description
PE.912.C.2.7:	Evaluate the effectiveness of specific warm-up and cool-down activities.
PE.912.C.2.17:	Assess physiological effects of exercise during and after physical activity. **Clarifications:** Some examples are breathing, resting heart rate and blood pressure.
PE.912.C.2.22:	Explain the skill-related components of fitness and how they enhance performance levels. **Clarifications:** The skill-related components of fitness are speed, coordination, balance, power, agility and reaction time.
PE.912.C.2.23:	Apply appropriate technology and analyze data to evaluate, monitor and/or improve performance.
PE.912.C.2.24:	Analyze the mechanical principles as they apply to specific course activities. **Clarifications:** Some examples are balance, force and leverage.
PE.912.C.2.25:	Analyze and evaluate the risks, safety procedures, rules and equipment associated with specific course activities.
PE.912.C.2.26:	Evaluate skill patterns of self and/or partner by detecting and correcting mechanical errors.
PE.912.L.3.2:	Participate in a variety of activities that promote the health-related components of fitness. **Clarifications:** The health-related components of fitness are cardiorespiratory endurance, muscular strength, muscular endurance, flexibility and body composition.
PE.912.L.3.3:	Identify a variety of activities that promote effective stress management.
PE.912.L.3.6:	Identify risks and safety factors that may affect physical activity throughout life.
PE.912.L.4.2:	Identify ways to self-assess and modify a personal fitness program.
PE.912.L.4.4:	Use available technology to assess, design and evaluate a personal fitness program.
PE.912.L.4.5:	Apply the principles of training to personal fitness goals. **Clarifications:** Some examples of training principles are overload, specificity and progression.
PE.912.M.1.5:	Apply strategies for self improvement based on individual strengths and needs.
PE.912.M.1.12:	Select and perform complex movements using a variety of equipment which lead to improved or maintained muscular strength and endurance. **Clarifications:** An example is performing plyometrics.
PE.912.M.1.16:	Apply the principles of training and conditioning to accommodate individual needs and strengths. **Clarifications:** Some examples of training principles are overload, specificity and progression.
PE.912.M.1.19:	Use correct body alignment, strength, flexibility and coordination in the performance of technical movements.
PE.912.M.1.30:	Combine and apply movement patterns from simple to complex.
PE.912.M.1.33:	Practice complex motor activities in order to improve performance.
PE.912.M.1.34:	Demonstrate use of the mechanical principles as they apply to specific course activities. **Clarifications:** Some examples are balance, force and leverage.
PE.912.M.1.35:	Select proper equipment and apply all appropriate safety procedures necessary for participation.
PE.912.R.5.5:	Demonstrate appropriate etiquette, care of equipment, respect for facilities and safe behaviors while participating in a variety of physical activities.
PE.912.R.6.2:	Analyze physical activities from which benefits can be derived. **Clarifications:** Some examples of potential benefits are physical, mental, emotional and social.
PE.912.R.6.3:	Analyze the roles of games, sports and/or physical activities in other cultures.
MA.K12.MTR.1.1:	Mathematicians who participate in effortful learning both individually and with others: • Analyze the problem in a way that makes sense given the task. • Ask questions that will help with solving the task. • Build perseverance by modifying methods as needed while solving a challenging task. • Stay engaged and maintain a positive mindset when working to solve tasks. • Help and support each other when attempting a new method or approach. **Clarifications:** Teachers who encourage students to participate actively in effortful learning both individually and with others: • Cultivate a community of growth mindset learners. • Foster perseverance in students by choosing tasks that are challenging. • Develop students' ability to analyze and problem solve. • Recognize students' effort when solving challenging problems.
	Demonstrate understanding by representing problems in multiple ways.

Mathematicians who demonstrate understanding by representing problems in multiple ways:

- Build understanding through modeling and using manipulatives.
- Represent solutions to problems in multiple ways using objects, drawings, tables, graphs and equations.
- Progress from modeling problems with objects and drawings to using algorithms and equations.
- Express connections between concepts and representations.

MA.K12.MTR.2.1:

- Choose a representation based on the given context or purpose.

Clarifications:
Teachers who encourage students to demonstrate understanding by representing problems in multiple ways:

- Help students make connections between concepts and representations.
- Provide opportunities for students to use manipulatives when investigating concepts.
- Guide students from concrete to pictorial to abstract representations as understanding progresses.
- Show students that various representations can have different purposes and can be useful in different situations.

Complete tasks with mathematical fluency.
Mathematicians who complete tasks with mathematical fluency:

- Select efficient and appropriate methods for solving problems within the given context.
- Maintain flexibility and accuracy while performing procedures and mental calculations.
- Complete tasks accurately and with confidence.
- Adapt procedures to apply them to a new context.

MA.K12.MTR.3.1:

- Use feedback to improve efficiency when performing calculations.

Clarifications:
Teachers who encourage students to complete tasks with mathematical fluency:

- Provide students with the flexibility to solve problems by selecting a procedure that allows them to solve efficiently and accurately.
- Offer multiple opportunities for students to practice efficient and generalizable methods.
- Provide opportunities for students to reflect on the method they used and determine if a more efficient method could have been used.

Engage in discussions that reflect on the mathematical thinking of self and others.
Mathematicians who engage in discussions that reflect on the mathematical thinking of self and others:

- Communicate mathematical ideas, vocabulary and methods effectively.
- Analyze the mathematical thinking of others.
- Compare the efficiency of a method to those expressed by others.
- Recognize errors and suggest how to correctly solve the task.
- Justify results by explaining methods and processes.

MA.K12.MTR.4.1:

- Construct possible arguments based on evidence.

Clarifications:
Teachers who encourage students to engage in discussions that reflect on the mathematical thinking of self and others:

- Establish a culture in which students ask questions of the teacher and their peers, and error is an opportunity for learning.
- Create opportunities for students to discuss their thinking with peers.
- Select, sequence and present student work to advance and deepen understanding of correct and increasingly efficient methods.
- Develop students' ability to justify methods and compare their responses to the responses of their peers.

Use patterns and structure to help understand and connect mathematical concepts.
Mathematicians who use patterns and structure to help understand and connect mathematical concepts:

- Focus on relevant details within a problem.
- Create plans and procedures to logically order events, steps or ideas to solve problems.
- Decompose a complex problem into manageable parts.
- Relate previously learned concepts to new concepts.
- Look for similarities among problems.

MA.K12.MTR.5.1:

- Connect solutions of problems to more complicated large-scale situations.

Clarifications:
Teachers who encourage students to use patterns and structure to help understand and connect mathematical concepts:

- Help students recognize the patterns in the world around them and connect these patterns to mathematical concepts.
- Support students to develop generalizations based on the similarities found among problems.
- Provide opportunities for students to create plans and procedures to solve problems.
- Develop students' ability to construct relationships between their current understanding and more sophisticated ways of thinking.

Assess the reasonableness of solutions.
Mathematicians who assess the reasonableness of solutions:

- Estimate to discover possible solutions.
- Use benchmark quantities to determine if a solution makes sense.
- Check calculations when solving problems.
- Verify possible solutions by explaining the methods used.

MA.K12.MTR.6.1:

- Evaluate results based on the given context.

Clarifications:
Teachers who encourage students to assess the reasonableness of solutions:

- Have students estimate or predict solutions prior to solving.
- Prompt students to continually ask, "Does this solution make sense? How do you know?"
- Reinforce that students check their work as they progress within and after a task.
- Strengthen students' ability to verify solutions through justifications.

MA.K12.MTR.7.1:	Apply mathematics to real-world contexts. Mathematicians who apply mathematics to real-world contexts: • Connect mathematical concepts to everyday experiences. • Use models and methods to understand, represent and solve problems. • Perform investigations to gather data or determine if a method is appropriate. • Redesign models and methods to improve accuracy or efficiency. **Clarifications:** Teachers who encourage students to apply mathematics to real-world contexts: • Provide opportunities for students to create models, both concrete and abstract, and perform investigations. • Challenge students to question the accuracy of their models and methods. • Support students as they validate conclusions by comparing them to the given situation. • Indicate how various concepts can be applied to other disciplines.
ELA.K12.EE.1.1:	Cite evidence to explain and justify reasoning. **Clarifications:** K-1 Students include textual evidence in their oral communication with guidance and support from adults. The evidence can consist of details from the text without naming the text. During 1st grade, students learn how to incorporate the evidence in their writing. 2-3 Students include relevant textual evidence in their written and oral communication. Students should name the text when they refer to it. In 3rd grade, students should use a combination of direct and indirect citations. 4-5 Students continue with previous skills and reference comments made by speakers and peers. Students cite texts that they've directly quoted, paraphrased, or used for information. When writing, students will use the form of citation dictated by the instructor or the style guide referenced by the instructor. 6-8 Students continue with previous skills and use a style guide to create a proper citation. 9-12 Students continue with previous skills and should be aware of existing style guides and the ways in which they differ.
ELA.K12.EE.2.1:	Read and comprehend grade-level complex texts proficiently. **Clarifications:** See Text Complexity for grade-level complexity bands and a text complexity rubric.
ELA.K12.EE.3.1:	Make inferences to support comprehension. **Clarifications:** Students will make inferences before the words infer or inference are introduced. Kindergarten students will answer questions like "Why is the girl smiling?" or make predictions about what will happen based on the title page. Students will use the terms and apply them in 2nd grade and beyond.
ELA.K12.EE.4.1:	Use appropriate collaborative techniques and active listening skills when engaging in discussions in a variety of situations. **Clarifications:** In kindergarten, students learn to listen to one another respectfully. In grades 1-2, students build upon these skills by justifying what they are thinking. For example: "I think _____ because _____." The collaborative conversations are becoming academic conversations. In grades 3-12, students engage in academic conversations discussing claims and justifying their reasoning, refining and applying skills. Students build on ideas, propel the conversation, and support claims and counterclaims with evidence.
ELA.K12.EE.5.1:	Use the accepted rules governing a specific format to create quality work. **Clarifications:** Students will incorporate skills learned into work products to produce quality work. For students to incorporate these skills appropriately, they must receive instruction. A 3rd grade student creating a poster board display must have instruction in how to effectively present information to do quality work.
ELA.K12.EE.6.1:	Use appropriate voice and tone when speaking or writing. **Clarifications:** In kindergarten and 1st grade, students learn the difference between formal and informal language. For example, the way we talk to our friends differs from the way we speak to adults. In 2nd grade and beyond, students practice appropriate social and academic language to discuss texts.
ELD.K12.ELL.SI.1:	English language learners communicate for social and instructional purposes within the school setting.

General Course Information and Notes

GENERAL NOTES

Florida's Benchmarks for Excellent Student Thinking (B.E.S.T.) Standards
This course includes Florida's B.E.S.T. ELA Expectations (EE) and Mathematical Thinking and Reasoning Standards (MTRs) for students. Florida educators should intentionally embed these standards within the content and their instruction as applicable. For guidance on the implementation of the EEs and MTRs, please visit cpalms.org/Standards/BEST_Standards.aspx and select the appropriate B.E.S.T. Standards package.

English Language Development ELD Standards Special Notes Section:
Teachers are required to provide listening, speaking, reading and writing instruction that allows English language learners (ELL) to communicate for social and instructional purposes within the school setting. For the given level of English language proficiency and with visual, graphic, or interactive support, students will interact with grade level words, expressions, sentences and discourse to process or produce language necessary for academic success. The ELD standard should specify a relevant content area concept or topic of study chosen by curriculum developers and teachers which maximizes an ELL's need for communication and social skills. To access an ELL supporting document which delineates performance definitions and descriptors, please click on the following link: cpalms.org/uploads/docs/standards/eld/SI.pdf

GENERAL INFORMATION

Course Number: 1501360

Course Path: Section: Grades PreK to 12 Education Courses > **Grade Group:** Grades 9 to 12 and Adult Education Courses > **Subject:** Physical Education > **SubSubject:** Fitness >

Abbreviated Title: WEIGHT TRAIN 3

Number of Credits: Half credit (.5)

Course Length: Semester (S)

Course Type: Core Academic Course

Course Level: 2

Course Status: Draft - Course Pending Approval

Grade Level(s): 9,10,11,12

Graduation Requirement: Physical Education

Educator Certifications

Physical Education (Grades 6-12)
Physical Education (Elementary and Secondary Grades K-12)

Personal Fitness Trainer (#1501380) 2022 - And Beyond

Course Standards

Name	Description
PE.912.C.2.6:	Compare and contrast the health-related benefits of various physical activities.
PE.912.C.2.7:	Evaluate the effectiveness of specific warm-up and cool-down activities.
PE.912.C.2.8:	Differentiate between the three different types of heat illnesses associated with fluid loss. **Clarifications:** The three types of heat illnesses are heat cramps, heat exhaustion and heat stroke.
PE.912.C.2.9:	Explain the precautions to be taken when exercising in extreme weather and/or environmental conditions. **Clarifications:** Some examples of precautions are hydration and appropriate attire.
PE.912.C.2.10:	Analyze long-term benefits of regularly participating in physical activity.
PE.912.C.2.11:	Explain how each of the health-related components of fitness are improved through the application of training principles. **Clarifications:** The health-related components of fitness are cardiorespiratory endurance, muscular strength, muscular endurance, flexibility and body composition.
PE.912.C.2.12:	Compare and contrast aerobic versus anaerobic activities.
PE.912.C.2.13:	Document food intake, calories consumed and energy expended through physical activity and analyze the results.
PE.912.C.2.14:	Compare and contrast the skill-related components of fitness used in various physical activities. **Clarifications:** The skill-related components of fitness are speed, coordination, balance, power, agility and reaction time.
PE.912.C.2.15:	Calculate individual target heart-rate zone and analyze how to adjust intensity level to stay within the desired range.
PE.912.C.2.16:	Explain the methods of monitoring levels of intensity during aerobic activity. **Clarifications:** Some examples are a talk test, rate of perceived exertion and checking one's heart rate/pulse.
PE.912.C.2.17:	Assess physiological effects of exercise during and after physical activity. **Clarifications:** Some examples are breathing, resting heart rate and blood pressure.
PE.912.C.2.18:	Differentiate between fact and fallacy as it relates to consumer physical fitness products and programs. **Clarifications:** Some examples are weight-loss pills, food labels and exercise equipment.
PE.912.C.2.23:	Apply appropriate technology and analyze data to evaluate, monitor and/or improve performance.
PE.912.C.2.25:	Analyze and evaluate the risks, safety procedures, rules and equipment associated with specific course activities.
PE.912.L.3.2:	Participate in a variety of activities that promote the health-related components of fitness. **Clarifications:** The health-related components of fitness are cardiorespiratory endurance, muscular strength, muscular endurance, flexibility and body composition.
PE.912.L.3.6:	Identify risks and safety factors that may affect physical activity throughout life.
PE.912.L.4.1:	Design a personal fitness program. **Clarifications:** Some examples of things to consider when designing a personal fitness program are timelines and current fitness level.
PE.912.L.4.2:	Identify ways to self-assess and modify a personal fitness program.
PE.912.L.4.3:	Identify strategies for setting goals when developing a personal fitness program.
PE.912.L.4.4:	Use available technology to assess, design and evaluate a personal fitness program.
PE.912.L.4.5:	Apply the principles of training to personal fitness goals. **Clarifications:** Some examples of training principles are overload, specificity and progression.
PE.912.L.4.6:	Identify health-related problems associated with low levels of cardiorespiratory endurance, muscular strength and endurance, flexibility and body composition.
PE.912.L.4.7:	Evaluate how to make changes in an individual wellness plan as lifestyle changes occur.
PE.912.M.1.5:	Apply strategies for self improvement based on individual strengths and needs.
PE.912.M.1.12:	Select and perform complex movements using a variety of equipment which lead to improved or maintained muscular strength and endurance. **Clarifications:** An example is performing plyometrics.
PE.912.M.1.13:	Perform a student-designed cardiorespiratory enhancing workout.
PE.912.M.1.14:	Utilize technology to assess, enhance and maintain health and skill-related fitness levels. **Clarifications:** Some examples of technology are Excel spreadsheets or web based programs to chart or log activities, heart rate monitors, videotapes or digital cameras.

PE.912.M.1.15:	Select and apply sport/activity specific warm-up and cool-down techniques.
PE.912.M.1.16:	Apply the principles of training and conditioning to accommodate individual needs and strengths. **Clarifications:** Some examples of training principles are overload, specificity and progression.
PE.912.M.1.17:	Demonstrate basic cardiopulmonary resuscitation (CPR) procedures.
PE.912.M.1.19:	Use correct body alignment, strength, flexibility and coordination in the performance of technical movements.
PE.912.M.1.34:	Demonstrate use of the mechanical principles as they apply to specific course activities. **Clarifications:** Some examples are balance, force and leverage.
PE.912.M.1.35:	Select proper equipment and apply all appropriate safety procedures necessary for participation.
PE.912.R.5.2:	Develop strategies for including persons of diverse backgrounds and abilities while participating in a variety of physical activities.
PE.912.R.5.4:	Maintain appropriate personal, social and ethical behavior while participating in a variety of physical activities. **Clarifications:** Some examples are respecting teammates, opponents and officials, and accepting both victory and defeat.
PE.912.R.5.5:	Demonstrate appropriate etiquette, care of equipment, respect for facilities and safe behaviors while participating in a variety of physical activities.
PE.912.R.6.1:	Discuss opportunities for participation in a variety of physical activities outside of the school setting that contribute to personal enjoyment and the attainment or maintenance of a healthy lifestyle.
PE.912.R.6.2:	Analyze physical activities from which benefits can be derived. **Clarifications:** Some examples of potential benefits are physical, mental, emotional and social.
SC.912.L.14.12:	Describe the anatomy and histology of bone tissue.
SC.912.L.14.16:	Describe the anatomy and histology, including ultrastructure, of muscle tissue.
SC.912.L.14.17:	List the steps involved in the sliding filament of muscle contraction.
SC.912.L.14.19:	Explain the physiology of skeletal muscle.
SC.912.L.14.20:	Identify the major muscles of the human on a model or diagram.
SC.912.L.14.24:	Identify the general parts of a synapse and describe the physiology of signal transmission across a synapse.
SC.912.L.14.36:	Describe the factors affecting blood flow through the cardiovascular system.
SC.912.L.14.44:	Describe the physiology of the respiratory system including the mechanisms of ventilation, gas exchange, gas transport and the mechanisms that control the rate of ventilation.
MA.K12.MTR.1.1:	Mathematicians who participate in effortful learning both individually and with others: • Analyze the problem in a way that makes sense given the task. • Ask questions that will help with solving the task. • Build perseverance by modifying methods as needed while solving a challenging task. • Stay engaged and maintain a positive mindset when working to solve tasks. • Help and support each other when attempting a new method or approach. **Clarifications:** Teachers who encourage students to participate actively in effortful learning both individually and with others: • Cultivate a community of growth mindset learners. • Foster perseverance in students by choosing tasks that are challenging. • Develop students' ability to analyze and problem solve. • Recognize students' effort when solving challenging problems.
MA.K12.MTR.2.1:	Demonstrate understanding by representing problems in multiple ways. Mathematicians who demonstrate understanding by representing problems in multiple ways: • Build understanding through modeling and using manipulatives. • Represent solutions to problems in multiple ways using objects, drawings, tables, graphs and equations. • Progress from modeling problems with objects and drawings to using algorithms and equations. • Express connections between concepts and representations. • Choose a representation based on the given context or purpose. **Clarifications:** Teachers who encourage students to demonstrate understanding by representing problems in multiple ways: • Help students make connections between concepts and representations. • Provide opportunities for students to use manipulatives when investigating concepts. • Guide students from concrete to pictorial to abstract representations as understanding progresses. • Show students that various representations can have different purposes and can be useful in different situations.
MA.K12.MTR.3.1:	Complete tasks with mathematical fluency. Mathematicians who complete tasks with mathematical fluency: • Select efficient and appropriate methods for solving problems within the given context. • Maintain flexibility and accuracy while performing procedures and mental calculations. • Complete tasks accurately and with confidence. • Adapt procedures to apply them to a new context. • Use feedback to improve efficiency when performing calculations. **Clarifications:** Teachers who encourage students to complete tasks with mathematical fluency: • Provide students with the flexibility to solve problems by selecting a procedure that allows them to solve efficiently and accurately. • Offer multiple opportunities for students to practice efficient and generalizable methods. • Provide opportunities for students to reflect on the method they used and determine if a more efficient method could have been used.

MA.K12.MTR.4.1:	Engage in discussions that reflect on the mathematical thinking of self and others. Mathematicians who engage in discussions that reflect on the mathematical thinking of self and others: • Communicate mathematical ideas, vocabulary and methods effectively. • Analyze the mathematical thinking of others. • Compare the efficiency of a method to those expressed by others. • Recognize errors and suggest how to correctly solve the task. • Justify results by explaining methods and processes. • Construct possible arguments based on evidence. **Clarifications:** Teachers who encourage students to engage in discussions that reflect on the mathematical thinking of self and others: • Establish a culture in which students ask questions of the teacher and their peers, and error is an opportunity for learning. • Create opportunities for students to discuss their thinking with peers. • Select, sequence and present student work to advance and deepen understanding of correct and increasingly efficient methods. • Develop students' ability to justify methods and compare their responses to the responses of their peers.
MA.K12.MTR.5.1:	Use patterns and structure to help understand and connect mathematical concepts. Mathematicians who use patterns and structure to help understand and connect mathematical concepts: • Focus on relevant details within a problem. • Create plans and procedures to logically order events, steps or ideas to solve problems. • Decompose a complex problem into manageable parts. • Relate previously learned concepts to new concepts. • Look for similarities among problems. • Connect solutions of problems to more complicated large-scale situations. **Clarifications:** Teachers who encourage students to use patterns and structure to help understand and connect mathematical concepts: • Help students recognize the patterns in the world around them and connect these patterns to mathematical concepts. • Support students to develop generalizations based on the similarities found among problems. • Provide opportunities for students to create plans and procedures to solve problems. • Develop students' ability to construct relationships between their current understanding and more sophisticated ways of thinking.
MA.K12.MTR.6.1:	Assess the reasonableness of solutions. Mathematicians who assess the reasonableness of solutions: • Estimate to discover possible solutions. • Use benchmark quantities to determine if a solution makes sense. • Check calculations when solving problems. • Verify possible solutions by explaining the methods used. • Evaluate results based on the given context. **Clarifications:** Teachers who encourage students to assess the reasonableness of solutions: • Have students estimate or predict solutions prior to solving. • Prompt students to continually ask, "Does this solution make sense? How do you know?" • Reinforce that students check their work as they progress within and after a task. • Strengthen students' ability to verify solutions through justifications.
MA.K12.MTR.7.1:	Apply mathematics to real-world contexts. Mathematicians who apply mathematics to real-world contexts: • Connect mathematical concepts to everyday experiences. • Use models and methods to understand, represent and solve problems. • Perform investigations to gather data or determine if a method is appropriate. • Redesign models and methods to improve accuracy or efficiency. **Clarifications:** Teachers who encourage students to apply mathematics to real-world contexts: • Provide opportunities for students to create models, both concrete and abstract, and perform investigations. • Challenge students to question the accuracy of their models and methods. • Support students as they validate conclusions by comparing them to the given situation. • Indicate how various concepts can be applied to other disciplines.
ELA.K12.EE.1.1:	Cite evidence to explain and justify reasoning. **Clarifications:** K-1 Students include textual evidence in their oral communication with guidance and support from adults. The evidence can consist of details from the text without naming the text. During 1st grade, students learn how to incorporate the evidence in their writing. 2-3 Students include relevant textual evidence in their written and oral communication. Students should name the text when they refer to it. In 3rd grade, students should use a combination of direct and indirect citations. 4-5 Students continue with previous skills and reference comments made by speakers and peers. Students cite texts that they've directly quoted, paraphrased, or used for information. When writing, students will use the form of citation dictated by the instructor or the style guide referenced by the instructor. 6-8 Students continue with previous skills and use a style guide to create a proper citation. 9-12 Students continue with previous skills and should be aware of existing style guides and the ways in which they differ.
	Read and comprehend grade-level complex texts proficiently.

ELA.K12.EE.2.1:	**Clarifications:** See Text Complexity for grade-level complexity bands and a text complexity rubric.
ELA.K12.EE.3.1:	Make inferences to support comprehension. **Clarifications:** Students will make inferences before the words infer or inference are introduced. Kindergarten students will answer questions like "Why is the girl smiling?" or make predictions about what will happen based on the title page. Students will use the terms and apply them in 2nd grade and beyond.
ELA.K12.EE.4.1:	Use appropriate collaborative techniques and active listening skills when engaging in discussions in a variety of situations. **Clarifications:** In kindergarten, students learn to listen to one another respectfully. In grades 1-2, students build upon these skills by justifying what they are thinking. For example: "I think _____ because _____." The collaborative conversations are becoming academic conversations. In grades 3-12, students engage in academic conversations discussing claims and justifying their reasoning, refining and applying skills. Students build on ideas, propel the conversation, and support claims and counterclaims with evidence.
ELA.K12.EE.5.1:	Use the accepted rules governing a specific format to create quality work. **Clarifications:** Students will incorporate skills learned into work products to produce quality work. For students to incorporate these skills appropriately, they must receive instruction. A 3rd grade student creating a poster board display must have instruction in how to effectively present information to do quality work.
ELA.K12.EE.6.1:	Use appropriate voice and tone when speaking or writing. **Clarifications:** In kindergarten and 1st grade, students learn the difference between formal and informal language. For example, the way we talk to our friends differs from the way we speak to adults. In 2nd grade and beyond, students practice appropriate social and academic language to discuss texts.
HE.912.B.3.4:	Justify when professional health services or providers may be required. **Clarifications:** Injury, depression, suicide, drug abuse, medical emergency, 911, child abuse, domestic and/or dating violence, and natural or man-made conditions.
HE.912.B.6.2:	Formulate a plan to attain a personal health goal that addresses strengths, needs, and risks. **Clarifications:** Weight management, comprehensive physical fitness, stress management, dating relationships, risky behaviors, and a wellness-program plan.
HE.912.B.6.3:	Implement strategies and monitor progress in achieving a personal health goal. **Clarifications:** Stress management, time out, using of a squeeze ball when frustrated, talking with a friend or professional, pacing yourself, setting realistic expectations, using rewards, getting support, and wellness promotion.
HE.912.C.1.4:	Propose strategies to reduce or prevent injuries and health problems. **Clarifications:** Mandatory passenger-restraint/helmet laws, refusal skills, mandatory immunizations, healthy relationship skills, and improved inspection of food sources.
HE.912.P.8.1:	Demonstrate how to influence and support others in making positive health choices. **Clarifications:** Avoidance of underage drinking, prevention of driving under the influence, suicide prevention, promotion of healthy dating/personal relationships, responsible parenting, disease prevention, and promotion of first-aid training.
ELD.K12.ELL.SI.1:	English language learners communicate for social and instructional purposes within the school setting.

General Course Information and Notes

GENERAL NOTES

Florida's Benchmarks for Excellent Student Thinking (B.E.S.T.) Standards
This course includes Florida's B.E.S.T. ELA Expectations (EE) and Mathematical Thinking and Reasoning Standards (MTRs) for students. Florida educators should intentionally embed these standards within the content and their instruction as applicable. For guidance on the implementation of the EEs and MTRs, please visit cpalms.org/Standards/BEST_Standards.aspx and select the appropriate B.E.S.T. Standards package.

English Language Development ELD Standards Special Notes Section:
Teachers are required to provide listening, speaking, reading and writing instruction that allows English language learners (ELL) to communicate for social and instructional purposes within the school setting. For the given level of English language proficiency and with visual, graphic, or interactive support, students will interact with grade level words, expressions, sentences and discourse to process or produce language necessary for academic success. The ELD standard should specify a relevant content area concept or topic of study chosen by curriculum developers and teachers which maximizes an ELL's need for communication and social skills. To access an ELL supporting document which delineates performance definitions and descriptors, please click on the following link: cpalms.org/uploads/docs/standards/eld/SI.pdf

GENERAL INFORMATION

Course Path: Section: Grades PreK to 12 Education

Course Number: 1501380

Courses > **Grade Group:** Grades 9 to 12 and Adult Education Courses > **Subject:** Physical Education > **SubSubject:** Fitness >

Abbreviated Title: PERS FIT TRAINER

Number of Credits: One (1) credit

Course Length: Year (Y)

Course Type: Core Academic Course

Course Level: 2

Course Status: Draft - Course Pending Approval

Grade Level(s): 9,10,11,12

Graduation Requirement: Physical Education

Educator Certifications

Physical Education (Elementary and Secondary Grades K-12)

Comprehensive Fitness (#1501390) 2022 - And Beyond

Course Standards

Name	Description
PE.912.C.2.15:	Calculate individual target heart-rate zone and analyze how to adjust intensity level to stay within the desired range.
PE.912.C.2.16:	Explain the methods of monitoring levels of intensity during aerobic activity. **Clarifications:** Some examples are a talk test, rate of perceived exertion and checking one's heart rate/pulse.
PE.912.C.2.23:	Apply appropriate technology and analyze data to evaluate, monitor and/or improve performance.
PE.912.C.2.26:	Evaluate skill patterns of self and/or partner by detecting and correcting mechanical errors.
PE.912.C.2.28:	Interpret and apply the rules associated with specific course activities.
PE.912.L.3.1:	Participate in a variety of physical activities to meet the recommended number of minutes of moderate to vigorous physical activity beyond physical education on five or more days of the week.
PE.912.L.3.2:	Participate in a variety of activities that promote the health-related components of fitness. **Clarifications:** The health-related components of fitness are cardiorespiratory endurance, muscular strength, muscular endurance, flexibility and body composition.
PE.912.L.3.3:	Identify a variety of activities that promote effective stress management.
PE.912.L.4.1:	Design a personal fitness program. **Clarifications:** Some examples of things to consider when designing a personal fitness program are timelines and current fitness level.
PE.912.L.4.2:	Identify ways to self-assess and modify a personal fitness program.
PE.912.L.4.3:	Identify strategies for setting goals when developing a personal fitness program.
PE.912.L.4.4:	Use available technology to assess, design and evaluate a personal fitness program.
PE.912.L.4.5:	Apply the principles of training to personal fitness goals. **Clarifications:** Some examples of training principles are overload, specificity and progression.
PE.912.L.4.7:	Evaluate how to make changes in an individual wellness plan as lifestyle changes occur.
PE.912.M.1.5:	Apply strategies for self improvement based on individual strengths and needs.
PE.912.M.1.12:	Select and perform complex movements using a variety of equipment which lead to improved or maintained muscular strength and endurance. **Clarifications:** An example is performing plyometrics.
PE.912.M.1.13:	Perform a student-designed cardiorespiratory enhancing workout.
PE.912.M.1.14:	Utilize technology to assess, enhance and maintain health and skill-related fitness levels. **Clarifications:** Some examples of technology are Excel spreadsheets or web based programs to chart or log activities, heart rate monitors, videotapes or digital cameras.
PE.912.M.1.15:	Select and apply sport/activity specific warm-up and cool-down techniques.
PE.912.M.1.16:	Apply the principles of training and conditioning to accommodate individual needs and strengths. **Clarifications:** Some examples of training principles are overload, specificity and progression.
PE.912.M.1.33:	Practice complex motor activities in order to improve performance.
PE.912.M.1.34:	Demonstrate use of the mechanical principles as they apply to specific course activities. **Clarifications:** Some examples are balance, force and leverage.
PE.912.M.1.35:	Select proper equipment and apply all appropriate safety procedures necessary for participation.
PE.912.R.5.4:	Maintain appropriate personal, social and ethical behavior while participating in a variety of physical activities. **Clarifications:** Some examples are respecting teammates, opponents and officials, and accepting both victory and defeat.
PE.912.R.5.5:	Demonstrate appropriate etiquette, care of equipment, respect for facilities and safe behaviors while participating in a variety of physical activities.
PE.912.R.6.3:	Analyze the roles of games, sports and/or physical activities in other cultures.
MA.K12.MTR.1.1:	Mathematicians who participate in effortful learning both individually and with others: • Analyze the problem in a way that makes sense given the task. • Ask questions that will help with solving the task. • Build perseverance by modifying methods as needed while solving a challenging task. • Stay engaged and maintain a positive mindset when working to solve tasks. • Help and support each other when attempting a new method or approach. **Clarifications:** Teachers who encourage students to participate actively in effortful learning both individually and with others: • Cultivate a community of growth mindset learners.

- Foster perseverance in students by choosing tasks that are challenging.
- Develop students' ability to analyze and problem solve.
- Recognize students' effort when solving challenging problems.

Demonstrate understanding by representing problems in multiple ways.
Mathematicians who demonstrate understanding by representing problems in multiple ways:

- Build understanding through modeling and using manipulatives.
- Represent solutions to problems in multiple ways using objects, drawings, tables, graphs and equations.
- Progress from modeling problems with objects and drawings to using algorithms and equations.
- Express connections between concepts and representations.

MA.K12.MTR.2.1:

- Choose a representation based on the given context or purpose.

Clarifications:
Teachers who encourage students to demonstrate understanding by representing problems in multiple ways:

- Help students make connections between concepts and representations.
- Provide opportunities for students to use manipulatives when investigating concepts.
- Guide students from concrete to pictorial to abstract representations as understanding progresses.
- Show students that various representations can have different purposes and can be useful in different situations.

Complete tasks with mathematical fluency.
Mathematicians who complete tasks with mathematical fluency:

- Select efficient and appropriate methods for solving problems within the given context.
- Maintain flexibility and accuracy while performing procedures and mental calculations.
- Complete tasks accurately and with confidence.
- Adapt procedures to apply them to a new context.

MA.K12.MTR.3.1:

- Use feedback to improve efficiency when performing calculations.

Clarifications:
Teachers who encourage students to complete tasks with mathematical fluency:

- Provide students with the flexibility to solve problems by selecting a procedure that allows them to solve efficiently and accurately.
- Offer multiple opportunities for students to practice efficient and generalizable methods.
- Provide opportunities for students to reflect on the method they used and determine if a more efficient method could have been used.

Engage in discussions that reflect on the mathematical thinking of self and others.
Mathematicians who engage in discussions that reflect on the mathematical thinking of self and others:

- Communicate mathematical ideas, vocabulary and methods effectively.
- Analyze the mathematical thinking of others.
- Compare the efficiency of a method to those expressed by others.
- Recognize errors and suggest how to correctly solve the task.
- Justify results by explaining methods and processes.

MA.K12.MTR.4.1:

- Construct possible arguments based on evidence.

Clarifications:
Teachers who encourage students to engage in discussions that reflect on the mathematical thinking of self and others:

- Establish a culture in which students ask questions of the teacher and their peers, and error is an opportunity for learning.
- Create opportunities for students to discuss their thinking with peers.
- Select, sequence and present student work to advance and deepen understanding of correct and increasingly efficient methods.
- Develop students' ability to justify methods and compare their responses to the responses of their peers.

Use patterns and structure to help understand and connect mathematical concepts.
Mathematicians who use patterns and structure to help understand and connect mathematical concepts:

- Focus on relevant details within a problem.
- Create plans and procedures to logically order events, steps or ideas to solve problems.
- Decompose a complex problem into manageable parts.
- Relate previously learned concepts to new concepts.
- Look for similarities among problems.

MA.K12.MTR.5.1:

- Connect solutions of problems to more complicated large-scale situations.

Clarifications:
Teachers who encourage students to use patterns and structure to help understand and connect mathematical concepts:

- Help students recognize the patterns in the world around them and connect these patterns to mathematical concepts.
- Support students to develop generalizations based on the similarities found among problems.
- Provide opportunities for students to create plans and procedures to solve problems.
- Develop students' ability to construct relationships between their current understanding and more sophisticated ways of thinking.

Assess the reasonableness of solutions.
Mathematicians who assess the reasonableness of solutions:

- Estimate to discover possible solutions.
- Use benchmark quantities to determine if a solution makes sense.
- Check calculations when solving problems.
- Verify possible solutions by explaining the methods used.

MA.K12.MTR.6.1:

- Evaluate results based on the given context.

Clarifications:
Teachers who encourage students to assess the reasonableness of solutions:

	• Have students estimate or predict solutions prior to solving. • Prompt students to continually ask, "Does this solution make sense? How do you know?" • Reinforce that students check their work as they progress within and after a task. • Strengthen students' ability to verify solutions through justifications.
MA.K12.MTR.7.1:	Apply mathematics to real-world contexts. Mathematicians who apply mathematics to real-world contexts: • Connect mathematical concepts to everyday experiences. • Use models and methods to understand, represent and solve problems. • Perform investigations to gather data or determine if a method is appropriate. • Redesign models and methods to improve accuracy or efficiency. **Clarifications:** Teachers who encourage students to apply mathematics to real-world contexts: • Provide opportunities for students to create models, both concrete and abstract, and perform investigations. • Challenge students to question the accuracy of their models and methods. • Support students as they validate conclusions by comparing them to the given situation. • Indicate how various concepts can be applied to other disciplines.
ELA.K12.EE.1.1:	Cite evidence to explain and justify reasoning. **Clarifications:** K-1 Students include textual evidence in their oral communication with guidance and support from adults. The evidence can consist of details from the text without naming the text. During 1st grade, students learn how to incorporate the evidence in their writing. 2-3 Students include relevant textual evidence in their written and oral communication. Students should name the text when they refer to it. In 3rd grade, students should use a combination of direct and indirect citations. 4-5 Students continue with previous skills and reference comments made by speakers and peers. Students cite texts that they've directly quoted, paraphrased, or used for information. When writing, students will use the form of citation dictated by the instructor or the style guide referenced by the instructor. 6-8 Students continue with previous skills and use a style guide to create a proper citation. 9-12 Students continue with previous skills and should be aware of existing style guides and the ways in which they differ.
ELA.K12.EE.2.1:	Read and comprehend grade-level complex texts proficiently. **Clarifications:** See Text Complexity for grade-level complexity bands and a text complexity rubric.
ELA.K12.EE.3.1:	Make inferences to support comprehension. **Clarifications:** Students will make inferences before the words infer or inference are introduced. Kindergarten students will answer questions like "Why is the girl smiling?" or make predictions about what will happen based on the title page. Students will use the terms and apply them in 2nd grade and beyond.
ELA.K12.EE.4.1:	Use appropriate collaborative techniques and active listening skills when engaging in discussions in a variety of situations. **Clarifications:** In kindergarten, students learn to listen to one another respectfully. In grades 1-2, students build upon these skills by justifying what they are thinking. For example: "I think _____ because _____." The collaborative conversations are becoming academic conversations. In grades 3-12, students engage in academic conversations discussing claims and justifying their reasoning, refining and applying skills. Students build on ideas, propel the conversation, and support claims and counterclaims with evidence.
ELA.K12.EE.5.1:	Use the accepted rules governing a specific format to create quality work. **Clarifications:** Students will incorporate skills learned into work products to produce quality work. For students to incorporate these skills appropriately, they must receive instruction. A 3rd grade student creating a poster board display must have instruction in how to effectively present information to do quality work.
ELA.K12.EE.6.1:	Use appropriate voice and tone when speaking or writing. **Clarifications:** In kindergarten and 1st grade, students learn the difference between formal and informal language. For example, the way we talk to our friends differs from the way we speak to adults. In 2nd grade and beyond, students practice appropriate social and academic language to discuss texts.
ELD.K12.ELL.SI.1:	English language learners communicate for social and instructional purposes within the school setting.

General Course Information and Notes

GENERAL NOTES

Florida's Benchmarks for Excellent Student Thinking (B.E.S.T.) Standards
This course includes Florida's B.E.S.T. ELA Expectations (EE) and Mathematical Thinking and Reasoning Standards (MTRs) for students. Florida educators should intentionally embed these standards within the content and their instruction as applicable. For guidance on the implementation of the EEs and MTRs, please visit cpalms.org/Standards/BEST_Standards.aspx and select the appropriate B.E.S.T. Standards package.

English Language Development ELD Standards Special Notes Section:
Teachers are required to provide listening, speaking, reading and writing instruction that allows English language learners (ELL) to communicate for social and instructional

purposes within the school setting. For the given level of English language proficiency and with visual, graphic, or interactive support, students will interact with grade level words, expressions, sentences and discourse to process or produce language necessary for academic success. The ELD standard should specify a relevant content area concept or topic of study chosen by curriculum developers and teachers which maximizes an ELL's need for communication and social skills. To access an ELL supporting document which delineates performance definitions and descriptors, please click on the following link: cpalms.org/uploads/docs/standards/eld/SI.pdf

GENERAL INFORMATION

Course Number: 1501390

Course Path: Section: Grades PreK to 12 Education Courses > **Grade Group:** Grades 9 to 12 and Adult Education Courses > **Subject:** Physical Education > **SubSubject:** Fitness >

Abbreviated Title: COMPRE FIT

Number of Credits: Half credit (.5)

Course Length: Semester (S)

Course Type: Core Academic Course

Course Level: 2

Course Status: Draft - Course Pending Approval

Grade Level(s): 9,10,11,12

Graduation Requirement: Physical Education

Educator Certifications

Physical Education (Grades 6-12)
Physical Education (Elementary and Secondary Grades K-12)

Power Weight Training 1 (#1501410) 2022 - And Beyond

Course Standards

Name	Description
PE.912.C.2.3:	Analyze the movement performance of self and others. **Clarifications:** Some examples are video analysis and checklist.
PE.912.C.2.7:	Evaluate the effectiveness of specific warm-up and cool-down activities.
PE.912.C.2.14:	Compare and contrast the skill-related components of fitness used in various physical activities. **Clarifications:** The skill-related components of fitness are speed, coordination, balance, power, agility and reaction time.
PE.912.C.2.17:	Assess physiological effects of exercise during and after physical activity. **Clarifications:** Some examples are breathing, resting heart rate and blood pressure.
PE.912.C.2.23:	Apply appropriate technology and analyze data to evaluate, monitor and/or improve performance.
PE.912.C.2.25:	Analyze and evaluate the risks, safety procedures, rules and equipment associated with specific course activities.
PE.912.C.2.26:	Evaluate skill patterns of self and/or partner by detecting and correcting mechanical errors.
PE.912.L.3.2:	Participate in a variety of activities that promote the health-related components of fitness. **Clarifications:** The health-related components of fitness are cardiorespiratory endurance, muscular strength, muscular endurance, flexibility and body composition.
PE.912.L.3.3:	Identify a variety of activities that promote effective stress management.
PE.912.L.3.6:	Identify risks and safety factors that may affect physical activity throughout life.
PE.912.L.4.2:	Identify ways to self-assess and modify a personal fitness program.
PE.912.L.4.3:	Identify strategies for setting goals when developing a personal fitness program.
PE.912.L.4.4:	Use available technology to assess, design and evaluate a personal fitness program.
PE.912.L.4.5:	Apply the principles of training to personal fitness goals. **Clarifications:** Some examples of training principles are overload, specificity and progression.
PE.912.M.1.5:	Apply strategies for self improvement based on individual strengths and needs.
PE.912.M.1.12:	Select and perform complex movements using a variety of equipment which lead to improved or maintained muscular strength and endurance. **Clarifications:** An example is performing plyometrics.
PE.912.M.1.16:	Apply the principles of training and conditioning to accommodate individual needs and strengths. **Clarifications:** Some examples of training principles are overload, specificity and progression.
PE.912.M.1.19:	Use correct body alignment, strength, flexibility and coordination in the performance of technical movements.
PE.912.M.1.30:	Combine and apply movement patterns from simple to complex.
PE.912.M.1.34:	Demonstrate use of the mechanical principles as they apply to specific course activities. **Clarifications:** Some examples are balance, force and leverage.
PE.912.M.1.35:	Select proper equipment and apply all appropriate safety procedures necessary for participation.
PE.912.R.5.5:	Demonstrate appropriate etiquette, care of equipment, respect for facilities and safe behaviors while participating in a variety of physical activities.
PE.912.R.6.2:	Analyze physical activities from which benefits can be derived. **Clarifications:** Some examples of potential benefits are physical, mental, emotional and social.
PE.912.R.6.3:	Analyze the roles of games, sports and/or physical activities in other cultures.
MA.K12.MTR.1.1:	Mathematicians who participate in effortful learning both individually and with others: • Analyze the problem in a way that makes sense given the task. • Ask questions that will help with solving the task. • Build perseverance by modifying methods as needed while solving a challenging task. • Stay engaged and maintain a positive mindset when working to solve tasks. • Help and support each other when attempting a new method or approach. **Clarifications:** Teachers who encourage students to participate actively in effortful learning both individually and with others: • Cultivate a community of growth mindset learners. • Foster perseverance in students by choosing tasks that are challenging. • Develop students' ability to analyze and problem solve. • Recognize students' effort when solving challenging problems.
	Demonstrate understanding by representing problems in multiple ways.

Mathematicians who demonstrate understanding by representing problems in multiple ways:

- Build understanding through modeling and using manipulatives.
- Represent solutions to problems in multiple ways using objects, drawings, tables, graphs and equations.
- Progress from modeling problems with objects and drawings to using algorithms and equations.
- Express connections between concepts and representations.

MA.K12.MTR.2.1:

- Choose a representation based on the given context or purpose.

Clarifications:
Teachers who encourage students to demonstrate understanding by representing problems in multiple ways:

- Help students make connections between concepts and representations.
- Provide opportunities for students to use manipulatives when investigating concepts.
- Guide students from concrete to pictorial to abstract representations as understanding progresses.
- Show students that various representations can have different purposes and can be useful in different situations.

Complete tasks with mathematical fluency.
Mathematicians who complete tasks with mathematical fluency:

- Select efficient and appropriate methods for solving problems within the given context.
- Maintain flexibility and accuracy while performing procedures and mental calculations.
- Complete tasks accurately and with confidence.
- Adapt procedures to apply them to a new context.

MA.K12.MTR.3.1:

- Use feedback to improve efficiency when performing calculations.

Clarifications:
Teachers who encourage students to complete tasks with mathematical fluency:

- Provide students with the flexibility to solve problems by selecting a procedure that allows them to solve efficiently and accurately.
- Offer multiple opportunities for students to practice efficient and generalizable methods.
- Provide opportunities for students to reflect on the method they used and determine if a more efficient method could have been used.

Engage in discussions that reflect on the mathematical thinking of self and others.
Mathematicians who engage in discussions that reflect on the mathematical thinking of self and others:

- Communicate mathematical ideas, vocabulary and methods effectively.
- Analyze the mathematical thinking of others.
- Compare the efficiency of a method to those expressed by others.
- Recognize errors and suggest how to correctly solve the task.
- Justify results by explaining methods and processes.

MA.K12.MTR.4.1:

- Construct possible arguments based on evidence.

Clarifications:
Teachers who encourage students to engage in discussions that reflect on the mathematical thinking of self and others:

- Establish a culture in which students ask questions of the teacher and their peers, and error is an opportunity for learning.
- Create opportunities for students to discuss their thinking with peers.
- Select, sequence and present student work to advance and deepen understanding of correct and increasingly efficient methods.
- Develop students' ability to justify methods and compare their responses to the responses of their peers.

Use patterns and structure to help understand and connect mathematical concepts.
Mathematicians who use patterns and structure to help understand and connect mathematical concepts:

- Focus on relevant details within a problem.
- Create plans and procedures to logically order events, steps or ideas to solve problems.
- Decompose a complex problem into manageable parts.
- Relate previously learned concepts to new concepts.
- Look for similarities among problems.

MA.K12.MTR.5.1:

- Connect solutions of problems to more complicated large-scale situations.

Clarifications:
Teachers who encourage students to use patterns and structure to help understand and connect mathematical concepts:

- Help students recognize the patterns in the world around them and connect these patterns to mathematical concepts.
- Support students to develop generalizations based on the similarities found among problems.
- Provide opportunities for students to create plans and procedures to solve problems.
- Develop students' ability to construct relationships between their current understanding and more sophisticated ways of thinking.

Assess the reasonableness of solutions.
Mathematicians who assess the reasonableness of solutions:

- Estimate to discover possible solutions.
- Use benchmark quantities to determine if a solution makes sense.
- Check calculations when solving problems.
- Verify possible solutions by explaining the methods used.

MA.K12.MTR.6.1:

- Evaluate results based on the given context.

Clarifications:
Teachers who encourage students to assess the reasonableness of solutions:

- Have students estimate or predict solutions prior to solving.
- Prompt students to continually ask, "Does this solution make sense? How do you know?"
- Reinforce that students check their work as they progress within and after a task.
- Strengthen students' ability to verify solutions through justifications.

MA.K12.MTR.7.1:	Apply mathematics to real-world contexts. Mathematicians who apply mathematics to real-world contexts: • Connect mathematical concepts to everyday experiences. • Use models and methods to understand, represent and solve problems. • Perform investigations to gather data or determine if a method is appropriate. • Redesign models and methods to improve accuracy or efficiency. **Clarifications:** Teachers who encourage students to apply mathematics to real-world contexts: • Provide opportunities for students to create models, both concrete and abstract, and perform investigations. • Challenge students to question the accuracy of their models and methods. • Support students as they validate conclusions by comparing them to the given situation. • Indicate how various concepts can be applied to other disciplines.
ELA.K12.EE.1.1:	Cite evidence to explain and justify reasoning. **Clarifications:** K-1 Students include textual evidence in their oral communication with guidance and support from adults. The evidence can consist of details from the text without naming the text. During 1st grade, students learn how to incorporate the evidence in their writing. 2-3 Students include relevant textual evidence in their written and oral communication. Students should name the text when they refer to it. In 3rd grade, students should use a combination of direct and indirect citations. 4-5 Students continue with previous skills and reference comments made by speakers and peers. Students cite texts that they've directly quoted, paraphrased, or used for information. When writing, students will use the form of citation dictated by the instructor or the style guide referenced by the instructor. 6-8 Students continue with previous skills and use a style guide to create a proper citation. 9-12 Students continue with previous skills and should be aware of existing style guides and the ways in which they differ.
ELA.K12.EE.2.1:	Read and comprehend grade-level complex texts proficiently. **Clarifications:** See Text Complexity for grade-level complexity bands and a text complexity rubric.
ELA.K12.EE.3.1:	Make inferences to support comprehension. **Clarifications:** Students will make inferences before the words infer or inference are introduced. Kindergarten students will answer questions like "Why is the girl smiling?" or make predictions about what will happen based on the title page. Students will use the terms and apply them in 2nd grade and beyond.
ELA.K12.EE.4.1:	Use appropriate collaborative techniques and active listening skills when engaging in discussions in a variety of situations. **Clarifications:** In kindergarten, students learn to listen to one another respectfully. In grades 1-2, students build upon these skills by justifying what they are thinking. For example: "I think _____ because _____." The collaborative conversations are becoming academic conversations. In grades 3-12, students engage in academic conversations discussing claims and justifying their reasoning, refining and applying skills. Students build on ideas, propel the conversation, and support claims and counterclaims with evidence.
ELA.K12.EE.5.1:	Use the accepted rules governing a specific format to create quality work. **Clarifications:** Students will incorporate skills learned into work products to produce quality work. For students to incorporate these skills appropriately, they must receive instruction. A 3rd grade student creating a poster board display must have instruction in how to effectively present information to do quality work.
ELA.K12.EE.6.1:	Use appropriate voice and tone when speaking or writing. **Clarifications:** In kindergarten and 1st grade, students learn the difference between formal and informal language. For example, the way we talk to our friends differs from the way we speak to adults. In 2nd grade and beyond, students practice appropriate social and academic language to discuss texts.
ELD.K12.ELL.SI.1:	English language learners communicate for social and instructional purposes within the school setting.

General Course Information and Notes

GENERAL NOTES

Florida's Benchmarks for Excellent Student Thinking (B.E.S.T.) Standards
This course includes Florida's B.E.S.T. ELA Expectations (EE) and Mathematical Thinking and Reasoning Standards (MTRs) for students. Florida educators should intentionally embed these standards within the content and their instruction as applicable. For guidance on the implementation of the EEs and MTRs, please visit cpalms.org/Standards/BEST_Standards.aspx and select the appropriate B.E.S.T. Standards package.

English Language Development ELD Standards Special Notes Section:
Teachers are required to provide listening, speaking, reading and writing instruction that allows English language learners (ELL) to communicate for social and instructional purposes within the school setting. For the given level of English language proficiency and with visual, graphic, or interactive support, students will interact with grade level words, expressions, sentences and discourse to process or produce language necessary for academic success. The ELD standard should specify a relevant content area concept or topic of study chosen by curriculum developers and teachers which maximizes an ELL's need for communication and social skills. To access an ELL supporting document which delineates performance definitions and descriptors, please click on the following link: cpalms.org/uploads/docs/standards/eld/SI.pdf

GENERAL INFORMATION

Course Number: 1501410

Course Path: Section: Grades PreK to 12 Education Courses > **Grade Group:** Grades 9 to 12 and Adult Education Courses > **Subject:** Physical Education > **SubSubject:** Fitness >

Abbreviated Title: POWER WEIGHT TRAIN 1

Number of Credits: Half credit (.5)

Course Length: Semester (S)

Course Type: Core Academic Course

Course Level: 2

Course Status: Draft - Course Pending Approval

Grade Level(s): 9,10,11,12

Graduation Requirement: Physical Education

Educator Certifications

Physical Education (Grades 6-12)
Physical Education (Elementary and Secondary Grades K-12)

Gymnastics 1 (#1502300) 2022 - And Beyond

Course Standards

Name	Description
PE.912.C.2.23:	Apply appropriate technology and analyze data to evaluate, monitor and/or improve performance.
PE.912.C.2.26:	Evaluate skill patterns of self and/or partner by detecting and correcting mechanical errors.
PE.912.L.3.6:	Identify risks and safety factors that may affect physical activity throughout life.
PE.912.L.4.5:	Apply the principles of training to personal fitness goals. **Clarifications:** Some examples of training principles are overload, specificity and progression.
PE.912.L.4.7:	Evaluate how to make changes in an individual wellness plan as lifestyle changes occur.
PE.912.M.1.5:	Apply strategies for self improvement based on individual strengths and needs.
PE.912.M.1.15:	Select and apply sport/activity specific warm-up and cool-down techniques.
PE.912.M.1.16:	Apply the principles of training and conditioning to accommodate individual needs and strengths. **Clarifications:** Some examples of training principles are overload, specificity and progression.
PE.912.M.1.18:	Demonstrate a variety of gymnastics skills with a level of control.
PE.912.M.1.19:	Use correct body alignment, strength, flexibility and coordination in the performance of technical movements.
PE.912.M.1.20:	Perform complex combinations and sequences demonstrating smooth transitions while alone, with a partner or in a small group.
PE.912.M.1.34:	Demonstrate use of the mechanical principles as they apply to specific course activities. **Clarifications:** Some examples are balance, force and leverage.
PE.912.M.1.35:	Select proper equipment and apply all appropriate safety procedures necessary for participation.
PE.912.R.5.1:	Describe ways to act independently of peer pressure during physical activities.
PE.912.R.5.4:	Maintain appropriate personal, social and ethical behavior while participating in a variety of physical activities. **Clarifications:** Some examples are respecting teammates, opponents and officials, and accepting both victory and defeat.
PE.912.R.5.5:	Demonstrate appropriate etiquette, care of equipment, respect for facilities and safe behaviors while participating in a variety of physical activities.
PE.912.R.6.3:	Analyze the roles of games, sports and/or physical activities in other cultures.
MA.K12.MTR.1.1:	Mathematicians who participate in effortful learning both individually and with others: • Analyze the problem in a way that makes sense given the task. • Ask questions that will help with solving the task. • Build perseverance by modifying methods as needed while solving a challenging task. • Stay engaged and maintain a positive mindset when working to solve tasks. • Help and support each other when attempting a new method or approach. **Clarifications:** Teachers who encourage students to participate actively in effortful learning both individually and with others: • Cultivate a community of growth mindset learners. • Foster perseverance in students by choosing tasks that are challenging. • Develop students' ability to analyze and problem solve. • Recognize students' effort when solving challenging problems.
MA.K12.MTR.2.1:	Demonstrate understanding by representing problems in multiple ways. Mathematicians who demonstrate understanding by representing problems in multiple ways: • Build understanding through modeling and using manipulatives. • Represent solutions to problems in multiple ways using objects, drawings, tables, graphs and equations. • Progress from modeling problems with objects and drawings to using algorithms and equations. • Express connections between concepts and representations. • Choose a representation based on the given context or purpose. **Clarifications:** Teachers who encourage students to demonstrate understanding by representing problems in multiple ways: • Help students make connections between concepts and representations. • Provide opportunities for students to use manipulatives when investigating concepts. • Guide students from concrete to pictorial to abstract representations as understanding progresses. • Show students that various representations can have different purposes and can be useful in different situations.
MA.K12.MTR.3.1:	Complete tasks with mathematical fluency. Mathematicians who complete tasks with mathematical fluency: • Select efficient and appropriate methods for solving problems within the given context. • Maintain flexibility and accuracy while performing procedures and mental calculations. • Complete tasks accurately and with confidence. • Adapt procedures to apply them to a new context. • Use feedback to improve efficiency when performing calculations.

Clarifications:
Teachers who encourage students to complete tasks with mathematical fluency:

- Provide students with the flexibility to solve problems by selecting a procedure that allows them to solve efficiently and accurately.
- Offer multiple opportunities for students to practice efficient and generalizable methods.
- Provide opportunities for students to reflect on the method they used and determine if a more efficient method could have been used.

MA.K12.MTR.4.1:

Engage in discussions that reflect on the mathematical thinking of self and others.
Mathematicians who engage in discussions that reflect on the mathematical thinking of self and others:

- Communicate mathematical ideas, vocabulary and methods effectively.
- Analyze the mathematical thinking of others.
- Compare the efficiency of a method to those expressed by others.
- Recognize errors and suggest how to correctly solve the task.
- Justify results by explaining methods and processes.
- Construct possible arguments based on evidence.

Clarifications:
Teachers who encourage students to engage in discussions that reflect on the mathematical thinking of self and others:

- Establish a culture in which students ask questions of the teacher and their peers, and error is an opportunity for learning.
- Create opportunities for students to discuss their thinking with peers.
- Select, sequence and present student work to advance and deepen understanding of correct and increasingly efficient methods.
- Develop students' ability to justify methods and compare their responses to the responses of their peers.

MA.K12.MTR.5.1:

Use patterns and structure to help understand and connect mathematical concepts.
Mathematicians who use patterns and structure to help understand and connect mathematical concepts:

- Focus on relevant details within a problem.
- Create plans and procedures to logically order events, steps or ideas to solve problems.
- Decompose a complex problem into manageable parts.
- Relate previously learned concepts to new concepts.
- Look for similarities among problems.
- Connect solutions of problems to more complicated large-scale situations.

Clarifications:
Teachers who encourage students to use patterns and structure to help understand and connect mathematical concepts:

- Help students recognize the patterns in the world around them and connect these patterns to mathematical concepts.
- Support students to develop generalizations based on the similarities found among problems.
- Provide opportunities for students to create plans and procedures to solve problems.
- Develop students' ability to construct relationships between their current understanding and more sophisticated ways of thinking.

MA.K12.MTR.6.1:

Assess the reasonableness of solutions.
Mathematicians who assess the reasonableness of solutions:

- Estimate to discover possible solutions.
- Use benchmark quantities to determine if a solution makes sense.
- Check calculations when solving problems.
- Verify possible solutions by explaining the methods used.
- Evaluate results based on the given context.

Clarifications:
Teachers who encourage students to assess the reasonableness of solutions:

- Have students estimate or predict solutions prior to solving.
- Prompt students to continually ask, "Does this solution make sense? How do you know?"
- Reinforce that students check their work as they progress within and after a task.
- Strengthen students' ability to verify solutions through justifications.

MA.K12.MTR.7.1:

Apply mathematics to real-world contexts.
Mathematicians who apply mathematics to real-world contexts:

- Connect mathematical concepts to everyday experiences.
- Use models and methods to understand, represent and solve problems.
- Perform investigations to gather data or determine if a method is appropriate. • Redesign models and methods to improve accuracy or efficiency.

Clarifications:
Teachers who encourage students to apply mathematics to real-world contexts:

- Provide opportunities for students to create models, both concrete and abstract, and perform investigations.
- Challenge students to question the accuracy of their models and methods.
- Support students as they validate conclusions by comparing them to the given situation.
- Indicate how various concepts can be applied to other disciplines.

ELA.K12.EE.1.1:

Cite evidence to explain and justify reasoning.

Clarifications:
K-1 Students include textual evidence in their oral communication with guidance and support from adults. The evidence can consist of details from the text without naming the text. During 1st grade, students learn how to incorporate the evidence in their writing.
2-3 Students include relevant textual evidence in their written and oral communication. Students should name the text when they refer to it. In 3rd grade, students should use a combination of direct and indirect citations.

4-5 Students continue with previous skills and reference comments made by speakers and peers. Students cite texts that they've directly quoted, paraphrased, or used for information. When writing, students will use the form of citation dictated by the instructor or the style guide referenced by the instructor.

	6-8 Students continue with previous skills and use a style guide to create a proper citation. 9-12 Students continue with previous skills and should be aware of existing style guides and the ways in which they differ.
ELA.K12.EE.2.1:	Read and comprehend grade-level complex texts proficiently. **Clarifications:** See Text Complexity for grade-level complexity bands and a text complexity rubric.
ELA.K12.EE.3.1:	Make inferences to support comprehension. **Clarifications:** Students will make inferences before the words infer or inference are introduced. Kindergarten students will answer questions like "Why is the girl smiling?" or make predictions about what will happen based on the title page. Students will use the terms and apply them in 2nd grade and beyond.
ELA.K12.EE.4.1:	Use appropriate collaborative techniques and active listening skills when engaging in discussions in a variety of situations. **Clarifications:** In kindergarten, students learn to listen to one another respectfully. In grades 1-2, students build upon these skills by justifying what they are thinking. For example: "I think _____ because _____." The collaborative conversations are becoming academic conversations. In grades 3-12, students engage in academic conversations discussing claims and justifying their reasoning, refining and applying skills. Students build on ideas, propel the conversation, and support claims and counterclaims with evidence.
ELA.K12.EE.5.1:	Use the accepted rules governing a specific format to create quality work. **Clarifications:** Students will incorporate skills learned into work products to produce quality work. For students to incorporate these skills appropriately, they must receive instruction. A 3rd grade student creating a poster board display must have instruction in how to effectively present information to do quality work.
ELA.K12.EE.6.1:	Use appropriate voice and tone when speaking or writing. **Clarifications:** In kindergarten and 1st grade, students learn the difference between formal and informal language. For example, the way we talk to our friends differs from the way we speak to adults. In 2nd grade and beyond, students practice appropriate social and academic language to discuss texts.
ELD.K12.ELL.SI.1:	English language learners communicate for social and instructional purposes within the school setting.

General Course Information and Notes

GENERAL NOTES

Florida's Benchmarks for Excellent Student Thinking (B.E.S.T.) Standards
This course includes Florida's B.E.S.T. ELA Expectations (EE) and Mathematical Thinking and Reasoning Standards (MTRs) for students. Florida educators should intentionally embed these standards within the content and their instruction as applicable. For guidance on the implementation of the EEs and MTRs, please visit cpalms.org/Standards/BEST_Standards.aspx and select the appropriate B.E.S.T. Standards package.

English Language Development ELD Standards Special Notes Section:
Teachers are required to provide listening, speaking, reading and writing instruction that allows English language learners (ELL) to communicate for social and instructional purposes within the school setting. For the given level of English language proficiency and with visual, graphic, or interactive support, students will interact with grade level words, expressions, sentences and discourse to process or produce language necessary for academic success. The ELD standard should specify a relevant content area concept or topic of study chosen by curriculum developers and teachers which maximizes an ELL's need for communication and social skills. To access an ELL supporting document which delineates performance definitions and descriptors, please click on the following link: cpalms.org/uploads/docs/standards/eld/SI.pdf

GENERAL INFORMATION

Course Number: 1502300

Course Path: Section: Grades PreK to 12 Education Courses > **Grade Group:** Grades 9 to 12 and Adult Education Courses > **Subject:** Physical Education > **SubSubject:** Individual and Dual > **Abbreviated Title:** GYMNASTICS 1

Number of Credits: Half credit (.5)

Course Length: Semester (S)

Course Type: Core Academic Course

Course Level: 2

Course Status: Draft - Course Pending Approval

Grade Level(s): 9,10,11,12

Graduation Requirement: Physical Education

Educator Certifications

Physical Education (Grades 6-12)

Gymnastics 2 (#1502310) 2022 - And Beyond

Course Standards

Name	Description
PE.912.C.2.7:	Evaluate the effectiveness of specific warm-up and cool-down activities.
PE.912.C.2.19:	Choreograph complex sequences individually, with a partner or in a small group.
PE.912.C.2.23:	Apply appropriate technology and analyze data to evaluate, monitor and/or improve performance.
PE.912.C.2.24:	Analyze the mechanical principles as they apply to specific course activities. **Clarifications:** Some examples are balance, force and leverage.
PE.912.C.2.25:	Analyze and evaluate the risks, safety procedures, rules and equipment associated with specific course activities.
PE.912.C.2.26:	Evaluate skill patterns of self and/or partner by detecting and correcting mechanical errors.
PE.912.L.3.6:	Identify risks and safety factors that may affect physical activity throughout life.
PE.912.L.4.5:	Apply the principles of training to personal fitness goals. **Clarifications:** Some examples of training principles are overload, specificity and progression.
PE.912.M.1.5:	Apply strategies for self improvement based on individual strengths and needs.
PE.912.M.1.12:	Select and perform complex movements using a variety of equipment which lead to improved or maintained muscular strength and endurance. **Clarifications:** An example is performing plyometrics.
PE.912.M.1.18:	Demonstrate a variety of gymnastics skills with a level of control.
PE.912.M.1.19:	Use correct body alignment, strength, flexibility and coordination in the performance of technical movements.
PE.912.M.1.20:	Perform complex combinations and sequences demonstrating smooth transitions while alone, with a partner or in a small group.
PE.912.M.1.21:	Demonstrate the relationship between complex dance elements and rhythmic movements related to educational gymnastics skills and sequences.
PE.912.M.1.33:	Practice complex motor activities in order to improve performance.
PE.912.M.1.35:	Select proper equipment and apply all appropriate safety procedures necessary for participation.
PE.912.R.5.4:	Maintain appropriate personal, social and ethical behavior while participating in a variety of physical activities. **Clarifications:** Some examples are respecting teammates, opponents and officials, and accepting both victory and defeat.
PE.912.R.5.5:	Demonstrate appropriate etiquette, care of equipment, respect for facilities and safe behaviors while participating in a variety of physical activities.
PE.912.R.6.3:	Analyze the roles of games, sports and/or physical activities in other cultures.
MA.K12.MTR.1.1:	Mathematicians who participate in effortful learning both individually and with others: • Analyze the problem in a way that makes sense given the task. • Ask questions that will help with solving the task. • Build perseverance by modifying methods as needed while solving a challenging task. • Stay engaged and maintain a positive mindset when working to solve tasks. • Help and support each other when attempting a new method or approach. **Clarifications:** Teachers who encourage students to participate actively in effortful learning both individually and with others: • Cultivate a community of growth mindset learners. • Foster perseverance in students by choosing tasks that are challenging. • Develop students' ability to analyze and problem solve. • Recognize students' effort when solving challenging problems.
MA.K12.MTR.2.1:	Demonstrate understanding by representing problems in multiple ways. Mathematicians who demonstrate understanding by representing problems in multiple ways: • Build understanding through modeling and using manipulatives. • Represent solutions to problems in multiple ways using objects, drawings, tables, graphs and equations. • Progress from modeling problems with objects and drawings to using algorithms and equations. • Express connections between concepts and representations. • Choose a representation based on the given context or purpose. **Clarifications:** Teachers who encourage students to demonstrate understanding by representing problems in multiple ways: • Help students make connections between concepts and representations. • Provide opportunities for students to use manipulatives when investigating concepts. • Guide students from concrete to pictorial to abstract representations as understanding progresses. • Show students that various representations can have different purposes and can be useful in different situations.
	Complete tasks with mathematical fluency. Mathematicians who complete tasks with mathematical fluency: • Select efficient and appropriate methods for solving problems within the given context. • Maintain flexibility and accuracy while performing procedures and mental calculations. • Complete tasks accurately and with confidence.

MA.K12.MTR.3.1:

- Adapt procedures to apply them to a new context.
- Use feedback to improve efficiency when performing calculations.

Clarifications:
Teachers who encourage students to complete tasks with mathematical fluency:

- Provide students with the flexibility to solve problems by selecting a procedure that allows them to solve efficiently and accurately.
- Offer multiple opportunities for students to practice efficient and generalizable methods.
- Provide opportunities for students to reflect on the method they used and determine if a more efficient method could have been used.

MA.K12.MTR.4.1:

Engage in discussions that reflect on the mathematical thinking of self and others.
Mathematicians who engage in discussions that reflect on the mathematical thinking of self and others:

- Communicate mathematical ideas, vocabulary and methods effectively.
- Analyze the mathematical thinking of others.
- Compare the efficiency of a method to those expressed by others.
- Recognize errors and suggest how to correctly solve the task.
- Justify results by explaining methods and processes.
- Construct possible arguments based on evidence.

Clarifications:
Teachers who encourage students to engage in discussions that reflect on the mathematical thinking of self and others:

- Establish a culture in which students ask questions of the teacher and their peers, and error is an opportunity for learning.
- Create opportunities for students to discuss their thinking with peers.
- Select, sequence and present student work to advance and deepen understanding of correct and increasingly efficient methods.
- Develop students' ability to justify methods and compare their responses to the responses of their peers.

MA.K12.MTR.5.1:

Use patterns and structure to help understand and connect mathematical concepts.
Mathematicians who use patterns and structure to help understand and connect mathematical concepts:

- Focus on relevant details within a problem.
- Create plans and procedures to logically order events, steps or ideas to solve problems.
- Decompose a complex problem into manageable parts.
- Relate previously learned concepts to new concepts.
- Look for similarities among problems.
- Connect solutions of problems to more complicated large-scale situations.

Clarifications:
Teachers who encourage students to use patterns and structure to help understand and connect mathematical concepts:

- Help students recognize the patterns in the world around them and connect these patterns to mathematical concepts.
- Support students to develop generalizations based on the similarities found among problems.
- Provide opportunities for students to create plans and procedures to solve problems.
- Develop students' ability to construct relationships between their current understanding and more sophisticated ways of thinking.

MA.K12.MTR.6.1:

Assess the reasonableness of solutions.
Mathematicians who assess the reasonableness of solutions:

- Estimate to discover possible solutions.
- Use benchmark quantities to determine if a solution makes sense.
- Check calculations when solving problems.
- Verify possible solutions by explaining the methods used.
- Evaluate results based on the given context.

Clarifications:
Teachers who encourage students to assess the reasonableness of solutions:

- Have students estimate or predict solutions prior to solving.
- Prompt students to continually ask, "Does this solution make sense? How do you know?"
- Reinforce that students check their work as they progress within and after a task.
- Strengthen students' ability to verify solutions through justifications.

MA.K12.MTR.7.1:

Apply mathematics to real-world contexts.
Mathematicians who apply mathematics to real-world contexts:

- Connect mathematical concepts to everyday experiences.
- Use models and methods to understand, represent and solve problems.
- Perform investigations to gather data or determine if a method is appropriate. • Redesign models and methods to improve accuracy or efficiency.

Clarifications:
Teachers who encourage students to apply mathematics to real-world contexts:

- Provide opportunities for students to create models, both concrete and abstract, and perform investigations.
- Challenge students to question the accuracy of their models and methods.
- Support students as they validate conclusions by comparing them to the given situation.
- Indicate how various concepts can be applied to other disciplines.

Cite evidence to explain and justify reasoning.

Clarifications:
K-1 Students include textual evidence in their oral communication with guidance and support from adults. The evidence can consist of details from the text without naming the text. During 1st grade, students learn how to incorporate the evidence in their writing.
2-3 Students include relevant textual evidence in their written and oral communication. Students should name the text when they refer to it. In 3rd grade, students should use a combination of direct and indirect citations.

ELA.K12.EE.1.1:	4-5 Students continue with previous skills and reference comments made by speakers and peers. Students cite texts that they've directly quoted, paraphrased, or used for information. When writing, students will use the form of citation dictated by the instructor or the style guide referenced by the instructor. 6-8 Students continue with previous skills and use a style guide to create a proper citation. 9-12 Students continue with previous skills and should be aware of existing style guides and the ways in which they differ.
ELA.K12.EE.2.1:	Read and comprehend grade-level complex texts proficiently. **Clarifications:** See Text Complexity for grade-level complexity bands and a text complexity rubric.
ELA.K12.EE.3.1:	Make inferences to support comprehension. **Clarifications:** Students will make inferences before the words infer or inference are introduced. Kindergarten students will answer questions like "Why is the girl smiling?" or make predictions about what will happen based on the title page. Students will use the terms and apply them in 2nd grade and beyond.
ELA.K12.EE.4.1:	Use appropriate collaborative techniques and active listening skills when engaging in discussions in a variety of situations. **Clarifications:** In kindergarten, students learn to listen to one another respectfully. In grades 1-2, students build upon these skills by justifying what they are thinking. For example: "I think _____ because _____." The collaborative conversations are becoming academic conversations. In grades 3-12, students engage in academic conversations discussing claims and justifying their reasoning, refining and applying skills. Students build on ideas, propel the conversation, and support claims and counterclaims with evidence.
ELA.K12.EE.5.1:	Use the accepted rules governing a specific format to create quality work. **Clarifications:** Students will incorporate skills learned into work products to produce quality work. For students to incorporate these skills appropriately, they must receive instruction. A 3rd grade student creating a poster board display must have instruction in how to effectively present information to do quality work.
ELA.K12.EE.6.1:	Use appropriate voice and tone when speaking or writing. **Clarifications:** In kindergarten and 1st grade, students learn the difference between formal and informal language. For example, the way we talk to our friends differs from the way we speak to adults. In 2nd grade and beyond, students practice appropriate social and academic language to discuss texts.
ELD.K12.ELL.SI.1:	English language learners communicate for social and instructional purposes within the school setting.

General Course Information and Notes

GENERAL NOTES

Florida's Benchmarks for Excellent Student Thinking (B.E.S.T.) Standards
This course includes Florida's B.E.S.T. ELA Expectations (EE) and Mathematical Thinking and Reasoning Standards (MTRs) for students. Florida educators should intentionally embed these standards within the content and their instruction as applicable. For guidance on the implementation of the EEs and MTRs, please visit cpalms.org/Standards/BEST_Standards.aspx and select the appropriate B.E.S.T. Standards package.

English Language Development ELD Standards Special Notes Section:
Teachers are required to provide listening, speaking, reading and writing instruction that allows English language learners (ELL) to communicate for social and instructional purposes within the school setting. For the given level of English language proficiency and with visual, graphic, or interactive support, students will interact with grade level words, expressions, sentences and discourse to process or produce language necessary for academic success. The ELD standard should specify a relevant content area concept or topic of study chosen by curriculum developers and teachers which maximizes an ELL's need for communication and social skills. To access an ELL supporting document which delineates performance definitions and descriptors, please click on the following link: cpalms.org/uploads/docs/standards/eld/SI.pdf

GENERAL INFORMATION

Course Number: 1502310

Course Path: Section: Grades PreK to 12 Education Courses > **Grade Group:** Grades 9 to 12 and Adult Education Courses > **Subject:** Physical Education > **SubSubject:** Individual and Dual > **Abbreviated Title:** GYMNASTICS 2

Number of Credits: Half credit (.5)

Course Length: Semester (S)

Course Type: Core Academic Course

Course Level: 2

Course Status: Draft - Course Pending Approval

Grade Level(s): 9,10,11,12

Graduation Requirement: Physical Education

Educator Certifications

Physical Education (Grades 6-12)
Physical Education (Elementary and Secondary Grades K-12)

Paddleball/Racquetball/Handball (#1502400) 2022 - And Beyond

Course Standards

Name	Description
PE.912.C.2.21:	Diagram, explain and justify the use of advanced offensive, defensive and transition strategies and tactics.
PE.912.C.2.23:	Apply appropriate technology and analyze data to evaluate, monitor and/or improve performance.
PE.912.C.2.24:	Analyze the mechanical principles as they apply to specific course activities. **Clarifications:** Some examples are balance, force and leverage.
PE.912.C.2.25:	Analyze and evaluate the risks, safety procedures, rules and equipment associated with specific course activities.
PE.912.C.2.26:	Evaluate skill patterns of self and/or partner by detecting and correcting mechanical errors.
PE.912.C.2.27:	Compare and contrast how movement skills from one physical activity can be transferred and used in other physical activities. **Clarifications:** Some examples are volleyball and tennis serve, surfing and skate boarding.
PE.912.C.2.28:	Interpret and apply the rules associated with specific course activities.
PE.912.L.3.4:	Identify the in-school opportunities for participation in a variety of physical activities.
PE.912.L.3.5:	Identify the community opportunities for participation in a variety of physical activities.
PE.912.L.3.6:	Identify risks and safety factors that may affect physical activity throughout life.
PE.912.M.1.5:	Apply strategies for self improvement based on individual strengths and needs.
PE.912.M.1.10:	Apply sport specific skills in simulation and in real-life applications. **Clarifications:** An example of a simulation is a practice setting or lead up activity. An example of a real-life application is a game or performance setting.
PE.912.M.1.15:	Select and apply sport/activity specific warm-up and cool-down techniques.
PE.912.M.1.22:	Demonstrate proficiency in advanced combinations of motor skills for a variety of individual and dual sports.
PE.912.M.1.23:	Demonstrate proficiency of critical elements when striking with objects, implements or body parts.
PE.912.M.1.24:	Apply a combination of complex movement patterns in a game setting.
PE.912.M.1.25:	Apply appropriate speed and generation of force when distance running, sprinting, throwing, jumping, striking or kicking.
PE.912.M.1.26:	Analyze and apply offensive, defensive and transition strategies and tactics to reflect a higher order of thinking. **Clarifications:** An example is placing a shot in an open area away from opponent.
PE.912.M.1.30:	Combine and apply movement patterns from simple to complex.
PE.912.M.1.31:	Demonstrate advanced offensive, defensive and transition strategies and tactics.
PE.912.M.1.32:	Apply sport specific skills in a variety of game settings.
PE.912.M.1.34:	Demonstrate use of the mechanical principles as they apply to specific course activities. **Clarifications:** Some examples are balance, force and leverage.
PE.912.M.1.35:	Select proper equipment and apply all appropriate safety procedures necessary for participation.
PE.912.R.6.3:	Analyze the roles of games, sports and/or physical activities in other cultures.
MA.K12.MTR.1.1:	Mathematicians who participate in effortful learning both individually and with others: • Analyze the problem in a way that makes sense given the task. • Ask questions that will help with solving the task. • Build perseverance by modifying methods as needed while solving a challenging task. • Stay engaged and maintain a positive mindset when working to solve tasks. • Help and support each other when attempting a new method or approach. **Clarifications:** Teachers who encourage students to participate actively in effortful learning both individually and with others: • Cultivate a community of growth mindset learners. • Foster perseverance in students by choosing tasks that are challenging. • Develop students' ability to analyze and problem solve. • Recognize students' effort when solving challenging problems.
MA.K12.MTR.2.1:	Demonstrate understanding by representing problems in multiple ways. Mathematicians who demonstrate understanding by representing problems in multiple ways: • Build understanding through modeling and using manipulatives. • Represent solutions to problems in multiple ways using objects, drawings, tables, graphs and equations. • Progress from modeling problems with objects and drawings to using algorithms and equations. • Express connections between concepts and representations. • Choose a representation based on the given context or purpose. **Clarifications:** Teachers who encourage students to demonstrate understanding by representing problems in multiple ways: • Help students make connections between concepts and representations. • Provide opportunities for students to use manipulatives when investigating concepts.

- Guide students from concrete to pictorial to abstract representations as understanding progresses.
- Show students that various representations can have different purposes and can be useful in different situations.

MA.K12.MTR.3.1:

Complete tasks with mathematical fluency.
Mathematicians who complete tasks with mathematical fluency:

- Select efficient and appropriate methods for solving problems within the given context.
- Maintain flexibility and accuracy while performing procedures and mental calculations.
- Complete tasks accurately and with confidence.
- Adapt procedures to apply them to a new context.
- Use feedback to improve efficiency when performing calculations.

Clarifications:
Teachers who encourage students to complete tasks with mathematical fluency:

- Provide students with the flexibility to solve problems by selecting a procedure that allows them to solve efficiently and accurately.
- Offer multiple opportunities for students to practice efficient and generalizable methods.
- Provide opportunities for students to reflect on the method they used and determine if a more efficient method could have been used.

MA.K12.MTR.4.1:

Engage in discussions that reflect on the mathematical thinking of self and others.
Mathematicians who engage in discussions that reflect on the mathematical thinking of self and others:

- Communicate mathematical ideas, vocabulary and methods effectively.
- Analyze the mathematical thinking of others.
- Compare the efficiency of a method to those expressed by others.
- Recognize errors and suggest how to correctly solve the task.
- Justify results by explaining methods and processes.
- Construct possible arguments based on evidence.

Clarifications:
Teachers who encourage students to engage in discussions that reflect on the mathematical thinking of self and others:

- Establish a culture in which students ask questions of the teacher and their peers, and error is an opportunity for learning.
- Create opportunities for students to discuss their thinking with peers.
- Select, sequence and present student work to advance and deepen understanding of correct and increasingly efficient methods.
- Develop students' ability to justify methods and compare their responses to the responses of their peers.

MA.K12.MTR.5.1:

Use patterns and structure to help understand and connect mathematical concepts.
Mathematicians who use patterns and structure to help understand and connect mathematical concepts:

- Focus on relevant details within a problem.
- Create plans and procedures to logically order events, steps or ideas to solve problems.
- Decompose a complex problem into manageable parts.
- Relate previously learned concepts to new concepts.
- Look for similarities among problems.
- Connect solutions of problems to more complicated large-scale situations.

Clarifications:
Teachers who encourage students to use patterns and structure to help understand and connect mathematical concepts:

- Help students recognize the patterns in the world around them and connect these patterns to mathematical concepts.
- Support students to develop generalizations based on the similarities found among problems.
- Provide opportunities for students to create plans and procedures to solve problems.
- Develop students' ability to construct relationships between their current understanding and more sophisticated ways of thinking.

MA.K12.MTR.6.1:

Assess the reasonableness of solutions.
Mathematicians who assess the reasonableness of solutions:

- Estimate to discover possible solutions.
- Use benchmark quantities to determine if a solution makes sense.
- Check calculations when solving problems.
- Verify possible solutions by explaining the methods used.
- Evaluate results based on the given context.

Clarifications:
Teachers who encourage students to assess the reasonableness of solutions:

- Have students estimate or predict solutions prior to solving.
- Prompt students to continually ask, "Does this solution make sense? How do you know?"
- Reinforce that students check their work as they progress within and after a task.
- Strengthen students' ability to verify solutions through justifications.

MA.K12.MTR.7.1:

Apply mathematics to real-world contexts.
Mathematicians who apply mathematics to real-world contexts:

- Connect mathematical concepts to everyday experiences.
- Use models and methods to understand, represent and solve problems.
- Perform investigations to gather data or determine if a method is appropriate. • Redesign models and methods to improve accuracy or efficiency.

Clarifications:
Teachers who encourage students to apply mathematics to real-world contexts:

- Provide opportunities for students to create models, both concrete and abstract, and perform investigations.
- Challenge students to question the accuracy of their models and methods.
- Support students as they validate conclusions by comparing them to the given situation.

	• Indicate how various concepts can be applied to other disciplines.
ELA.K12.EE.1.1:	Cite evidence to explain and justify reasoning. **Clarifications:** K-1 Students include textual evidence in their oral communication with guidance and support from adults. The evidence can consist of details from the text without naming the text. During 1st grade, students learn how to incorporate the evidence in their writing. 2-3 Students include relevant textual evidence in their written and oral communication. Students should name the text when they refer to it. In 3rd grade, students should use a combination of direct and indirect citations. 4-5 Students continue with previous skills and reference comments made by speakers and peers. Students cite texts that they've directly quoted, paraphrased, or used for information. When writing, students will use the form of citation dictated by the instructor or the style guide referenced by the instructor. 6-8 Students continue with previous skills and use a style guide to create a proper citation. 9-12 Students continue with previous skills and should be aware of existing style guides and the ways in which they differ.
ELA.K12.EE.2.1:	Read and comprehend grade-level complex texts proficiently. **Clarifications:** See Text Complexity for grade-level complexity bands and a text complexity rubric.
ELA.K12.EE.3.1:	Make inferences to support comprehension. **Clarifications:** Students will make inferences before the words infer or inference are introduced. Kindergarten students will answer questions like "Why is the girl smiling?" or make predictions about what will happen based on the title page. Students will use the terms and apply them in 2nd grade and beyond.
ELA.K12.EE.4.1:	Use appropriate collaborative techniques and active listening skills when engaging in discussions in a variety of situations. **Clarifications:** In kindergarten, students learn to listen to one another respectfully. In grades 1-2, students build upon these skills by justifying what they are thinking. For example: "I think _____ because _____." The collaborative conversations are becoming academic conversations. In grades 3-12, students engage in academic conversations discussing claims and justifying their reasoning, refining and applying skills. Students build on ideas, propel the conversation, and support claims and counterclaims with evidence.
ELA.K12.EE.5.1:	Use the accepted rules governing a specific format to create quality work. **Clarifications:** Students will incorporate skills learned into work products to produce quality work. For students to incorporate these skills appropriately, they must receive instruction. A 3rd grade student creating a poster board display must have instruction in how to effectively present information to do quality work.
ELA.K12.EE.6.1:	Use appropriate voice and tone when speaking or writing. **Clarifications:** In kindergarten and 1st grade, students learn the difference between formal and informal language. For example, the way we talk to our friends differs from the way we speak to adults. In 2nd grade and beyond, students practice appropriate social and academic language to discuss texts.
ELD.K12.ELL.SI.1:	English language learners communicate for social and instructional purposes within the school setting.

General Course Information and Notes

GENERAL NOTES

Florida's Benchmarks for Excellent Student Thinking (B.E.S.T.) Standards
This course includes Florida's B.E.S.T. ELA Expectations (EE) and Mathematical Thinking and Reasoning Standards (MTRs) for students. Florida educators should intentionally embed these standards within the content and their instruction as applicable. For guidance on the implementation of the EEs and MTRs, please visit cpalms.org/Standards/BEST_Standards.aspx and select the appropriate B.E.S.T. Standards package.

English Language Development ELD Standards Special Notes Section:
Teachers are required to provide listening, speaking, reading and writing instruction that allows English language learners (ELL) to communicate for social and instructional purposes within the school setting. For the given level of English language proficiency and with visual, graphic, or interactive support, students will interact with grade level words, expressions, sentences and discourse to process or produce language necessary for academic success. The ELD standard should specify a relevant content area concept or topic of study chosen by curriculum developers and teachers which maximizes an ELL's need for communication and social skills. To access an ELL supporting document which delineates performance definitions and descriptors, please click on the following link: cpalms.org/uploads/docs/standards/eld/SI.pdf

GENERAL INFORMATION

Course Number: 1502400

Course Path: Section: Grades PreK to 12 Education Courses > **Grade Group:** Grades 9 to 12 and Adult Education Courses > **Subject:** Physical Education > **SubSubject:** Individual and Dual >
Abbreviated Title: PADB RACQB HANDBALL

Number of Credits: Half credit (.5)

Course Length: Semester (S)

Course Type: Core Academic Course
Course Level: 2
Course Status: Draft - Course Pending Approval
Grade Level(s): 9,10,11,12
Graduation Requirement: Physical Education

Educator Certifications

Physical Education (Grades 6-12)
Physical Education (Elementary and Secondary Grades K-12)

Individual and Dual Sports 1 (#1502410) 2022 - And Beyond

Course Standards

Name	Description
PE.912.C.2.20:	Identify appropriate methods to resolve physical conflict.
PE.912.C.2.23:	Apply appropriate technology and analyze data to evaluate, monitor and/or improve performance.
PE.912.C.2.26:	Evaluate skill patterns of self and/or partner by detecting and correcting mechanical errors.
PE.912.C.2.27:	Compare and contrast how movement skills from one physical activity can be transferred and used in other physical activities. **Clarifications:** Some examples are volleyball and tennis serve, surfing and skate boarding.
PE.912.C.2.28:	Interpret and apply the rules associated with specific course activities.
PE.912.L.3.3:	Identify a variety of activities that promote effective stress management.
PE.912.L.3.6:	Identify risks and safety factors that may affect physical activity throughout life.
PE.912.M.1.5:	Apply strategies for self improvement based on individual strengths and needs.
PE.912.M.1.10:	Apply sport specific skills in simulation and in real-life applications. **Clarifications:** An example of a simulation is a practice setting or lead up activity. An example of a real-life application is a game or performance setting.
PE.912.M.1.15:	Select and apply sport/activity specific warm-up and cool-down techniques.
PE.912.M.1.25:	Apply appropriate speed and generation of force when distance running, sprinting, throwing, jumping, striking or kicking.
PE.912.M.1.31:	Demonstrate advanced offensive, defensive and transition strategies and tactics.
PE.912.M.1.32:	Apply sport specific skills in a variety of game settings.
PE.912.M.1.33:	Practice complex motor activities in order to improve performance.
PE.912.M.1.35:	Select proper equipment and apply all appropriate safety procedures necessary for participation.
PE.912.R.5.3:	Demonstrate sportsmanship during game situations. **Clarifications:** Some examples are controlling emotions, resolving conflicts, respecting opponents and officials, and accepting both victory and defeat.
PE.912.R.5.4:	Maintain appropriate personal, social and ethical behavior while participating in a variety of physical activities. **Clarifications:** Some examples are respecting teammates, opponents and officials, and accepting both victory and defeat.
PE.912.R.5.5:	Demonstrate appropriate etiquette, care of equipment, respect for facilities and safe behaviors while participating in a variety of physical activities.
PE.912.R.6.1:	Discuss opportunities for participation in a variety of physical activities outside of the school setting that contribute to personal enjoyment and the attainment or maintenance of a healthy lifestyle.
PE.912.R.6.3:	Analyze the roles of games, sports and/or physical activities in other cultures.
MA.K12.MTR.1.1:	Mathematicians who participate in effortful learning both individually and with others: • Analyze the problem in a way that makes sense given the task. • Ask questions that will help with solving the task. • Build perseverance by modifying methods as needed while solving a challenging task. • Stay engaged and maintain a positive mindset when working to solve tasks. • Help and support each other when attempting a new method or approach. **Clarifications:** Teachers who encourage students to participate actively in effortful learning both individually and with others: • Cultivate a community of growth mindset learners. • Foster perseverance in students by choosing tasks that are challenging. • Develop students' ability to analyze and problem solve. • Recognize students' effort when solving challenging problems.
MA.K12.MTR.2.1:	Demonstrate understanding by representing problems in multiple ways. Mathematicians who demonstrate understanding by representing problems in multiple ways: • Build understanding through modeling and using manipulatives. • Represent solutions to problems in multiple ways using objects, drawings, tables, graphs and equations. • Progress from modeling problems with objects and drawings to using algorithms and equations. • Express connections between concepts and representations. • Choose a representation based on the given context or purpose. **Clarifications:** Teachers who encourage students to demonstrate understanding by representing problems in multiple ways: • Help students make connections between concepts and representations. • Provide opportunities for students to use manipulatives when investigating concepts. • Guide students from concrete to pictorial to abstract representations as understanding progresses. • Show students that various representations can have different purposes and can be useful in different situations.
	Complete tasks with mathematical fluency. Mathematicians who complete tasks with mathematical fluency: • Select efficient and appropriate methods for solving problems within the given context.

MA.K12.MTR.3.1:	• Maintain flexibility and accuracy while performing procedures and mental calculations. • Complete tasks accurately and with confidence. • Adapt procedures to apply them to a new context. • Use feedback to improve efficiency when performing calculations. **Clarifications:** Teachers who encourage students to complete tasks with mathematical fluency: • Provide students with the flexibility to solve problems by selecting a procedure that allows them to solve efficiently and accurately. • Offer multiple opportunities for students to practice efficient and generalizable methods. • Provide opportunities for students to reflect on the method they used and determine if a more efficient method could have been used.
MA.K12.MTR.4.1:	Engage in discussions that reflect on the mathematical thinking of self and others. Mathematicians who engage in discussions that reflect on the mathematical thinking of self and others: • Communicate mathematical ideas, vocabulary and methods effectively. • Analyze the mathematical thinking of others. • Compare the efficiency of a method to those expressed by others. • Recognize errors and suggest how to correctly solve the task. • Justify results by explaining methods and processes. • Construct possible arguments based on evidence. **Clarifications:** Teachers who encourage students to engage in discussions that reflect on the mathematical thinking of self and others: • Establish a culture in which students ask questions of the teacher and their peers, and error is an opportunity for learning. • Create opportunities for students to discuss their thinking with peers. • Select, sequence and present student work to advance and deepen understanding of correct and increasingly efficient methods. • Develop students' ability to justify methods and compare their responses to the responses of their peers.
MA.K12.MTR.5.1:	Use patterns and structure to help understand and connect mathematical concepts. Mathematicians who use patterns and structure to help understand and connect mathematical concepts: • Focus on relevant details within a problem. • Create plans and procedures to logically order events, steps or ideas to solve problems. • Decompose a complex problem into manageable parts. • Relate previously learned concepts to new concepts. • Look for similarities among problems. • Connect solutions of problems to more complicated large-scale situations. **Clarifications:** Teachers who encourage students to use patterns and structure to help understand and connect mathematical concepts: • Help students recognize the patterns in the world around them and connect these patterns to mathematical concepts. • Support students to develop generalizations based on the similarities found among problems. • Provide opportunities for students to create plans and procedures to solve problems. • Develop students' ability to construct relationships between their current understanding and more sophisticated ways of thinking.
MA.K12.MTR.6.1:	Assess the reasonableness of solutions. Mathematicians who assess the reasonableness of solutions: • Estimate to discover possible solutions. • Use benchmark quantities to determine if a solution makes sense. • Check calculations when solving problems. • Verify possible solutions by explaining the methods used. • Evaluate results based on the given context. **Clarifications:** Teachers who encourage students to assess the reasonableness of solutions: • Have students estimate or predict solutions prior to solving. • Prompt students to continually ask, "Does this solution make sense? How do you know?" • Reinforce that students check their work as they progress within and after a task. • Strengthen students' ability to verify solutions through justifications.
MA.K12.MTR.7.1:	Apply mathematics to real-world contexts. Mathematicians who apply mathematics to real-world contexts: • Connect mathematical concepts to everyday experiences. • Use models and methods to understand, represent and solve problems. • Perform investigations to gather data or determine if a method is appropriate. • Redesign models and methods to improve accuracy or efficiency. **Clarifications:** Teachers who encourage students to apply mathematics to real-world contexts: • Provide opportunities for students to create models, both concrete and abstract, and perform investigations. • Challenge students to question the accuracy of their models and methods. • Support students as they validate conclusions by comparing them to the given situation. • Indicate how various concepts can be applied to other disciplines.
	Cite evidence to explain and justify reasoning. **Clarifications:** K-1 Students include textual evidence in their oral communication with guidance and support from adults. The evidence can consist of details from the text without naming the text. During 1st grade, students learn how to incorporate the evidence in their writing. 2-3 Students include relevant textual evidence in their written and oral communication. Students should name the text when they refer to it.

ELA.K12.EE.1.1:	In 3rd grade, students should use a combination of direct and indirect citations. 4-5 Students continue with previous skills and reference comments made by speakers and peers. Students cite texts that they've directly quoted, paraphrased, or used for information. When writing, students will use the form of citation dictated by the instructor or the style guide referenced by the instructor. 6-8 Students continue with previous skills and use a style guide to create a proper citation. 9-12 Students continue with previous skills and should be aware of existing style guides and the ways in which they differ.
ELA.K12.EE.2.1:	Read and comprehend grade-level complex texts proficiently. **Clarifications:** See Text Complexity for grade-level complexity bands and a text complexity rubric.
ELA.K12.EE.3.1:	Make inferences to support comprehension. **Clarifications:** Students will make inferences before the words infer or inference are introduced. Kindergarten students will answer questions like "Why is the girl smiling?" or make predictions about what will happen based on the title page. Students will use the terms and apply them in 2nd grade and beyond.
ELA.K12.EE.4.1:	Use appropriate collaborative techniques and active listening skills when engaging in discussions in a variety of situations. **Clarifications:** In kindergarten, students learn to listen to one another respectfully. In grades 1-2, students build upon these skills by justifying what they are thinking. For example: "I think _____ because _____." The collaborative conversations are becoming academic conversations. In grades 3-12, students engage in academic conversations discussing claims and justifying their reasoning, refining and applying skills. Students build on ideas, propel the conversation, and support claims and counterclaims with evidence.
ELA.K12.EE.5.1:	Use the accepted rules governing a specific format to create quality work. **Clarifications:** Students will incorporate skills learned into work products to produce quality work. For students to incorporate these skills appropriately, they must receive instruction. A 3rd grade student creating a poster board display must have instruction in how to effectively present information to do quality work.
ELA.K12.EE.6.1:	Use appropriate voice and tone when speaking or writing. **Clarifications:** In kindergarten and 1st grade, students learn the difference between formal and informal language. For example, the way we talk to our friends differs from the way we speak to adults. In 2nd grade and beyond, students practice appropriate social and academic language to discuss texts.
ELD.K12.ELL.SI.1:	English language learners communicate for social and instructional purposes within the school setting.

General Course Information and Notes

GENERAL NOTES

Florida's Benchmarks for Excellent Student Thinking (B.E.S.T.) Standards
This course includes Florida's B.E.S.T. ELA Expectations (EE) and Mathematical Thinking and Reasoning Standards (MTRs) for students. Florida educators should intentionally embed these standards within the content and their instruction as applicable. For guidance on the implementation of the EEs and MTRs, please visit cpalms.org/Standards/BEST_Standards.aspx and select the appropriate B.E.S.T. Standards package.

English Language Development ELD Standards Special Notes Section:
Teachers are required to provide listening, speaking, reading and writing instruction that allows English language learners (ELL) to communicate for social and instructional purposes within the school setting. For the given level of English language proficiency and with visual, graphic, or interactive support, students will interact with grade level words, expressions, sentences and discourse to process or produce language necessary for academic success. The ELD standard should specify a relevant content area concept or topic of study chosen by curriculum developers and teachers which maximizes an ELL's need for communication and social skills. To access an ELL supporting document which delineates performance definitions and descriptors, please click on the following link: cpalms.org/uploads/docs/standards/eld/SI.pdf

GENERAL INFORMATION

Course Number: 1502410

Course Path: Section: Grades PreK to 12 Education Courses > **Grade Group:** Grades 9 to 12 and Adult Education Courses > **Subject:** Physical Education > **SubSubject:** Individual and Dual >

Abbreviated Title: INDIV/DUAL SPRTS 1

Number of Credits: Half credit (.5)

Course Length: Semester (S)

Course Type: Core Academic Course

Course Level: 2

Course Status: Draft - Course Pending Approval

Grade Level(s): 9,10,11,12

Graduation Requirement: Physical Education

Educator Certifications

Physical Education (Grades 6-12)
Physical Education (Elementary and Secondary Grades K-12)

Individual and Dual Sports 2 (#1502420) 2022 - And Beyond

Course Standards

Name	Description
PE.912.C.2.9:	Explain the precautions to be taken when exercising in extreme weather and/or environmental conditions. **Clarifications:** Some examples of precautions are hydration and appropriate attire.
PE.912.C.2.20:	Identify appropriate methods to resolve physical conflict.
PE.912.C.2.22:	Explain the skill-related components of fitness and how they enhance performance levels. **Clarifications:** The skill-related components of fitness are speed, coordination, balance, power, agility and reaction time.
PE.912.C.2.23:	Apply appropriate technology and analyze data to evaluate, monitor and/or improve performance.
PE.912.C.2.25:	Analyze and evaluate the risks, safety procedures, rules and equipment associated with specific course activities.
PE.912.C.2.26:	Evaluate skill patterns of self and/or partner by detecting and correcting mechanical errors.
PE.912.C.2.27:	Compare and contrast how movement skills from one physical activity can be transferred and used in other physical activities. **Clarifications:** Some examples are volleyball and tennis serve, surfing and skate boarding.
PE.912.C.2.28:	Interpret and apply the rules associated with specific course activities.
PE.912.L.3.3:	Identify a variety of activities that promote effective stress management.
PE.912.L.3.6:	Identify risks and safety factors that may affect physical activity throughout life.
PE.912.M.1.5:	Apply strategies for self improvement based on individual strengths and needs.
PE.912.M.1.10:	Apply sport specific skills in simulation and in real-life applications. **Clarifications:** An example of a simulation is a practice setting or lead up activity. An example of a real-life application is a game or performance setting.
PE.912.M.1.19:	Use correct body alignment, strength, flexibility and coordination in the performance of technical movements.
PE.912.M.1.22:	Demonstrate proficiency in advanced combinations of motor skills for a variety of individual and dual sports.
PE.912.M.1.23:	Demonstrate proficiency of critical elements when striking with objects, implements or body parts.
PE.912.M.1.24:	Apply a combination of complex movement patterns in a game setting.
PE.912.M.1.25:	Apply appropriate speed and generation of force when distance running, sprinting, throwing, jumping, striking or kicking.
PE.912.M.1.26:	Analyze and apply offensive, defensive and transition strategies and tactics to reflect a higher order of thinking. **Clarifications:** An example is placing a shot in an open area away from opponent.
PE.912.M.1.30:	Combine and apply movement patterns from simple to complex.
PE.912.M.1.31:	Demonstrate advanced offensive, defensive and transition strategies and tactics.
PE.912.M.1.32:	Apply sport specific skills in a variety of game settings.
PE.912.M.1.33:	Practice complex motor activities in order to improve performance.
PE.912.M.1.34:	Demonstrate use of the mechanical principles as they apply to specific course activities. **Clarifications:** Some examples are balance, force and leverage.
PE.912.M.1.35:	Select proper equipment and apply all appropriate safety procedures necessary for participation.
PE.912.R.5.3:	Demonstrate sportsmanship during game situations. **Clarifications:** Some examples are controlling emotions, resolving conflicts, respecting opponents and officials, and accepting both victory and defeat.
PE.912.R.5.4:	Maintain appropriate personal, social and ethical behavior while participating in a variety of physical activities. **Clarifications:** Some examples are respecting teammates, opponents and officials, and accepting both victory and defeat.
PE.912.R.5.5:	Demonstrate appropriate etiquette, care of equipment, respect for facilities and safe behaviors while participating in a variety of physical activities.
PE.912.R.6.1:	Discuss opportunities for participation in a variety of physical activities outside of the school setting that contribute to personal enjoyment and the attainment or maintenance of a healthy lifestyle.
PE.912.R.6.3:	Analyze the roles of games, sports and/or physical activities in other cultures.
MA.K12.MTR.1.1:	Mathematicians who participate in effortful learning both individually and with others: • Analyze the problem in a way that makes sense given the task. • Ask questions that will help with solving the task. • Build perseverance by modifying methods as needed while solving a challenging task. • Stay engaged and maintain a positive mindset when working to solve tasks. • Help and support each other when attempting a new method or approach. **Clarifications:** Teachers who encourage students to participate actively in effortful learning both individually and with others: • Cultivate a community of growth mindset learners. • Foster perseverance in students by choosing tasks that are challenging. • Develop students' ability to analyze and problem solve.

- Recognize students' effort when solving challenging problems.

Demonstrate understanding by representing problems in multiple ways.
Mathematicians who demonstrate understanding by representing problems in multiple ways:

- Build understanding through modeling and using manipulatives.
- Represent solutions to problems in multiple ways using objects, drawings, tables, graphs and equations.
- Progress from modeling problems with objects and drawings to using algorithms and equations.
- Express connections between concepts and representations.

MA.K12.MTR.2.1:

- Choose a representation based on the given context or purpose.

Clarifications:
Teachers who encourage students to demonstrate understanding by representing problems in multiple ways:

- Help students make connections between concepts and representations.
- Provide opportunities for students to use manipulatives when investigating concepts.
- Guide students from concrete to pictorial to abstract representations as understanding progresses.
- Show students that various representations can have different purposes and can be useful in different situations.

Complete tasks with mathematical fluency.
Mathematicians who complete tasks with mathematical fluency:

- Select efficient and appropriate methods for solving problems within the given context.
- Maintain flexibility and accuracy while performing procedures and mental calculations.
- Complete tasks accurately and with confidence.
- Adapt procedures to apply them to a new context.

MA.K12.MTR.3.1:

- Use feedback to improve efficiency when performing calculations.

Clarifications:
Teachers who encourage students to complete tasks with mathematical fluency:

- Provide students with the flexibility to solve problems by selecting a procedure that allows them to solve efficiently and accurately.
- Offer multiple opportunities for students to practice efficient and generalizable methods.
- Provide opportunities for students to reflect on the method they used and determine if a more efficient method could have been used.

Engage in discussions that reflect on the mathematical thinking of self and others.
Mathematicians who engage in discussions that reflect on the mathematical thinking of self and others:

- Communicate mathematical ideas, vocabulary and methods effectively.
- Analyze the mathematical thinking of others.
- Compare the efficiency of a method to those expressed by others.
- Recognize errors and suggest how to correctly solve the task.
- Justify results by explaining methods and processes.

MA.K12.MTR.4.1:

- Construct possible arguments based on evidence.

Clarifications:
Teachers who encourage students to engage in discussions that reflect on the mathematical thinking of self and others:

- Establish a culture in which students ask questions of the teacher and their peers, and error is an opportunity for learning.
- Create opportunities for students to discuss their thinking with peers.
- Select, sequence and present student work to advance and deepen understanding of correct and increasingly efficient methods.
- Develop students' ability to justify methods and compare their responses to the responses of their peers.

Use patterns and structure to help understand and connect mathematical concepts.
Mathematicians who use patterns and structure to help understand and connect mathematical concepts:

- Focus on relevant details within a problem.
- Create plans and procedures to logically order events, steps or ideas to solve problems.
- Decompose a complex problem into manageable parts.
- Relate previously learned concepts to new concepts.
- Look for similarities among problems.

MA.K12.MTR.5.1:

- Connect solutions of problems to more complicated large-scale situations.

Clarifications:
Teachers who encourage students to use patterns and structure to help understand and connect mathematical concepts:

- Help students recognize the patterns in the world around them and connect these patterns to mathematical concepts.
- Support students to develop generalizations based on the similarities found among problems.
- Provide opportunities for students to create plans and procedures to solve problems.
- Develop students' ability to construct relationships between their current understanding and more sophisticated ways of thinking.

Assess the reasonableness of solutions.
Mathematicians who assess the reasonableness of solutions:

- Estimate to discover possible solutions.
- Use benchmark quantities to determine if a solution makes sense.
- Check calculations when solving problems.
- Verify possible solutions by explaining the methods used.

MA.K12.MTR.6.1:

- Evaluate results based on the given context.

Clarifications:
Teachers who encourage students to assess the reasonableness of solutions:

- Have students estimate or predict solutions prior to solving.
- Prompt students to continually ask, "Does this solution make sense? How do you know?"

	• Reinforce that students check their work as they progress within and after a task. • Strengthen students' ability to verify solutions through justifications.
MA.K12.MTR.7.1:	Apply mathematics to real-world contexts. Mathematicians who apply mathematics to real-world contexts: • Connect mathematical concepts to everyday experiences. • Use models and methods to understand, represent and solve problems. • Perform investigations to gather data or determine if a method is appropriate. • Redesign models and methods to improve accuracy or efficiency. **Clarifications:** Teachers who encourage students to apply mathematics to real-world contexts: • Provide opportunities for students to create models, both concrete and abstract, and perform investigations. • Challenge students to question the accuracy of their models and methods. • Support students as they validate conclusions by comparing them to the given situation. • Indicate how various concepts can be applied to other disciplines.
ELA.K12.EE.1.1:	Cite evidence to explain and justify reasoning. **Clarifications:** K-1 Students include textual evidence in their oral communication with guidance and support from adults. The evidence can consist of details from the text without naming the text. During 1st grade, students learn how to incorporate the evidence in their writing. 2-3 Students include relevant textual evidence in their written and oral communication. Students should name the text when they refer to it. In 3rd grade, students should use a combination of direct and indirect citations. 4-5 Students continue with previous skills and reference comments made by speakers and peers. Students cite texts that they've directly quoted, paraphrased, or used for information. When writing, students will use the form of citation dictated by the instructor or the style guide referenced by the instructor. 6-8 Students continue with previous skills and use a style guide to create a proper citation. 9-12 Students continue with previous skills and should be aware of existing style guides and the ways in which they differ.
ELA.K12.EE.2.1:	Read and comprehend grade-level complex texts proficiently. **Clarifications:** See Text Complexity for grade-level complexity bands and a text complexity rubric.
ELA.K12.EE.3.1:	Make inferences to support comprehension. **Clarifications:** Students will make inferences before the words infer or inference are introduced. Kindergarten students will answer questions like "Why is the girl smiling?" or make predictions about what will happen based on the title page. Students will use the terms and apply them in 2nd grade and beyond.
ELA.K12.EE.4.1:	Use appropriate collaborative techniques and active listening skills when engaging in discussions in a variety of situations. **Clarifications:** In kindergarten, students learn to listen to one another respectfully. In grades 1-2, students build upon these skills by justifying what they are thinking. For example: "I think _____ because _____." The collaborative conversations are becoming academic conversations. In grades 3-12, students engage in academic conversations discussing claims and justifying their reasoning, refining and applying skills. Students build on ideas, propel the conversation, and support claims and counterclaims with evidence.
ELA.K12.EE.5.1:	Use the accepted rules governing a specific format to create quality work. **Clarifications:** Students will incorporate skills learned into work products to produce quality work. For students to incorporate these skills appropriately, they must receive instruction. A 3rd grade student creating a poster board display must have instruction in how to effectively present information to do quality work.
ELA.K12.EE.6.1:	Use appropriate voice and tone when speaking or writing. **Clarifications:** In kindergarten and 1st grade, students learn the difference between formal and informal language. For example, the way we talk to our friends differs from the way we speak to adults. In 2nd grade and beyond, students practice appropriate social and academic language to discuss texts.
ELD.K12.ELL.SI.1:	English language learners communicate for social and instructional purposes within the school setting.

General Course Information and Notes

GENERAL NOTES

Florida's Benchmarks for Excellent Student Thinking (B.E.S.T.) Standards
This course includes Florida's B.E.S.T. ELA Expectations (EE) and Mathematical Thinking and Reasoning Standards (MTRs) for students. Florida educators should intentionally embed these standards within the content and their instruction as applicable. For guidance on the implementation of the EEs and MTRs, please visit cpalms.org/Standards/BEST_Standards.aspx and select the appropriate B.E.S.T. Standards package.

English Language Development ELD Standards Special Notes Section:
Teachers are required to provide listening, speaking, reading and writing instruction that allows English language learners (ELL) to communicate for social and instructional purposes within the school setting. For the given level of English language proficiency and with visual, graphic, or interactive support, students will interact with grade level words, expressions, sentences and discourse to process or produce language necessary for academic success. The ELD standard should specify a relevant content area

concept or topic of study chosen by curriculum developers and teachers which maximizes an ELL's need for communication and social skills. To access an ELL supporting document which delineates performance definitions and descriptors, please click on the following link: cpalms.org/uploads/docs/standards/eld/SI.pdf

GENERAL INFORMATION

Course Number: 1502420

Course Path: Section: Grades PreK to 12 Education Courses > **Grade Group:** Grades 9 to 12 and Adult Education Courses > **Subject:** Physical Education > **SubSubject:** Individual and Dual >

Abbreviated Title: INDIV/DUAL SPRTS 2

Number of Credits: Half credit (.5)

Course Length: Semester (S)

Course Type: Core Academic Course

Course Level: 2

Course Status: Draft - Course Pending Approval

Grade Level(s): 9,10,11,12

Graduation Requirement: Physical Education

Educator Certifications

Physical Education (Grades 6-12)
Physical Education (Elementary and Secondary Grades K-12)

Individual and Dual Sports 3 (#1502430) 2022 - And Beyond

Course Standards

Name	Description
PE.912.C.2.7:	Evaluate the effectiveness of specific warm-up and cool-down activities.
PE.912.C.2.9:	Explain the precautions to be taken when exercising in extreme weather and/or environmental conditions. **Clarifications:** Some examples of precautions are hydration and appropriate attire.
PE.912.C.2.20:	Identify appropriate methods to resolve physical conflict.
PE.912.C.2.21:	Diagram, explain and justify the use of advanced offensive, defensive and transition strategies and tactics.
PE.912.C.2.23:	Apply appropriate technology and analyze data to evaluate, monitor and/or improve performance.
PE.912.C.2.24:	Analyze the mechanical principles as they apply to specific course activities. **Clarifications:** Some examples are balance, force and leverage.
PE.912.C.2.25:	Analyze and evaluate the risks, safety procedures, rules and equipment associated with specific course activities.
PE.912.C.2.26:	Evaluate skill patterns of self and/or partner by detecting and correcting mechanical errors.
PE.912.C.2.27:	Compare and contrast how movement skills from one physical activity can be transferred and used in other physical activities. **Clarifications:** Some examples are volleyball and tennis serve, surfing and skate boarding.
PE.912.C.2.28:	Interpret and apply the rules associated with specific course activities.
PE.912.L.3.3:	Identify a variety of activities that promote effective stress management.
PE.912.L.3.6:	Identify risks and safety factors that may affect physical activity throughout life.
PE.912.M.1.5:	Apply strategies for self improvement based on individual strengths and needs.
PE.912.M.1.10:	Apply sport specific skills in simulation and in real-life applications. **Clarifications:** An example of a simulation is a practice setting or lead up activity. An example of a real-life application is a game or performance setting.
PE.912.M.1.20:	Perform complex combinations and sequences demonstrating smooth transitions while alone, with a partner or in a small group.
PE.912.M.1.22:	Demonstrate proficiency in advanced combinations of motor skills for a variety of individual and dual sports.
PE.912.M.1.23:	Demonstrate proficiency of critical elements when striking with objects, implements or body parts.
PE.912.M.1.24:	Apply a combination of complex movement patterns in a game setting.
PE.912.M.1.25:	Apply appropriate speed and generation of force when distance running, sprinting, throwing, jumping, striking or kicking.
PE.912.M.1.26:	Analyze and apply offensive, defensive and transition strategies and tactics to reflect a higher order of thinking. **Clarifications:** An example is placing a shot in an open area away from opponent.
PE.912.M.1.32:	Apply sport specific skills in a variety of game settings.
PE.912.M.1.33:	Practice complex motor activities in order to improve performance.
PE.912.M.1.35:	Select proper equipment and apply all appropriate safety procedures necessary for participation.
PE.912.R.5.3:	Demonstrate sportsmanship during game situations. **Clarifications:** Some examples are controlling emotions, resolving conflicts, respecting opponents and officials, and accepting both victory and defeat.
PE.912.R.5.4:	Maintain appropriate personal, social and ethical behavior while participating in a variety of physical activities. **Clarifications:** Some examples are respecting teammates, opponents and officials, and accepting both victory and defeat.
PE.912.R.5.5:	Demonstrate appropriate etiquette, care of equipment, respect for facilities and safe behaviors while participating in a variety of physical activities.
PE.912.R.6.1:	Discuss opportunities for participation in a variety of physical activities outside of the school setting that contribute to personal enjoyment and the attainment or maintenance of a healthy lifestyle.
PE.912.R.6.3:	Analyze the roles of games, sports and/or physical activities in other cultures.
MA.K12.MTR.1.1:	Mathematicians who participate in effortful learning both individually and with others: • Analyze the problem in a way that makes sense given the task. • Ask questions that will help with solving the task. • Build perseverance by modifying methods as needed while solving a challenging task. • Stay engaged and maintain a positive mindset when working to solve tasks. • Help and support each other when attempting a new method or approach. **Clarifications:** Teachers who encourage students to participate actively in effortful learning both individually and with others: • Cultivate a community of growth mindset learners. • Foster perseverance in students by choosing tasks that are challenging. • Develop students' ability to analyze and problem solve. • Recognize students' effort when solving challenging problems.
	Demonstrate understanding by representing problems in multiple ways. Mathematicians who demonstrate understanding by representing problems in multiple ways:

- Build understanding through modeling and using manipulatives.
- Represent solutions to problems in multiple ways using objects, drawings, tables, graphs and equations.
- Progress from modeling problems with objects and drawings to using algorithms and equations.
- Express connections between concepts and representations.

MA.K12.MTR.2.1:

- Choose a representation based on the given context or purpose.

Clarifications:
Teachers who encourage students to demonstrate understanding by representing problems in multiple ways:

- Help students make connections between concepts and representations.
- Provide opportunities for students to use manipulatives when investigating concepts.
- Guide students from concrete to pictorial to abstract representations as understanding progresses.
- Show students that various representations can have different purposes and can be useful in different situations.

Complete tasks with mathematical fluency.
Mathematicians who complete tasks with mathematical fluency:

- Select efficient and appropriate methods for solving problems within the given context.
- Maintain flexibility and accuracy while performing procedures and mental calculations.
- Complete tasks accurately and with confidence.
- Adapt procedures to apply them to a new context.

MA.K12.MTR.3.1:

- Use feedback to improve efficiency when performing calculations.

Clarifications:
Teachers who encourage students to complete tasks with mathematical fluency:

- Provide students with the flexibility to solve problems by selecting a procedure that allows them to solve efficiently and accurately.
- Offer multiple opportunities for students to practice efficient and generalizable methods.
- Provide opportunities for students to reflect on the method they used and determine if a more efficient method could have been used.

Engage in discussions that reflect on the mathematical thinking of self and others.
Mathematicians who engage in discussions that reflect on the mathematical thinking of self and others:

- Communicate mathematical ideas, vocabulary and methods effectively.
- Analyze the mathematical thinking of others.
- Compare the efficiency of a method to those expressed by others.
- Recognize errors and suggest how to correctly solve the task.
- Justify results by explaining methods and processes.

MA.K12.MTR.4.1:

- Construct possible arguments based on evidence.

Clarifications:
Teachers who encourage students to engage in discussions that reflect on the mathematical thinking of self and others:

- Establish a culture in which students ask questions of the teacher and their peers, and error is an opportunity for learning.
- Create opportunities for students to discuss their thinking with peers.
- Select, sequence and present student work to advance and deepen understanding of correct and increasingly efficient methods.
- Develop students' ability to justify methods and compare their responses to the responses of their peers.

Use patterns and structure to help understand and connect mathematical concepts.
Mathematicians who use patterns and structure to help understand and connect mathematical concepts:

- Focus on relevant details within a problem.
- Create plans and procedures to logically order events, steps or ideas to solve problems.
- Decompose a complex problem into manageable parts.
- Relate previously learned concepts to new concepts.
- Look for similarities among problems.

MA.K12.MTR.5.1:

- Connect solutions of problems to more complicated large-scale situations.

Clarifications:
Teachers who encourage students to use patterns and structure to help understand and connect mathematical concepts:

- Help students recognize the patterns in the world around them and connect these patterns to mathematical concepts.
- Support students to develop generalizations based on the similarities found among problems.
- Provide opportunities for students to create plans and procedures to solve problems.
- Develop students' ability to construct relationships between their current understanding and more sophisticated ways of thinking.

Assess the reasonableness of solutions.
Mathematicians who assess the reasonableness of solutions:

- Estimate to discover possible solutions.
- Use benchmark quantities to determine if a solution makes sense.
- Check calculations when solving problems.
- Verify possible solutions by explaining the methods used.

MA.K12.MTR.6.1:

- Evaluate results based on the given context.

Clarifications:
Teachers who encourage students to assess the reasonableness of solutions:

- Have students estimate or predict solutions prior to solving.
- Prompt students to continually ask, "Does this solution make sense? How do you know?"
- Reinforce that students check their work as they progress within and after a task.
- Strengthen students' ability to verify solutions through justifications.

Apply mathematics to real-world contexts.

	Mathematicians who apply mathematics to real-world contexts: • Connect mathematical concepts to everyday experiences. • Use models and methods to understand, represent and solve problems. • Perform investigations to gather data or determine if a method is appropriate. • Redesign models and methods to improve accuracy or efficiency.
MA.K12.MTR.7.1:	**Clarifications:** Teachers who encourage students to apply mathematics to real-world contexts: • Provide opportunities for students to create models, both concrete and abstract, and perform investigations. • Challenge students to question the accuracy of their models and methods. • Support students as they validate conclusions by comparing them to the given situation. • Indicate how various concepts can be applied to other disciplines.
ELA.K12.EE.1.1:	Cite evidence to explain and justify reasoning. **Clarifications:** K-1 Students include textual evidence in their oral communication with guidance and support from adults. The evidence can consist of details from the text without naming the text. During 1st grade, students learn how to incorporate the evidence in their writing. 2-3 Students include relevant textual evidence in their written and oral communication. Students should name the text when they refer to it. In 3rd grade, students should use a combination of direct and indirect citations. 4-5 Students continue with previous skills and reference comments made by speakers and peers. Students cite texts that they've directly quoted, paraphrased, or used for information. When writing, students will use the form of citation dictated by the instructor or the style guide referenced by the instructor. 6-8 Students continue with previous skills and use a style guide to create a proper citation. 9-12 Students continue with previous skills and should be aware of existing style guides and the ways in which they differ.
ELA.K12.EE.2.1:	Read and comprehend grade-level complex texts proficiently. **Clarifications:** See Text Complexity for grade-level complexity bands and a text complexity rubric.
ELA.K12.EE.3.1:	Make inferences to support comprehension. **Clarifications:** Students will make inferences before the words infer or inference are introduced. Kindergarten students will answer questions like "Why is the girl smiling?" or make predictions about what will happen based on the title page. Students will use the terms and apply them in 2nd grade and beyond.
ELA.K12.EE.4.1:	Use appropriate collaborative techniques and active listening skills when engaging in discussions in a variety of situations. **Clarifications:** In kindergarten, students learn to listen to one another respectfully. In grades 1-2, students build upon these skills by justifying what they are thinking. For example: "I think _____ because _____." The collaborative conversations are becoming academic conversations. In grades 3-12, students engage in academic conversations discussing claims and justifying their reasoning, refining and applying skills. Students build on ideas, propel the conversation, and support claims and counterclaims with evidence.
ELA.K12.EE.5.1:	Use the accepted rules governing a specific format to create quality work. **Clarifications:** Students will incorporate skills learned into work products to produce quality work. For students to incorporate these skills appropriately, they must receive instruction. A 3rd grade student creating a poster board display must have instruction in how to effectively present information to do quality work.
ELA.K12.EE.6.1:	Use appropriate voice and tone when speaking or writing. **Clarifications:** In kindergarten and 1st grade, students learn the difference between formal and informal language. For example, the way we talk to our friends differs from the way we speak to adults. In 2nd grade and beyond, students practice appropriate social and academic language to discuss texts.
ELD.K12.ELL.SI.1:	English language learners communicate for social and instructional purposes within the school setting.

General Course Information and Notes

GENERAL NOTES

Florida's Benchmarks for Excellent Student Thinking (B.E.S.T.) Standards
This course includes Florida's B.E.S.T. ELA Expectations (EE) and Mathematical Thinking and Reasoning Standards (MTRs) for students. Florida educators should intentionally embed these standards within the content and their instruction as applicable. For guidance on the implementation of the EEs and MTRs, please visit cpalms.org/Standards/BEST_Standards.aspx and select the appropriate B.E.S.T. Standards package.

English Language Development ELD Standards Special Notes Section:
Teachers are required to provide listening, speaking, reading and writing instruction that allows English language learners (ELL) to communicate for social and instructional purposes within the school setting. For the given level of English language proficiency and with visual, graphic, or interactive support, students will interact with grade level words, expressions, sentences and discourse to process or produce language necessary for academic success. The ELD standard should specify a relevant content area concept or topic of study chosen by curriculum developers and teachers which maximizes an ELL's need for communication and social skills. To access an ELL supporting document which delineates performance definitions and descriptors, please click on the following link: cpalms.org/uploads/docs/standards/eld/SI.pdf

GENERAL INFORMATION

Course Number: 1502430

Course Path: Section: Grades PreK to 12 Education Courses > **Grade Group:** Grades 9 to 12 and Adult Education Courses > **Subject:** Physical Education > **SubSubject:** Individual and Dual >

Abbreviated Title: INDIV/DUAL SPRTS 3

Number of Credits: Half credit (.5)

Course Length: Semester (S)

Course Type: Core Academic Course

Course Level: 2

Course Status: Draft - Course Pending Approval

Grade Level(s): 9,10,11,12

Graduation Requirement: Physical Education

Educator Certifications

Physical Education (Grades 6-12)
Physical Education (Elementary and Secondary Grades K-12)

Self Defense Activities (#1502460) 2022 - And Beyond

Course Standards

Name	Description
PE.912.C.2.20:	Identify appropriate methods to resolve physical conflict.
PE.912.C.2.25:	Analyze and evaluate the risks, safety procedures, rules and equipment associated with specific course activities.
PE.912.L.3.3:	Identify a variety of activities that promote effective stress management.
PE.912.L.3.6:	Identify risks and safety factors that may affect physical activity throughout life.
PE.912.M.1.5:	Apply strategies for self improvement based on individual strengths and needs.
PE.912.M.1.12:	Select and perform complex movements using a variety of equipment which lead to improved or maintained muscular strength and endurance. **Clarifications:** An example is performing plyometrics.
PE.912.M.1.15:	Select and apply sport/activity specific warm-up and cool-down techniques.
PE.912.M.1.16:	Apply the principles of training and conditioning to accommodate individual needs and strengths. **Clarifications:** Some examples of training principles are overload, specificity and progression.
PE.912.M.1.19:	Use correct body alignment, strength, flexibility and coordination in the performance of technical movements.
PE.912.M.1.20:	Perform complex combinations and sequences demonstrating smooth transitions while alone, with a partner or in a small group.
PE.912.M.1.29:	Demonstrate proficiency in self-defense movement skills.
PE.912.M.1.30:	Combine and apply movement patterns from simple to complex.
PE.912.R.5.1:	Describe ways to act independently of peer pressure during physical activities.
PE.912.R.5.3:	Demonstrate sportsmanship during game situations. **Clarifications:** Some examples are controlling emotions, resolving conflicts, respecting opponents and officials, and accepting both victory and defeat.
PE.912.R.5.4:	Maintain appropriate personal, social and ethical behavior while participating in a variety of physical activities. **Clarifications:** Some examples are respecting teammates, opponents and officials, and accepting both victory and defeat.
PE.912.R.5.5:	Demonstrate appropriate etiquette, care of equipment, respect for facilities and safe behaviors while participating in a variety of physical activities.
PE.912.R.6.2:	Analyze physical activities from which benefits can be derived. **Clarifications:** Some examples of potential benefits are physical, mental, emotional and social.
MA.K12.MTR.1.1:	Mathematicians who participate in effortful learning both individually and with others: • Analyze the problem in a way that makes sense given the task. • Ask questions that will help with solving the task. • Build perseverance by modifying methods as needed while solving a challenging task. • Stay engaged and maintain a positive mindset when working to solve tasks. • Help and support each other when attempting a new method or approach. **Clarifications:** Teachers who encourage students to participate actively in effortful learning both individually and with others: • Cultivate a community of growth mindset learners. • Foster perseverance in students by choosing tasks that are challenging. • Develop students' ability to analyze and problem solve. • Recognize students' effort when solving challenging problems.
MA.K12.MTR.2.1:	Demonstrate understanding by representing problems in multiple ways. Mathematicians who demonstrate understanding by representing problems in multiple ways: • Build understanding through modeling and using manipulatives. • Represent solutions to problems in multiple ways using objects, drawings, tables, graphs and equations. • Progress from modeling problems with objects and drawings to using algorithms and equations. • Express connections between concepts and representations. • Choose a representation based on the given context or purpose. **Clarifications:** Teachers who encourage students to demonstrate understanding by representing problems in multiple ways: • Help students make connections between concepts and representations. • Provide opportunities for students to use manipulatives when investigating concepts. • Guide students from concrete to pictorial to abstract representations as understanding progresses. • Show students that various representations can have different purposes and can be useful in different situations.
	Complete tasks with mathematical fluency. Mathematicians who complete tasks with mathematical fluency: • Select efficient and appropriate methods for solving problems within the given context. • Maintain flexibility and accuracy while performing procedures and mental calculations.

MA.K12.MTR.3.1:

- Complete tasks accurately and with confidence.
- Adapt procedures to apply them to a new context.
- Use feedback to improve efficiency when performing calculations.

Clarifications:
Teachers who encourage students to complete tasks with mathematical fluency:

- Provide students with the flexibility to solve problems by selecting a procedure that allows them to solve efficiently and accurately.
- Offer multiple opportunities for students to practice efficient and generalizable methods.
- Provide opportunities for students to reflect on the method they used and determine if a more efficient method could have been used.

MA.K12.MTR.4.1:

Engage in discussions that reflect on the mathematical thinking of self and others.
Mathematicians who engage in discussions that reflect on the mathematical thinking of self and others:

- Communicate mathematical ideas, vocabulary and methods effectively.
- Analyze the mathematical thinking of others.
- Compare the efficiency of a method to those expressed by others.
- Recognize errors and suggest how to correctly solve the task.
- Justify results by explaining methods and processes.
- Construct possible arguments based on evidence.

Clarifications:
Teachers who encourage students to engage in discussions that reflect on the mathematical thinking of self and others:

- Establish a culture in which students ask questions of the teacher and their peers, and error is an opportunity for learning.
- Create opportunities for students to discuss their thinking with peers.
- Select, sequence and present student work to advance and deepen understanding of correct and increasingly efficient methods.
- Develop students' ability to justify methods and compare their responses to the responses of their peers.

MA.K12.MTR.5.1:

Use patterns and structure to help understand and connect mathematical concepts.
Mathematicians who use patterns and structure to help understand and connect mathematical concepts:

- Focus on relevant details within a problem.
- Create plans and procedures to logically order events, steps or ideas to solve problems.
- Decompose a complex problem into manageable parts.
- Relate previously learned concepts to new concepts.
- Look for similarities among problems.
- Connect solutions of problems to more complicated large-scale situations.

Clarifications:
Teachers who encourage students to use patterns and structure to help understand and connect mathematical concepts:

- Help students recognize the patterns in the world around them and connect these patterns to mathematical concepts.
- Support students to develop generalizations based on the similarities found among problems.
- Provide opportunities for students to create plans and procedures to solve problems.
- Develop students' ability to construct relationships between their current understanding and more sophisticated ways of thinking.

MA.K12.MTR.6.1:

Assess the reasonableness of solutions.
Mathematicians who assess the reasonableness of solutions:

- Estimate to discover possible solutions.
- Use benchmark quantities to determine if a solution makes sense.
- Check calculations when solving problems.
- Verify possible solutions by explaining the methods used.
- Evaluate results based on the given context.

Clarifications:
Teachers who encourage students to assess the reasonableness of solutions:

- Have students estimate or predict solutions prior to solving.
- Prompt students to continually ask, "Does this solution make sense? How do you know?"
- Reinforce that students check their work as they progress within and after a task.
- Strengthen students' ability to verify solutions through justifications.

MA.K12.MTR.7.1:

Apply mathematics to real-world contexts.
Mathematicians who apply mathematics to real-world contexts:

- Connect mathematical concepts to everyday experiences.
- Use models and methods to understand, represent and solve problems.
- Perform investigations to gather data or determine if a method is appropriate. • Redesign models and methods to improve accuracy or efficiency.

Clarifications:
Teachers who encourage students to apply mathematics to real-world contexts:

- Provide opportunities for students to create models, both concrete and abstract, and perform investigations.
- Challenge students to question the accuracy of their models and methods.
- Support students as they validate conclusions by comparing them to the given situation.
- Indicate how various concepts can be applied to other disciplines.

Cite evidence to explain and justify reasoning.

Clarifications:
K-1 Students include textual evidence in their oral communication with guidance and support from adults. The evidence can consist of details from the text without naming the text. During 1st grade, students learn how to incorporate the evidence in their writing.
2-3 Students include relevant textual evidence in their written and oral communication. Students should name the text when they refer to it. In 3rd grade, students should use a combination of direct and indirect citations.

ELA.K12.EE.1.1:	4-5 Students continue with previous skills and reference comments made by speakers and peers. Students cite texts that they've directly quoted, paraphrased, or used for information. When writing, students will use the form of citation dictated by the instructor or the style guide referenced by the instructor. 6-8 Students continue with previous skills and use a style guide to create a proper citation. 9-12 Students continue with previous skills and should be aware of existing style guides and the ways in which they differ.
ELA.K12.EE.2.1:	Read and comprehend grade-level complex texts proficiently. **Clarifications:** See Text Complexity for grade-level complexity bands and a text complexity rubric.
ELA.K12.EE.3.1:	Make inferences to support comprehension. **Clarifications:** Students will make inferences before the words infer or inference are introduced. Kindergarten students will answer questions like "Why is the girl smiling?" or make predictions about what will happen based on the title page. Students will use the terms and apply them in 2nd grade and beyond.
ELA.K12.EE.4.1:	Use appropriate collaborative techniques and active listening skills when engaging in discussions in a variety of situations. **Clarifications:** In kindergarten, students learn to listen to one another respectfully. In grades 1-2, students build upon these skills by justifying what they are thinking. For example: "I think _____ because _____." The collaborative conversations are becoming academic conversations. In grades 3-12, students engage in academic conversations discussing claims and justifying their reasoning, refining and applying skills. Students build on ideas, propel the conversation, and support claims and counterclaims with evidence.
ELA.K12.EE.5.1:	Use the accepted rules governing a specific format to create quality work. **Clarifications:** Students will incorporate skills learned into work products to produce quality work. For students to incorporate these skills appropriately, they must receive instruction. A 3rd grade student creating a poster board display must have instruction in how to effectively present information to do quality work.
ELA.K12.EE.6.1:	Use appropriate voice and tone when speaking or writing. **Clarifications:** In kindergarten and 1st grade, students learn the difference between formal and informal language. For example, the way we talk to our friends differs from the way we speak to adults. In 2nd grade and beyond, students practice appropriate social and academic language to discuss texts.
ELD.K12.ELL.SI.1:	English language learners communicate for social and instructional purposes within the school setting.

General Course Information and Notes

GENERAL NOTES

Florida's Benchmarks for Excellent Student Thinking (B.E.S.T.) Standards
This course includes Florida's B.E.S.T. ELA Expectations (EE) and Mathematical Thinking and Reasoning Standards (MTRs) for students. Florida educators should intentionally embed these standards within the content and their instruction as applicable. For guidance on the implementation of the EEs and MTRs, please visit cpalms.org/Standards/BEST_Standards.aspx and select the appropriate B.E.S.T. Standards package.

English Language Development ELD Standards Special Notes Section:
Teachers are required to provide listening, speaking, reading and writing instruction that allows English language learners (ELL) to communicate for social and instructional purposes within the school setting. For the given level of English language proficiency and with visual, graphic, or interactive support, students will interact with grade level words, expressions, sentences and discourse to process or produce language necessary for academic success. The ELD standard should specify a relevant content area concept or topic of study chosen by curriculum developers and teachers which maximizes an ELL's need for communication and social skills. To access an ELL supporting document which delineates performance definitions and descriptors, please click on the following link: cpalms.org/uploads/docs/standards/eld/SI.pdf

GENERAL INFORMATION

Course Number: 1502460

Course Path: Section: Grades PreK to 12 Education Courses > **Grade Group:** Grades 9 to 12 and Adult Education Courses > **Subject:** Physical Education > **SubSubject:** Individual and Dual > **Abbreviated Title:** SELF DEFENSE

Number of Credits: Half credit (.5)

Course Length: Semester (S)

Course Type: Core Academic Course

Course Level: 2

Course Status: Draft - Course Pending Approval

Grade Level(s): 9,10,11,12

Graduation Requirement: Physical Education

Educator Certifications

Physical Education (Grades 6-12)
Physical Education (Elementary and Secondary Grades K-12)

Recreational Activities (#1502470) 2022 - And Beyond

Course Standards

Name	Description
PE.912.C.2.9:	Explain the precautions to be taken when exercising in extreme weather and/or environmental conditions. **Clarifications:** Some examples of precautions are hydration and appropriate attire.
PE.912.C.2.10:	Analyze long-term benefits of regularly participating in physical activity.
PE.912.C.2.23:	Apply appropriate technology and analyze data to evaluate, monitor and/or improve performance.
PE.912.C.2.25:	Analyze and evaluate the risks, safety procedures, rules and equipment associated with specific course activities.
PE.912.C.2.26:	Evaluate skill patterns of self and/or partner by detecting and correcting mechanical errors.
PE.912.C.2.28:	Interpret and apply the rules associated with specific course activities.
PE.912.L.3.2:	Participate in a variety of activities that promote the health-related components of fitness. **Clarifications:** The health-related components of fitness are cardiorespiratory endurance, muscular strength, muscular endurance, flexibility and body composition.
PE.912.L.3.3:	Identify a variety of activities that promote effective stress management.
PE.912.L.3.4:	Identify the in-school opportunities for participation in a variety of physical activities.
PE.912.L.3.5:	Identify the community opportunities for participation in a variety of physical activities.
PE.912.M.1.1:	Demonstrate critical elements of basic skills relating to aquatics. **Clarifications:** Some examples are use of swim strokes, use of mask and fins and use of emergency safety equipment.
PE.912.M.1.9:	Demonstrate complex skills and advanced rhythmic movements in dance. **Clarifications:** Some examples are line, hip-hop, country and folk.
PE.912.M.1.15:	Select and apply sport/activity specific warm-up and cool-down techniques.
PE.912.M.1.28:	Apply strategies and tactics in a variety of outdoor pursuits.
PE.912.M.1.31:	Demonstrate advanced offensive, defensive and transition strategies and tactics.
PE.912.M.1.32:	Apply sport specific skills in a variety of game settings.
PE.912.R.5.2:	Develop strategies for including persons of diverse backgrounds and abilities while participating in a variety of physical activities.
PE.912.R.5.3:	Demonstrate sportsmanship during game situations. **Clarifications:** Some examples are controlling emotions, resolving conflicts, respecting opponents and officials, and accepting both victory and defeat.
PE.912.R.5.4:	Maintain appropriate personal, social and ethical behavior while participating in a variety of physical activities. **Clarifications:** Some examples are respecting teammates, opponents and officials, and accepting both victory and defeat.
PE.912.R.5.5:	Demonstrate appropriate etiquette, care of equipment, respect for facilities and safe behaviors while participating in a variety of physical activities.
PE.912.R.6.1:	Discuss opportunities for participation in a variety of physical activities outside of the school setting that contribute to personal enjoyment and the attainment or maintenance of a healthy lifestyle.
PE.912.R.6.2:	Analyze physical activities from which benefits can be derived. **Clarifications:** Some examples of potential benefits are physical, mental, emotional and social.
PE.912.R.6.3:	Analyze the roles of games, sports and/or physical activities in other cultures.
MA.K12.MTR.1.1:	Mathematicians who participate in effortful learning both individually and with others: • Analyze the problem in a way that makes sense given the task. • Ask questions that will help with solving the task. • Build perseverance by modifying methods as needed while solving a challenging task. • Stay engaged and maintain a positive mindset when working to solve tasks. • Help and support each other when attempting a new method or approach. **Clarifications:** Teachers who encourage students to participate actively in effortful learning both individually and with others: • Cultivate a community of growth mindset learners. • Foster perseverance in students by choosing tasks that are challenging. • Develop students' ability to analyze and problem solve. • Recognize students' effort when solving challenging problems.
	Demonstrate understanding by representing problems in multiple ways. Mathematicians who demonstrate understanding by representing problems in multiple ways: • Build understanding through modeling and using manipulatives. • Represent solutions to problems in multiple ways using objects, drawings, tables, graphs and equations. • Progress from modeling problems with objects and drawings to using algorithms and equations.

- Express connections between concepts and representations.

MA.K12.MTR.2.1:

- Choose a representation based on the given context or purpose.

Clarifications:
Teachers who encourage students to demonstrate understanding by representing problems in multiple ways:

- Help students make connections between concepts and representations.
- Provide opportunities for students to use manipulatives when investigating concepts.
- Guide students from concrete to pictorial to abstract representations as understanding progresses.
- Show students that various representations can have different purposes and can be useful in different situations.

Complete tasks with mathematical fluency.
Mathematicians who complete tasks with mathematical fluency:

- Select efficient and appropriate methods for solving problems within the given context.
- Maintain flexibility and accuracy while performing procedures and mental calculations.
- Complete tasks accurately and with confidence.
- Adapt procedures to apply them to a new context.

MA.K12.MTR.3.1:

- Use feedback to improve efficiency when performing calculations.

Clarifications:
Teachers who encourage students to complete tasks with mathematical fluency:

- Provide students with the flexibility to solve problems by selecting a procedure that allows them to solve efficiently and accurately.
- Offer multiple opportunities for students to practice efficient and generalizable methods.
- Provide opportunities for students to reflect on the method they used and determine if a more efficient method could have been used.

Engage in discussions that reflect on the mathematical thinking of self and others.
Mathematicians who engage in discussions that reflect on the mathematical thinking of self and others:

- Communicate mathematical ideas, vocabulary and methods effectively.
- Analyze the mathematical thinking of others.
- Compare the efficiency of a method to those expressed by others.
- Recognize errors and suggest how to correctly solve the task.
- Justify results by explaining methods and processes.

MA.K12.MTR.4.1:

- Construct possible arguments based on evidence.

Clarifications:
Teachers who encourage students to engage in discussions that reflect on the mathematical thinking of self and others:

- Establish a culture in which students ask questions of the teacher and their peers, and error is an opportunity for learning.
- Create opportunities for students to discuss their thinking with peers.
- Select, sequence and present student work to advance and deepen understanding of correct and increasingly efficient methods.
- Develop students' ability to justify methods and compare their responses to the responses of their peers.

Use patterns and structure to help understand and connect mathematical concepts.
Mathematicians who use patterns and structure to help understand and connect mathematical concepts:

- Focus on relevant details within a problem.
- Create plans and procedures to logically order events, steps or ideas to solve problems.
- Decompose a complex problem into manageable parts.
- Relate previously learned concepts to new concepts.
- Look for similarities among problems.

MA.K12.MTR.5.1:

- Connect solutions of problems to more complicated large-scale situations.

Clarifications:
Teachers who encourage students to use patterns and structure to help understand and connect mathematical concepts:

- Help students recognize the patterns in the world around them and connect these patterns to mathematical concepts.
- Support students to develop generalizations based on the similarities found among problems.
- Provide opportunities for students to create plans and procedures to solve problems.
- Develop students' ability to construct relationships between their current understanding and more sophisticated ways of thinking.

Assess the reasonableness of solutions.
Mathematicians who assess the reasonableness of solutions:

- Estimate to discover possible solutions.
- Use benchmark quantities to determine if a solution makes sense.
- Check calculations when solving problems.
- Verify possible solutions by explaining the methods used.

MA.K12.MTR.6.1:

- Evaluate results based on the given context.

Clarifications:
Teachers who encourage students to assess the reasonableness of solutions:

- Have students estimate or predict solutions prior to solving.
- Prompt students to continually ask, "Does this solution make sense? How do you know?"
- Reinforce that students check their work as they progress within and after a task.
- Strengthen students' ability to verify solutions through justifications.

Apply mathematics to real-world contexts.
Mathematicians who apply mathematics to real-world contexts:

- Connect mathematical concepts to everyday experiences.
- Use models and methods to understand, represent and solve problems.

MA.K12.MTR.7.1:	• Perform investigations to gather data or determine if a method is appropriate. • Redesign models and methods to improve accuracy or efficiency. **Clarifications:** Teachers who encourage students to apply mathematics to real-world contexts: • Provide opportunities for students to create models, both concrete and abstract, and perform investigations. • Challenge students to question the accuracy of their models and methods. • Support students as they validate conclusions by comparing them to the given situation. • Indicate how various concepts can be applied to other disciplines.
ELA.K12.EE.1.1:	Cite evidence to explain and justify reasoning. **Clarifications:** K-1 Students include textual evidence in their oral communication with guidance and support from adults. The evidence can consist of details from the text without naming the text. During 1st grade, students learn how to incorporate the evidence in their writing. 2-3 Students include relevant textual evidence in their written and oral communication. Students should name the text when they refer to it. In 3rd grade, students should use a combination of direct and indirect citations. 4-5 Students continue with previous skills and reference comments made by speakers and peers. Students cite texts that they've directly quoted, paraphrased, or used for information. When writing, students will use the form of citation dictated by the instructor or the style guide referenced by the instructor. 6-8 Students continue with previous skills and use a style guide to create a proper citation. 9-12 Students continue with previous skills and should be aware of existing style guides and the ways in which they differ.
ELA.K12.EE.2.1:	Read and comprehend grade-level complex texts proficiently. **Clarifications:** See Text Complexity for grade-level complexity bands and a text complexity rubric.
ELA.K12.EE.3.1:	Make inferences to support comprehension. **Clarifications:** Students will make inferences before the words infer or inference are introduced. Kindergarten students will answer questions like "Why is the girl smiling?" or make predictions about what will happen based on the title page. Students will use the terms and apply them in 2nd grade and beyond.
ELA.K12.EE.4.1:	Use appropriate collaborative techniques and active listening skills when engaging in discussions in a variety of situations. **Clarifications:** In kindergarten, students learn to listen to one another respectfully. In grades 1-2, students build upon these skills by justifying what they are thinking. For example: "I think _____ because _____." The collaborative conversations are becoming academic conversations. In grades 3-12, students engage in academic conversations discussing claims and justifying their reasoning, refining and applying skills. Students build on ideas, propel the conversation, and support claims and counterclaims with evidence.
ELA.K12.EE.5.1:	Use the accepted rules governing a specific format to create quality work. **Clarifications:** Students will incorporate skills learned into work products to produce quality work. For students to incorporate these skills appropriately, they must receive instruction. A 3rd grade student creating a poster board display must have instruction in how to effectively present information to do quality work.
ELA.K12.EE.6.1:	Use appropriate voice and tone when speaking or writing. **Clarifications:** In kindergarten and 1st grade, students learn the difference between formal and informal language. For example, the way we talk to our friends differs from the way we speak to adults. In 2nd grade and beyond, students practice appropriate social and academic language to discuss texts.
ELD.K12.ELL.SI.1:	English language learners communicate for social and instructional purposes within the school setting.

General Course Information and Notes

GENERAL NOTES

Florida's Benchmarks for Excellent Student Thinking (B.E.S.T.) Standards
This course includes Florida's B.E.S.T. ELA Expectations (EE) and Mathematical Thinking and Reasoning Standards (MTRs) for students. Florida educators should intentionally embed these standards within the content and their instruction as applicable. For guidance on the implementation of the EEs and MTRs, please visit cpalms.org/Standards/BEST_Standards.aspx and select the appropriate B.E.S.T. Standards package.

English Language Development ELD Standards Special Notes Section:
Teachers are required to provide listening, speaking, reading and writing instruction that allows English language learners (ELL) to communicate for social and instructional purposes within the school setting. For the given level of English language proficiency and with visual, graphic, or interactive support, students will interact with grade level words, expressions, sentences and discourse to process or produce language necessary for academic success. The ELD standard should specify a relevant content area concept or topic of study chosen by curriculum developers and teachers which maximizes an ELL's need for communication and social skills. To access an ELL supporting document which delineates performance definitions and descriptors, please click on the following link: cpalms.org/uploads/docs/standards/eld/SI.pdf

GENERAL INFORMATION

Course Number: 1502470

Course Path: Section: Grades PreK to 12 Education Courses > **Grade Group:** Grades 9 to 12 and Adult Education Courses > **Subject:** Physical Education > **SubSubject:** Individual and Dual >

Abbreviated Title: REC

Number of Credits: Half credit (.5)

Course Length: Semester (S)

Course Type: Core Academic Course

Course Level: 2

Course Status: Draft - Course Pending Approval

Grade Level(s): 9,10,11,12

Graduation Requirement: Physical Education

Educator Certifications

Physical Education (Grades 6-12)
Physical Education (Elementary and Secondary Grades K-12)

Outdoor Education (#1502480) 2022 - And Beyond

Course Standards

Name	Description
PE.912.C.2.10:	Analyze long-term benefits of regularly participating in physical activity.
PE.912.C.2.23:	Apply appropriate technology and analyze data to evaluate, monitor and/or improve performance.
PE.912.C.2.25:	Analyze and evaluate the risks, safety procedures, rules and equipment associated with specific course activities.
PE.912.L.3.3:	Identify a variety of activities that promote effective stress management.
PE.912.L.3.4:	Identify the in-school opportunities for participation in a variety of physical activities.
PE.912.L.3.6:	Identify risks and safety factors that may affect physical activity throughout life.
PE.912.M.1.11:	Demonstrate competency in two or more extreme sports activities.
PE.912.M.1.27:	Demonstrate proficiency in a variety of outdoor pursuit activities.
PE.912.M.1.28:	Apply strategies and tactics in a variety of outdoor pursuits.
PE.912.M.1.33:	Practice complex motor activities in order to improve performance.
PE.912.M.1.34:	Demonstrate use of the mechanical principles as they apply to specific course activities. **Clarifications:** Some examples are balance, force and leverage.
PE.912.M.1.35:	Select proper equipment and apply all appropriate safety procedures necessary for participation.
PE.912.R.5.1:	Describe ways to act independently of peer pressure during physical activities.
PE.912.R.5.5:	Demonstrate appropriate etiquette, care of equipment, respect for facilities and safe behaviors while participating in a variety of physical activities.
PE.912.R.6.1:	Discuss opportunities for participation in a variety of physical activities outside of the school setting that contribute to personal enjoyment and the attainment or maintenance of a healthy lifestyle.
PE.912.R.6.3:	Analyze the roles of games, sports and/or physical activities in other cultures.
MA.K12.MTR.1.1:	Mathematicians who participate in effortful learning both individually and with others: • Analyze the problem in a way that makes sense given the task. • Ask questions that will help with solving the task. • Build perseverance by modifying methods as needed while solving a challenging task. • Stay engaged and maintain a positive mindset when working to solve tasks. • Help and support each other when attempting a new method or approach. **Clarifications:** Teachers who encourage students to participate actively in effortful learning both individually and with others: • Cultivate a community of growth mindset learners. • Foster perseverance in students by choosing tasks that are challenging. • Develop students' ability to analyze and problem solve. • Recognize students' effort when solving challenging problems.
MA.K12.MTR.2.1:	Demonstrate understanding by representing problems in multiple ways. Mathematicians who demonstrate understanding by representing problems in multiple ways: • Build understanding through modeling and using manipulatives. • Represent solutions to problems in multiple ways using objects, drawings, tables, graphs and equations. • Progress from modeling problems with objects and drawings to using algorithms and equations. • Express connections between concepts and representations. • Choose a representation based on the given context or purpose. **Clarifications:** Teachers who encourage students to demonstrate understanding by representing problems in multiple ways: • Help students make connections between concepts and representations. • Provide opportunities for students to use manipulatives when investigating concepts. • Guide students from concrete to pictorial to abstract representations as understanding progresses. • Show students that various representations can have different purposes and can be useful in different situations.
MA.K12.MTR.3.1:	Complete tasks with mathematical fluency. Mathematicians who complete tasks with mathematical fluency: • Select efficient and appropriate methods for solving problems within the given context. • Maintain flexibility and accuracy while performing procedures and mental calculations. • Complete tasks accurately and with confidence. • Adapt procedures to apply them to a new context. • Use feedback to improve efficiency when performing calculations. **Clarifications:** Teachers who encourage students to complete tasks with mathematical fluency: • Provide students with the flexibility to solve problems by selecting a procedure that allows them to solve efficiently and accurately. • Offer multiple opportunities for students to practice efficient and generalizable methods. • Provide opportunities for students to reflect on the method they used and determine if a more efficient method could have been used.
	Engage in discussions that reflect on the mathematical thinking of self and others. Mathematicians who engage in discussions that reflect on the mathematical thinking of self and others:

MA.K12.MTR.4.1:	• Communicate mathematical ideas, vocabulary and methods effectively. • Analyze the mathematical thinking of others. • Compare the efficiency of a method to those expressed by others. • Recognize errors and suggest how to correctly solve the task. • Justify results by explaining methods and processes. • Construct possible arguments based on evidence. **Clarifications:** Teachers who encourage students to engage in discussions that reflect on the mathematical thinking of self and others: • Establish a culture in which students ask questions of the teacher and their peers, and error is an opportunity for learning. • Create opportunities for students to discuss their thinking with peers. • Select, sequence and present student work to advance and deepen understanding of correct and increasingly efficient methods. • Develop students' ability to justify methods and compare their responses to the responses of their peers.
MA.K12.MTR.5.1:	Use patterns and structure to help understand and connect mathematical concepts. Mathematicians who use patterns and structure to help understand and connect mathematical concepts: • Focus on relevant details within a problem. • Create plans and procedures to logically order events, steps or ideas to solve problems. • Decompose a complex problem into manageable parts. • Relate previously learned concepts to new concepts. • Look for similarities among problems. • Connect solutions of problems to more complicated large-scale situations. **Clarifications:** Teachers who encourage students to use patterns and structure to help understand and connect mathematical concepts: • Help students recognize the patterns in the world around them and connect these patterns to mathematical concepts. • Support students to develop generalizations based on the similarities found among problems. • Provide opportunities for students to create plans and procedures to solve problems. • Develop students' ability to construct relationships between their current understanding and more sophisticated ways of thinking.
MA.K12.MTR.6.1:	Assess the reasonableness of solutions. Mathematicians who assess the reasonableness of solutions: • Estimate to discover possible solutions. • Use benchmark quantities to determine if a solution makes sense. • Check calculations when solving problems. • Verify possible solutions by explaining the methods used. • Evaluate results based on the given context. **Clarifications:** Teachers who encourage students to assess the reasonableness of solutions: • Have students estimate or predict solutions prior to solving. • Prompt students to continually ask, "Does this solution make sense? How do you know?" • Reinforce that students check their work as they progress within and after a task. • Strengthen students' ability to verify solutions through justifications.
MA.K12.MTR.7.1:	Apply mathematics to real-world contexts. Mathematicians who apply mathematics to real-world contexts: • Connect mathematical concepts to everyday experiences. • Use models and methods to understand, represent and solve problems. • Perform investigations to gather data or determine if a method is appropriate. • Redesign models and methods to improve accuracy or efficiency. **Clarifications:** Teachers who encourage students to apply mathematics to real-world contexts: • Provide opportunities for students to create models, both concrete and abstract, and perform investigations. • Challenge students to question the accuracy of their models and methods. • Support students as they validate conclusions by comparing them to the given situation. • Indicate how various concepts can be applied to other disciplines.
ELA.K12.EE.1.1:	Cite evidence to explain and justify reasoning. **Clarifications:** K-1 Students include textual evidence in their oral communication with guidance and support from adults. The evidence can consist of details from the text without naming the text. During 1st grade, students learn how to incorporate the evidence in their writing. 2-3 Students include relevant textual evidence in their written and oral communication. Students should name the text when they refer to it. In 3rd grade, students should use a combination of direct and indirect citations. 4-5 Students continue with previous skills and reference comments made by speakers and peers. Students cite texts that they've directly quoted, paraphrased, or used for information. When writing, students will use the form of citation dictated by the instructor or the style guide referenced by the instructor. 6-8 Students continue with previous skills and use a style guide to create a proper citation. 9-12 Students continue with previous skills and should be aware of existing style guides and the ways in which they differ.
ELA.K12.EE.2.1:	Read and comprehend grade-level complex texts proficiently. **Clarifications:** See Text Complexity for grade-level complexity bands and a text complexity rubric.

ELA.K12.EE.3.1:	Make inferences to support comprehension. **Clarifications:** Students will make inferences before the words infer or inference are introduced. Kindergarten students will answer questions like "Why is the girl smiling?" or make predictions about what will happen based on the title page. Students will use the terms and apply them in 2nd grade and beyond.
ELA.K12.EE.4.1:	Use appropriate collaborative techniques and active listening skills when engaging in discussions in a variety of situations. **Clarifications:** In kindergarten, students learn to listen to one another respectfully. In grades 1-2, students build upon these skills by justifying what they are thinking. For example: "I think _____ because _____." The collaborative conversations are becoming academic conversations. In grades 3-12, students engage in academic conversations discussing claims and justifying their reasoning, refining and applying skills. Students build on ideas, propel the conversation, and support claims and counterclaims with evidence.
ELA.K12.EE.5.1:	Use the accepted rules governing a specific format to create quality work. **Clarifications:** Students will incorporate skills learned into work products to produce quality work. For students to incorporate these skills appropriately, they must receive instruction. A 3rd grade student creating a poster board display must have instruction in how to effectively present information to do quality work.
ELA.K12.EE.6.1:	Use appropriate voice and tone when speaking or writing. **Clarifications:** In kindergarten and 1st grade, students learn the difference between formal and informal language. For example, the way we talk to our friends differs from the way we speak to adults. In 2nd grade and beyond, students practice appropriate social and academic language to discuss texts.
ELD.K12.ELL.SI.1:	English language learners communicate for social and instructional purposes within the school setting.

General Course Information and Notes

GENERAL NOTES

Florida's Benchmarks for Excellent Student Thinking (B.E.S.T.) Standards
This course includes Florida's B.E.S.T. ELA Expectations (EE) and Mathematical Thinking and Reasoning Standards (MTRs) for students. Florida educators should intentionally embed these standards within the content and their instruction as applicable. For guidance on the implementation of the EEs and MTRs, please visit cpalms.org/Standards/BEST_Standards.aspx and select the appropriate B.E.S.T. Standards package.

English Language Development ELD Standards Special Notes Section:
Teachers are required to provide listening, speaking, reading and writing instruction that allows English language learners (ELL) to communicate for social and instructional purposes within the school setting. For the given level of English language proficiency and with visual, graphic, or interactive support, students will interact with grade level words, expressions, sentences and discourse to process or produce language necessary for academic success. The ELD standard should specify a relevant content area concept or topic of study chosen by curriculum developers and teachers which maximizes an ELL's need for communication and social skills. To access an ELL supporting document which delineates performance definitions and descriptors, please click on the following link: cpalms.org/uploads/docs/standards/eld/SI.pdf

QUALIFICATIONS

As well as any certification requirements listed on the course description, the following qualifications may also be acceptable for the course:

Any academic coverage (any coverage classified as an academic coverage in Rules 6A-4.0101 through 6A-4.0343, Florida Administrative Code

GENERAL INFORMATION

Course Number: 1502480

Course Path: Section: Grades PreK to 12 Education Courses > **Grade Group:** Grades 9 to 12 and Adult Education Courses > **Subject:** Physical Education > **SubSubject:** Individual and Dual > **Abbreviated Title:** OUTDOOR ED

Number of Credits: Half credit (.5)

Course Length: Semester (S)

Course Type: Core Academic Course

Course Level: 2

Course Status: Draft - Course Pending Approval

Grade Level(s): 9,10,11,12

Graduation Requirement: Physical Education

Care and Prevention of Athletic Injuries (#1502490) 2022 -

And Beyond

Course Standards

Name	Description
PE.912.C.2.7:	Evaluate the effectiveness of specific warm-up and cool-down activities.
PE.912.C.2.8:	Differentiate between the three different types of heat illnesses associated with fluid loss. **Clarifications:** The three types of heat illnesses are heat cramps, heat exhaustion and heat stroke.
PE.912.C.2.9:	Explain the precautions to be taken when exercising in extreme weather and/or environmental conditions. **Clarifications:** Some examples of precautions are hydration and appropriate attire.
PE.912.C.2.10:	Analyze long-term benefits of regularly participating in physical activity.
PE.912.C.2.11:	Explain how each of the health-related components of fitness are improved through the application of training principles. **Clarifications:** The health-related components of fitness are cardiorespiratory endurance, muscular strength, muscular endurance, flexibility and body composition.
PE.912.C.2.17:	Assess physiological effects of exercise during and after physical activity. **Clarifications:** Some examples are breathing, resting heart rate and blood pressure.
PE.912.C.2.23:	Apply appropriate technology and analyze data to evaluate, monitor and/or improve performance.
PE.912.C.2.25:	Analyze and evaluate the risks, safety procedures, rules and equipment associated with specific course activities.
PE.912.C.2.26:	Evaluate skill patterns of self and/or partner by detecting and correcting mechanical errors.
PE.912.L.3.6:	Identify risks and safety factors that may affect physical activity throughout life.
PE.912.L.4.6:	Identify health-related problems associated with low levels of cardiorespiratory endurance, muscular strength and endurance, flexibility and body composition.
PE.912.M.1.14:	Utilize technology to assess, enhance and maintain health and skill-related fitness levels. **Clarifications:** Some examples of technology are Excel spreadsheets or web based programs to chart or log activities, heart rate monitors, videotapes or digital cameras.
PE.912.M.1.16:	Apply the principles of training and conditioning to accommodate individual needs and strengths. **Clarifications:** Some examples of training principles are overload, specificity and progression.
PE.912.M.1.17:	Demonstrate basic cardiopulmonary resuscitation (CPR) procedures.
PE.912.M.1.34:	Demonstrate use of the mechanical principles as they apply to specific course activities. **Clarifications:** Some examples are balance, force and leverage.
PE.912.M.1.35:	Select proper equipment and apply all appropriate safety procedures necessary for participation.
PE.912.R.5.4:	Maintain appropriate personal, social and ethical behavior while participating in a variety of physical activities. **Clarifications:** Some examples are respecting teammates, opponents and officials, and accepting both victory and defeat.
PE.912.R.5.5:	Demonstrate appropriate etiquette, care of equipment, respect for facilities and safe behaviors while participating in a variety of physical activities.
PE.912.R.6.3:	Analyze the roles of games, sports and/or physical activities in other cultures.
MA.K12.MTR.1.1:	Mathematicians who participate in effortful learning both individually and with others: • Analyze the problem in a way that makes sense given the task. • Ask questions that will help with solving the task. • Build perseverance by modifying methods as needed while solving a challenging task. • Stay engaged and maintain a positive mindset when working to solve tasks. • Help and support each other when attempting a new method or approach. **Clarifications:** Teachers who encourage students to participate actively in effortful learning both individually and with others: • Cultivate a community of growth mindset learners. • Foster perseverance in students by choosing tasks that are challenging. • Develop students' ability to analyze and problem solve. • Recognize students' effort when solving challenging problems.
	Demonstrate understanding by representing problems in multiple ways. Mathematicians who demonstrate understanding by representing problems in multiple ways: • Build understanding through modeling and using manipulatives.

- Represent solutions to problems in multiple ways using objects, drawings, tables, graphs and equations.
- Progress from modeling problems with objects and drawings to using algorithms and equations.
- Express connections between concepts and representations.

MA.K12.MTR.2.1:

- Choose a representation based on the given context or purpose.

Clarifications:
Teachers who encourage students to demonstrate understanding by representing problems in multiple ways:

- Help students make connections between concepts and representations.
- Provide opportunities for students to use manipulatives when investigating concepts.
- Guide students from concrete to pictorial to abstract representations as understanding progresses.
- Show students that various representations can have different purposes and can be useful in different situations.

Complete tasks with mathematical fluency.
Mathematicians who complete tasks with mathematical fluency:

- Select efficient and appropriate methods for solving problems within the given context.
- Maintain flexibility and accuracy while performing procedures and mental calculations.
- Complete tasks accurately and with confidence.
- Adapt procedures to apply them to a new context.

MA.K12.MTR.3.1:

- Use feedback to improve efficiency when performing calculations.

Clarifications:
Teachers who encourage students to complete tasks with mathematical fluency:

- Provide students with the flexibility to solve problems by selecting a procedure that allows them to solve efficiently and accurately.
- Offer multiple opportunities for students to practice efficient and generalizable methods.
- Provide opportunities for students to reflect on the method they used and determine if a more efficient method could have been used.

Engage in discussions that reflect on the mathematical thinking of self and others.
Mathematicians who engage in discussions that reflect on the mathematical thinking of self and others:

- Communicate mathematical ideas, vocabulary and methods effectively.
- Analyze the mathematical thinking of others.
- Compare the efficiency of a method to those expressed by others.
- Recognize errors and suggest how to correctly solve the task.
- Justify results by explaining methods and processes.

MA.K12.MTR.4.1:

- Construct possible arguments based on evidence.

Clarifications:
Teachers who encourage students to engage in discussions that reflect on the mathematical thinking of self and others:

- Establish a culture in which students ask questions of the teacher and their peers, and error is an opportunity for learning.
- Create opportunities for students to discuss their thinking with peers.
- Select, sequence and present student work to advance and deepen understanding of correct and increasingly efficient methods.
- Develop students' ability to justify methods and compare their responses to the responses of their peers.

Use patterns and structure to help understand and connect mathematical concepts.
Mathematicians who use patterns and structure to help understand and connect mathematical concepts:

- Focus on relevant details within a problem.
- Create plans and procedures to logically order events, steps or ideas to solve problems.
- Decompose a complex problem into manageable parts.
- Relate previously learned concepts to new concepts.
- Look for similarities among problems.

MA.K12.MTR.5.1:

- Connect solutions of problems to more complicated large-scale situations.

Clarifications:
Teachers who encourage students to use patterns and structure to help understand and connect mathematical concepts:

- Help students recognize the patterns in the world around them and connect these patterns to mathematical concepts.
- Support students to develop generalizations based on the similarities found among problems.
- Provide opportunities for students to create plans and procedures to solve problems.
- Develop students' ability to construct relationships between their current understanding and more sophisticated ways of thinking.

Assess the reasonableness of solutions.
Mathematicians who assess the reasonableness of solutions:

- Estimate to discover possible solutions.
- Use benchmark quantities to determine if a solution makes sense.
- Check calculations when solving problems.
- Verify possible solutions by explaining the methods used.

MA.K12.MTR.6.1:

- Evaluate results based on the given context.

Clarifications:
Teachers who encourage students to assess the reasonableness of solutions:

- Have students estimate or predict solutions prior to solving.
- Prompt students to continually ask, "Does this solution make sense? How do you know?"
- Reinforce that students check their work as they progress within and after a task.
- Strengthen students' ability to verify solutions through justifications.

Apply mathematics to real-world contexts.
Mathematicians who apply mathematics to real-world contexts:

MA.K12.MTR.7.1:	• Connect mathematical concepts to everyday experiences. • Use models and methods to understand, represent and solve problems. • Perform investigations to gather data or determine if a method is appropriate. • Redesign models and methods to improve accuracy or efficiency. **Clarifications:** Teachers who encourage students to apply mathematics to real-world contexts: • Provide opportunities for students to create models, both concrete and abstract, and perform investigations. • Challenge students to question the accuracy of their models and methods. • Support students as they validate conclusions by comparing them to the given situation. • Indicate how various concepts can be applied to other disciplines.
ELA.K12.EE.1.1:	Cite evidence to explain and justify reasoning. **Clarifications:** K-1 Students include textual evidence in their oral communication with guidance and support from adults. The evidence can consist of details from the text without naming the text. During 1st grade, students learn how to incorporate the evidence in their writing. 2-3 Students include relevant textual evidence in their written and oral communication. Students should name the text when they refer to it. In 3rd grade, students should use a combination of direct and indirect citations. 4-5 Students continue with previous skills and reference comments made by speakers and peers. Students cite texts that they've directly quoted, paraphrased, or used for information. When writing, students will use the form of citation dictated by the instructor or the style guide referenced by the instructor. 6-8 Students continue with previous skills and use a style guide to create a proper citation. 9-12 Students continue with previous skills and should be aware of existing style guides and the ways in which they differ.
ELA.K12.EE.2.1:	Read and comprehend grade-level complex texts proficiently. **Clarifications:** See Text Complexity for grade-level complexity bands and a text complexity rubric.
ELA.K12.EE.3.1:	Make inferences to support comprehension. **Clarifications:** Students will make inferences before the words infer or inference are introduced. Kindergarten students will answer questions like "Why is the girl smiling?" or make predictions about what will happen based on the title page. Students will use the terms and apply them in 2nd grade and beyond.
ELA.K12.EE.4.1:	Use appropriate collaborative techniques and active listening skills when engaging in discussions in a variety of situations. **Clarifications:** In kindergarten, students learn to listen to one another respectfully. In grades 1-2, students build upon these skills by justifying what they are thinking. For example: "I think _____ because _____." The collaborative conversations are becoming academic conversations. In grades 3-12, students engage in academic conversations discussing claims and justifying their reasoning, refining and applying skills. Students build on ideas, propel the conversation, and support claims and counterclaims with evidence.
ELA.K12.EE.5.1:	Use the accepted rules governing a specific format to create quality work. **Clarifications:** Students will incorporate skills learned into work products to produce quality work. For students to incorporate these skills appropriately, they must receive instruction. A 3rd grade student creating a poster board display must have instruction in how to effectively present information to do quality work.
ELA.K12.EE.6.1:	Use appropriate voice and tone when speaking or writing. **Clarifications:** In kindergarten and 1st grade, students learn the difference between formal and informal language. For example, the way we talk to our friends differs from the way we speak to adults. In 2nd grade and beyond, students practice appropriate social and academic language to discuss texts.
ELD.K12.ELL.SI.1:	English language learners communicate for social and instructional purposes within the school setting.

General Course Information and Notes

GENERAL NOTES

Florida's Benchmarks for Excellent Student Thinking (B.E.S.T.) Standards
This course includes Florida's B.E.S.T. ELA Expectations (EE) and Mathematical Thinking and Reasoning Standards (MTRs) for students. Florida educators should intentionally embed these standards within the content and their instruction as applicable. For guidance on the implementation of the EEs and MTRs, please visit cpalms.org/Standards/BEST_Standards.aspx and select the appropriate B.E.S.T. Standards package.

English Language Development ELD Standards Special Notes Section:
Teachers are required to provide listening, speaking, reading and writing instruction that allows English language learners (ELL) to communicate for social and instructional purposes within the school setting. For the given level of English language proficiency and with visual, graphic, or interactive support, students will interact with grade level words, expressions, sentences and discourse to process or produce language necessary for academic success. The ELD standard should specify a relevant content area concept or topic of study chosen by curriculum developers and teachers which maximizes an ELL's need for communication and social skills. To access an ELL supporting document which delineates performance definitions and descriptors, please click on the following link: cpalms.org/uploads/docs/standards/eld/SI.pdf

QUALIFICATIONS

As well as any certification requirements listed on the course description, the following qualifications may also be acceptable for the course:

Any field (any coverage, degreed or non-degreed) with Athletic Trainer licensure.

OR

Licensed Athletic Trainer.

GENERAL INFORMATION

Course Number: 1502490

Course Path: Section: Grades PreK to 12 Education Courses > **Grade Group:** Grades 9 to 12 and Adult Education Courses > **Subject:** Physical Education > **SubSubject:** Individual and Dual > **Abbreviated Title:** CARE/PREV OF ATH INJ

Number of Credits: Half credit (.5)

Course Length: Semester (S)

Course Type: Core Academic Course

Course Level: 2

Course Status: Draft - Course Pending Approval

Grade Level(s): 9,10,11,12

Graduation Requirement: Physical Education

Educator Certifications

Health (Elementary and Secondary Grades K-12)
Health Education (Secondary Grades 7-12)
Physical Education (Grades 6-12)
Physical Education (Elementary and Secondary Grades K-12)

Sports Officiating (#1502500) 2022 - And Beyond

Course Standards

Name	Description
PE.912.C.2.20:	Identify appropriate methods to resolve physical conflict.
PE.912.C.2.23:	Apply appropriate technology and analyze data to evaluate, monitor and/or improve performance.
PE.912.C.2.25:	Analyze and evaluate the risks, safety procedures, rules and equipment associated with specific course activities.
PE.912.C.2.26:	Evaluate skill patterns of self and/or partner by detecting and correcting mechanical errors.
PE.912.L.3.3:	Identify a variety of activities that promote effective stress management.
PE.912.L.3.4:	Identify the in-school opportunities for participation in a variety of physical activities.
PE.912.L.3.5:	Identify the community opportunities for participation in a variety of physical activities.
PE.912.M.1.5:	Apply strategies for self improvement based on individual strengths and needs.
PE.912.M.1.10:	Apply sport specific skills in simulation and in real-life applications. **Clarifications:** An example of a simulation is a practice setting or lead up activity. An example of a real-life application is a game or performance setting.
PE.912.M.1.15:	Select and apply sport/activity specific warm-up and cool-down techniques.
PE.912.M.1.35:	Select proper equipment and apply all appropriate safety procedures necessary for participation.
PE.912.R.5.1:	Describe ways to act independently of peer pressure during physical activities.
PE.912.R.5.3:	Demonstrate sportsmanship during game situations. **Clarifications:** Some examples are controlling emotions, resolving conflicts, respecting opponents and officials, and accepting both victory and defeat.
PE.912.R.5.4:	Maintain appropriate personal, social and ethical behavior while participating in a variety of physical activities. **Clarifications:** Some examples are respecting teammates, opponents and officials, and accepting both victory and defeat.
PE.912.R.5.5:	Demonstrate appropriate etiquette, care of equipment, respect for facilities and safe behaviors while participating in a variety of physical activities.
PE.912.R.6.3:	Analyze the roles of games, sports and/or physical activities in other cultures.
MA.K12.MTR.1.1:	Mathematicians who participate in effortful learning both individually and with others: • Analyze the problem in a way that makes sense given the task. • Ask questions that will help with solving the task. • Build perseverance by modifying methods as needed while solving a challenging task. • Stay engaged and maintain a positive mindset when working to solve tasks. • Help and support each other when attempting a new method or approach. **Clarifications:** Teachers who encourage students to participate actively in effortful learning both individually and with others: • Cultivate a community of growth mindset learners. • Foster perseverance in students by choosing tasks that are challenging. • Develop students' ability to analyze and problem solve. • Recognize students' effort when solving challenging problems.
MA.K12.MTR.2.1:	Demonstrate understanding by representing problems in multiple ways. Mathematicians who demonstrate understanding by representing problems in multiple ways: • Build understanding through modeling and using manipulatives. • Represent solutions to problems in multiple ways using objects, drawings, tables, graphs and equations. • Progress from modeling problems with objects and drawings to using algorithms and equations. • Express connections between concepts and representations. • Choose a representation based on the given context or purpose. **Clarifications:** Teachers who encourage students to demonstrate understanding by representing problems in multiple ways: • Help students make connections between concepts and representations. • Provide opportunities for students to use manipulatives when investigating concepts. • Guide students from concrete to pictorial to abstract representations as understanding progresses. • Show students that various representations can have different purposes and can be useful in different situations.
MA.K12.MTR.3.1:	Complete tasks with mathematical fluency. Mathematicians who complete tasks with mathematical fluency: • Select efficient and appropriate methods for solving problems within the given context. • Maintain flexibility and accuracy while performing procedures and mental calculations. • Complete tasks accurately and with confidence. • Adapt procedures to apply them to a new context. • Use feedback to improve efficiency when performing calculations. **Clarifications:** Teachers who encourage students to complete tasks with mathematical fluency: • Provide students with the flexibility to solve problems by selecting a procedure that allows them to solve efficiently and accurately.

- Offer multiple opportunities for students to practice efficient and generalizable methods.
- Provide opportunities for students to reflect on the method they used and determine if a more efficient method could have been used.

MA.K12.MTR.4.1:

Engage in discussions that reflect on the mathematical thinking of self and others.
Mathematicians who engage in discussions that reflect on the mathematical thinking of self and others:

- Communicate mathematical ideas, vocabulary and methods effectively.
- Analyze the mathematical thinking of others.
- Compare the efficiency of a method to those expressed by others.
- Recognize errors and suggest how to correctly solve the task.
- Justify results by explaining methods and processes.
- Construct possible arguments based on evidence.

Clarifications:
Teachers who encourage students to engage in discussions that reflect on the mathematical thinking of self and others:

- Establish a culture in which students ask questions of the teacher and their peers, and error is an opportunity for learning.
- Create opportunities for students to discuss their thinking with peers.
- Select, sequence and present student work to advance and deepen understanding of correct and increasingly efficient methods.
- Develop students' ability to justify methods and compare their responses to the responses of their peers.

MA.K12.MTR.5.1:

Use patterns and structure to help understand and connect mathematical concepts.
Mathematicians who use patterns and structure to help understand and connect mathematical concepts:

- Focus on relevant details within a problem.
- Create plans and procedures to logically order events, steps or ideas to solve problems.
- Decompose a complex problem into manageable parts.
- Relate previously learned concepts to new concepts.
- Look for similarities among problems.
- Connect solutions of problems to more complicated large-scale situations.

Clarifications:
Teachers who encourage students to use patterns and structure to help understand and connect mathematical concepts:

- Help students recognize the patterns in the world around them and connect these patterns to mathematical concepts.
- Support students to develop generalizations based on the similarities found among problems.
- Provide opportunities for students to create plans and procedures to solve problems.
- Develop students' ability to construct relationships between their current understanding and more sophisticated ways of thinking.

MA.K12.MTR.6.1:

Assess the reasonableness of solutions.
Mathematicians who assess the reasonableness of solutions:

- Estimate to discover possible solutions.
- Use benchmark quantities to determine if a solution makes sense.
- Check calculations when solving problems.
- Verify possible solutions by explaining the methods used.
- Evaluate results based on the given context.

Clarifications:
Teachers who encourage students to assess the reasonableness of solutions:

- Have students estimate or predict solutions prior to solving.
- Prompt students to continually ask, "Does this solution make sense? How do you know?"
- Reinforce that students check their work as they progress within and after a task.
- Strengthen students' ability to verify solutions through justifications.

MA.K12.MTR.7.1:

Apply mathematics to real-world contexts.
Mathematicians who apply mathematics to real-world contexts:

- Connect mathematical concepts to everyday experiences.
- Use models and methods to understand, represent and solve problems.
- Perform investigations to gather data or determine if a method is appropriate. • Redesign models and methods to improve accuracy or efficiency.

Clarifications:
Teachers who encourage students to apply mathematics to real-world contexts:

- Provide opportunities for students to create models, both concrete and abstract, and perform investigations.
- Challenge students to question the accuracy of their models and methods.
- Support students as they validate conclusions by comparing them to the given situation.
- Indicate how various concepts can be applied to other disciplines.

ELA.K12.EE.1.1:

Cite evidence to explain and justify reasoning.

Clarifications:
K-1 Students include textual evidence in their oral communication with guidance and support from adults. The evidence can consist of details from the text without naming the text. During 1st grade, students learn how to incorporate the evidence in their writing.
2-3 Students include relevant textual evidence in their written and oral communication. Students should name the text when they refer to it. In 3rd grade, students should use a combination of direct and indirect citations.

4-5 Students continue with previous skills and reference comments made by speakers and peers. Students cite texts that they've directly quoted, paraphrased, or used for information. When writing, students will use the form of citation dictated by the instructor or the style guide referenced by the instructor.

6-8 Students continue with previous skills and use a style guide to create a proper citation.

9-12 Students continue with previous skills and should be aware of existing style guides and the ways in which they differ.

ELA.K12.EE.2.1:	Read and comprehend grade-level complex texts proficiently. **Clarifications:** See Text Complexity for grade-level complexity bands and a text complexity rubric.
ELA.K12.EE.3.1:	Make inferences to support comprehension. **Clarifications:** Students will make inferences before the words infer or inference are introduced. Kindergarten students will answer questions like "Why is the girl smiling?" or make predictions about what will happen based on the title page. Students will use the terms and apply them in 2nd grade and beyond.
ELA.K12.EE.4.1:	Use appropriate collaborative techniques and active listening skills when engaging in discussions in a variety of situations. **Clarifications:** In kindergarten, students learn to listen to one another respectfully. In grades 1-2, students build upon these skills by justifying what they are thinking. For example: "I think _____ because _____." The collaborative conversations are becoming academic conversations. In grades 3-12, students engage in academic conversations discussing claims and justifying their reasoning, refining and applying skills. Students build on ideas, propel the conversation, and support claims and counterclaims with evidence.
ELA.K12.EE.5.1:	Use the accepted rules governing a specific format to create quality work. **Clarifications:** Students will incorporate skills learned into work products to produce quality work. For students to incorporate these skills appropriately, they must receive instruction. A 3rd grade student creating a poster board display must have instruction in how to effectively present information to do quality work.
ELA.K12.EE.6.1:	Use appropriate voice and tone when speaking or writing. **Clarifications:** In kindergarten and 1st grade, students learn the difference between formal and informal language. For example, the way we talk to our friends differs from the way we speak to adults. In 2nd grade and beyond, students practice appropriate social and academic language to discuss texts.
ELD.K12.ELL.SI.1:	English language learners communicate for social and instructional purposes within the school setting.

General Course Information and Notes

GENERAL NOTES

Florida's Benchmarks for Excellent Student Thinking (B.E.S.T.) Standards
This course includes Florida's B.E.S.T. ELA Expectations (EE) and Mathematical Thinking and Reasoning Standards (MTRs) for students. Florida educators should intentionally embed these standards within the content and their instruction as applicable. For guidance on the implementation of the EEs and MTRs, please visit cpalms.org/Standards/BEST_Standards.aspx and select the appropriate B.E.S.T. Standards package.

English Language Development ELD Standards Special Notes Section:
Teachers are required to provide listening, speaking, reading and writing instruction that allows English language learners (ELL) to communicate for social and instructional purposes within the school setting. For the given level of English language proficiency and with visual, graphic, or interactive support, students will interact with grade level words, expressions, sentences and discourse to process or produce language necessary for academic success. The ELD standard should specify a relevant content area concept or topic of study chosen by curriculum developers and teachers which maximizes an ELL's need for communication and social skills. To access an ELL supporting document which delineates performance definitions and descriptors, please click on the following link: cpalms.org/uploads/docs/standards/eld/SI.pdf

GENERAL INFORMATION

Course Number: 1502500

Course Path: Section: Grades PreK to 12 Education Courses > **Grade Group:** Grades 9 to 12 and Adult Education Courses > **Subject:** Physical Education > **SubSubject:** Fitness > **Abbreviated Title:** SPRTS OFFICIATING

Number of Credits: Half credit (.5)

Course Length: Semester (S)

Course Type: Core Academic Course

Course Level: 2

Course Status: Draft - Course Pending Approval

Grade Level(s): 9,10,11,12

Graduation Requirement: Physical Education

Educator Certifications

Physical Education (Grades 6-12)
Physical Education (Elementary and Secondary Grades K-12)

Track and Field (#1503300) 2022 - And Beyond

Course Standards

Name	Description
PE.912.C.2.9:	Explain the precautions to be taken when exercising in extreme weather and/or environmental conditions. **Clarifications:** Some examples of precautions are hydration and appropriate attire.
PE.912.C.2.22:	Explain the skill-related components of fitness and how they enhance performance levels. **Clarifications:** The skill-related components of fitness are speed, coordination, balance, power, agility and reaction time.
PE.912.C.2.23:	Apply appropriate technology and analyze data to evaluate, monitor and/or improve performance.
PE.912.C.2.24:	Analyze the mechanical principles as they apply to specific course activities. **Clarifications:** Some examples are balance, force and leverage.
PE.912.C.2.25:	Analyze and evaluate the risks, safety procedures, rules and equipment associated with specific course activities.
PE.912.C.2.26:	Evaluate skill patterns of self and/or partner by detecting and correcting mechanical errors.
PE.912.C.2.28:	Interpret and apply the rules associated with specific course activities.
PE.912.L.3.4:	Identify the in-school opportunities for participation in a variety of physical activities.
PE.912.L.3.5:	Identify the community opportunities for participation in a variety of physical activities.
PE.912.L.3.6:	Identify risks and safety factors that may affect physical activity throughout life.
PE.912.M.1.5:	Apply strategies for self improvement based on individual strengths and needs.
PE.912.M.1.10:	Apply sport specific skills in simulation and in real-life applications. **Clarifications:** An example of a simulation is a practice setting or lead up activity. An example of a real-life application is a game or performance setting.
PE.912.M.1.15:	Select and apply sport/activity specific warm-up and cool-down techniques.
PE.912.M.1.16:	Apply the principles of training and conditioning to accommodate individual needs and strengths. **Clarifications:** Some examples of training principles are overload, specificity and progression.
PE.912.M.1.19:	Use correct body alignment, strength, flexibility and coordination in the performance of technical movements.
PE.912.M.1.25:	Apply appropriate speed and generation of force when distance running, sprinting, throwing, jumping, striking or kicking.
PE.912.M.1.30:	Combine and apply movement patterns from simple to complex.
PE.912.M.1.32:	Apply sport specific skills in a variety of game settings.
PE.912.M.1.33:	Practice complex motor activities in order to improve performance.
PE.912.M.1.34:	Demonstrate use of the mechanical principles as they apply to specific course activities. **Clarifications:** Some examples are balance, force and leverage.
PE.912.M.1.35:	Select proper equipment and apply all appropriate safety procedures necessary for participation.
PE.912.R.5.2:	Develop strategies for including persons of diverse backgrounds and abilities while participating in a variety of physical activities.
PE.912.R.5.3:	Demonstrate sportsmanship during game situations. **Clarifications:** Some examples are controlling emotions, resolving conflicts, respecting opponents and officials, and accepting both victory and defeat.
PE.912.R.5.4:	Maintain appropriate personal, social and ethical behavior while participating in a variety of physical activities. **Clarifications:** Some examples are respecting teammates, opponents and officials, and accepting both victory and defeat.
PE.912.R.5.5:	Demonstrate appropriate etiquette, care of equipment, respect for facilities and safe behaviors while participating in a variety of physical activities.
PE.912.R.6.3:	Analyze the roles of games, sports and/or physical activities in other cultures.
MA.K12.MTR.1.1:	Mathematicians who participate in effortful learning both individually and with others: • Analyze the problem in a way that makes sense given the task. • Ask questions that will help with solving the task. • Build perseverance by modifying methods as needed while solving a challenging task. • Stay engaged and maintain a positive mindset when working to solve tasks. • Help and support each other when attempting a new method or approach. **Clarifications:** Teachers who encourage students to participate actively in effortful learning both individually and with others: • Cultivate a community of growth mindset learners. • Foster perseverance in students by choosing tasks that are challenging. • Develop students' ability to analyze and problem solve. • Recognize students' effort when solving challenging problems.
	Demonstrate understanding by representing problems in multiple ways. Mathematicians who demonstrate understanding by representing problems in multiple ways:

- Build understanding through modeling and using manipulatives.
- Represent solutions to problems in multiple ways using objects, drawings, tables, graphs and equations.
- Progress from modeling problems with objects and drawings to using algorithms and equations.
- Express connections between concepts and representations.

MA.K12.MTR.2.1:

- Choose a representation based on the given context or purpose.

Clarifications:
Teachers who encourage students to demonstrate understanding by representing problems in multiple ways:

- Help students make connections between concepts and representations.
- Provide opportunities for students to use manipulatives when investigating concepts.
- Guide students from concrete to pictorial to abstract representations as understanding progresses.
- Show students that various representations can have different purposes and can be useful in different situations.

Complete tasks with mathematical fluency.
Mathematicians who complete tasks with mathematical fluency:

- Select efficient and appropriate methods for solving problems within the given context.
- Maintain flexibility and accuracy while performing procedures and mental calculations.
- Complete tasks accurately and with confidence.
- Adapt procedures to apply them to a new context.

MA.K12.MTR.3.1:

- Use feedback to improve efficiency when performing calculations.

Clarifications:
Teachers who encourage students to complete tasks with mathematical fluency:

- Provide students with the flexibility to solve problems by selecting a procedure that allows them to solve efficiently and accurately.
- Offer multiple opportunities for students to practice efficient and generalizable methods.
- Provide opportunities for students to reflect on the method they used and determine if a more efficient method could have been used.

Engage in discussions that reflect on the mathematical thinking of self and others.
Mathematicians who engage in discussions that reflect on the mathematical thinking of self and others:

- Communicate mathematical ideas, vocabulary and methods effectively.
- Analyze the mathematical thinking of others.
- Compare the efficiency of a method to those expressed by others.
- Recognize errors and suggest how to correctly solve the task.
- Justify results by explaining methods and processes.

MA.K12.MTR.4.1:

- Construct possible arguments based on evidence.

Clarifications:
Teachers who encourage students to engage in discussions that reflect on the mathematical thinking of self and others:

- Establish a culture in which students ask questions of the teacher and their peers, and error is an opportunity for learning.
- Create opportunities for students to discuss their thinking with peers.
- Select, sequence and present student work to advance and deepen understanding of correct and increasingly efficient methods.
- Develop students' ability to justify methods and compare their responses to the responses of their peers.

Use patterns and structure to help understand and connect mathematical concepts.
Mathematicians who use patterns and structure to help understand and connect mathematical concepts:

- Focus on relevant details within a problem.
- Create plans and procedures to logically order events, steps or ideas to solve problems.
- Decompose a complex problem into manageable parts.
- Relate previously learned concepts to new concepts.
- Look for similarities among problems.

MA.K12.MTR.5.1:

- Connect solutions of problems to more complicated large-scale situations.

Clarifications:
Teachers who encourage students to use patterns and structure to help understand and connect mathematical concepts:

- Help students recognize the patterns in the world around them and connect these patterns to mathematical concepts.
- Support students to develop generalizations based on the similarities found among problems.
- Provide opportunities for students to create plans and procedures to solve problems.
- Develop students' ability to construct relationships between their current understanding and more sophisticated ways of thinking.

Assess the reasonableness of solutions.
Mathematicians who assess the reasonableness of solutions:

- Estimate to discover possible solutions.
- Use benchmark quantities to determine if a solution makes sense.
- Check calculations when solving problems.
- Verify possible solutions by explaining the methods used.

MA.K12.MTR.6.1:

- Evaluate results based on the given context.

Clarifications:
Teachers who encourage students to assess the reasonableness of solutions:

- Have students estimate or predict solutions prior to solving.
- Prompt students to continually ask, "Does this solution make sense? How do you know?"
- Reinforce that students check their work as they progress within and after a task.
- Strengthen students' ability to verify solutions through justifications.

Apply mathematics to real-world contexts.
Mathematicians who apply mathematics to real-world contexts:

	• Connect mathematical concepts to everyday experiences. • Use models and methods to understand, represent and solve problems. • Perform investigations to gather data or determine if a method is appropriate. • Redesign models and methods to improve accuracy or efficiency.
MA.K12.MTR.7.1:	**Clarifications:** Teachers who encourage students to apply mathematics to real-world contexts: • Provide opportunities for students to create models, both concrete and abstract, and perform investigations. • Challenge students to question the accuracy of their models and methods. • Support students as they validate conclusions by comparing them to the given situation. • Indicate how various concepts can be applied to other disciplines.
ELA.K12.EE.1.1:	Cite evidence to explain and justify reasoning. **Clarifications:** K-1 Students include textual evidence in their oral communication with guidance and support from adults. The evidence can consist of details from the text without naming the text. During 1st grade, students learn how to incorporate the evidence in their writing. 2-3 Students include relevant textual evidence in their written and oral communication. Students should name the text when they refer to it. In 3rd grade, students should use a combination of direct and indirect citations. 4-5 Students continue with previous skills and reference comments made by speakers and peers. Students cite texts that they've directly quoted, paraphrased, or used for information. When writing, students will use the form of citation dictated by the instructor or the style guide referenced by the instructor. 6-8 Students continue with previous skills and use a style guide to create a proper citation. 9-12 Students continue with previous skills and should be aware of existing style guides and the ways in which they differ.
ELA.K12.EE.2.1:	Read and comprehend grade-level complex texts proficiently. **Clarifications:** See Text Complexity for grade-level complexity bands and a text complexity rubric.
ELA.K12.EE.3.1:	Make inferences to support comprehension. **Clarifications:** Students will make inferences before the words infer or inference are introduced. Kindergarten students will answer questions like "Why is the girl smiling?" or make predictions about what will happen based on the title page. Students will use the terms and apply them in 2nd grade and beyond.
ELA.K12.EE.4.1:	Use appropriate collaborative techniques and active listening skills when engaging in discussions in a variety of situations. **Clarifications:** In kindergarten, students learn to listen to one another respectfully. In grades 1-2, students build upon these skills by justifying what they are thinking. For example: "I think _____ because _____." The collaborative conversations are becoming academic conversations. In grades 3-12, students engage in academic conversations discussing claims and justifying their reasoning, refining and applying skills. Students build on ideas, propel the conversation, and support claims and counterclaims with evidence.
ELA.K12.EE.5.1:	Use the accepted rules governing a specific format to create quality work. **Clarifications:** Students will incorporate skills learned into work products to produce quality work. For students to incorporate these skills appropriately, they must receive instruction. A 3rd grade student creating a poster board display must have instruction in how to effectively present information to do quality work.
ELA.K12.EE.6.1:	Use appropriate voice and tone when speaking or writing. **Clarifications:** In kindergarten and 1st grade, students learn the difference between formal and informal language. For example, the way we talk to our friends differs from the way we speak to adults. In 2nd grade and beyond, students practice appropriate social and academic language to discuss texts.
ELD.K12.ELL.SI.1:	English language learners communicate for social and instructional purposes within the school setting.

General Course Information and Notes

GENERAL NOTES

Florida's Benchmarks for Excellent Student Thinking (B.E.S.T.) Standards
This course includes Florida's B.E.S.T. ELA Expectations (EE) and Mathematical Thinking and Reasoning Standards (MTRs) for students. Florida educators should intentionally embed these standards within the content and their instruction as applicable. For guidance on the implementation of the EEs and MTRs, please visit cpalms.org/Standards/BEST_Standards.aspx and select the appropriate B.E.S.T. Standards package.

English Language Development ELD Standards Special Notes Section:
Teachers are required to provide listening, speaking, reading and writing instruction that allows English language learners (ELL) to communicate for social and instructional purposes within the school setting. For the given level of English language proficiency and with visual, graphic, or interactive support, students will interact with grade level words, expressions, sentences and discourse to process or produce language necessary for academic success. The ELD standard should specify a relevant content area concept or topic of study chosen by curriculum developers and teachers which maximizes an ELL's need for communication and social skills. To access an ELL supporting document which delineates performance definitions and descriptors, please click on the following link: cpalms.org/uploads/docs/standards/eld/SI.pdf

GENERAL INFORMATION

Course Number: 1503300

Course Path: Section: Grades PreK to 12 Education Courses > **Grade Group:** Grades 9 to 12 and Adult Education Courses > **Subject:** Physical Education > **SubSubject:** Team >

Abbreviated Title: TRACK & FIELD

Number of Credits: Half credit (.5)

Course Length: Semester (S)

Course Type: Core Academic Course

Course Level: 2

Course Status: Draft - Course Pending Approval

Grade Level(s): 9,10,11,12

Graduation Requirement: Physical Education

Educator Certifications

Physical Education (Grades 6-12)
Physical Education (Elementary and Secondary Grades K-12)

Basketball (#1503310) 2022 - And Beyond

Course Standards

Name	Description
PE.912.C.2.20:	Identify appropriate methods to resolve physical conflict.
PE.912.C.2.21:	Diagram, explain and justify the use of advanced offensive, defensive and transition strategies and tactics.
PE.912.C.2.22:	Explain the skill-related components of fitness and how they enhance performance levels. **Clarifications:** The skill-related components of fitness are speed, coordination, balance, power, agility and reaction time.
PE.912.C.2.23:	Apply appropriate technology and analyze data to evaluate, monitor and/or improve performance.
PE.912.C.2.24:	Analyze the mechanical principles as they apply to specific course activities. **Clarifications:** Some examples are balance, force and leverage.
PE.912.C.2.25:	Analyze and evaluate the risks, safety procedures, rules and equipment associated with specific course activities.
PE.912.C.2.26:	Evaluate skill patterns of self and/or partner by detecting and correcting mechanical errors.
PE.912.C.2.28:	Interpret and apply the rules associated with specific course activities.
PE.912.L.3.4:	Identify the in-school opportunities for participation in a variety of physical activities.
PE.912.L.3.5:	Identify the community opportunities for participation in a variety of physical activities.
PE.912.L.3.6:	Identify risks and safety factors that may affect physical activity throughout life.
PE.912.M.1.5:	Apply strategies for self improvement based on individual strengths and needs.
PE.912.M.1.10:	Apply sport specific skills in simulation and in real-life applications. **Clarifications:** An example of a simulation is a practice setting or lead up activity. An example of a real-life application is a game or performance setting.
PE.912.M.1.15:	Select and apply sport/activity specific warm-up and cool-down techniques.
PE.912.M.1.24:	Apply a combination of complex movement patterns in a game setting.
PE.912.M.1.25:	Apply appropriate speed and generation of force when distance running, sprinting, throwing, jumping, striking or kicking.
PE.912.M.1.26:	Analyze and apply offensive, defensive and transition strategies and tactics to reflect a higher order of thinking. **Clarifications:** An example is placing a shot in an open area away from opponent.
PE.912.M.1.30:	Combine and apply movement patterns from simple to complex.
PE.912.M.1.31:	Demonstrate advanced offensive, defensive and transition strategies and tactics.
PE.912.M.1.32:	Apply sport specific skills in a variety of game settings.
PE.912.M.1.33:	Practice complex motor activities in order to improve performance.
PE.912.M.1.34:	Demonstrate use of the mechanical principles as they apply to specific course activities. **Clarifications:** Some examples are balance, force and leverage.
PE.912.M.1.35:	Select proper equipment and apply all appropriate safety procedures necessary for participation.
PE.912.R.5.2:	Develop strategies for including persons of diverse backgrounds and abilities while participating in a variety of physical activities.
PE.912.R.5.3:	Demonstrate sportsmanship during game situations. **Clarifications:** Some examples are controlling emotions, resolving conflicts, respecting opponents and officials, and accepting both victory and defeat.
PE.912.R.5.4:	Maintain appropriate personal, social and ethical behavior while participating in a variety of physical activities. **Clarifications:** Some examples are respecting teammates, opponents and officials, and accepting both victory and defeat.
PE.912.R.5.5:	Demonstrate appropriate etiquette, care of equipment, respect for facilities and safe behaviors while participating in a variety of physical activities.
PE.912.R.6.3:	Analyze the roles of games, sports and/or physical activities in other cultures.
MA.K12.MTR.1.1:	Mathematicians who participate in effortful learning both individually and with others: • Analyze the problem in a way that makes sense given the task. • Ask questions that will help with solving the task. • Build perseverance by modifying methods as needed while solving a challenging task. • Stay engaged and maintain a positive mindset when working to solve tasks. • Help and support each other when attempting a new method or approach. **Clarifications:** Teachers who encourage students to participate actively in effortful learning both individually and with others: • Cultivate a community of growth mindset learners. • Foster perseverance in students by choosing tasks that are challenging. • Develop students' ability to analyze and problem solve. • Recognize students' effort when solving challenging problems.
	Demonstrate understanding by representing problems in multiple ways. Mathematicians who demonstrate understanding by representing problems in multiple ways:

- Build understanding through modeling and using manipulatives.
- Represent solutions to problems in multiple ways using objects, drawings, tables, graphs and equations.
- Progress from modeling problems with objects and drawings to using algorithms and equations.
- Express connections between concepts and representations.

MA.K12.MTR.2.1:

- Choose a representation based on the given context or purpose.

Clarifications:
Teachers who encourage students to demonstrate understanding by representing problems in multiple ways:

- Help students make connections between concepts and representations.
- Provide opportunities for students to use manipulatives when investigating concepts.
- Guide students from concrete to pictorial to abstract representations as understanding progresses.
- Show students that various representations can have different purposes and can be useful in different situations.

Complete tasks with mathematical fluency.
Mathematicians who complete tasks with mathematical fluency:

- Select efficient and appropriate methods for solving problems within the given context.
- Maintain flexibility and accuracy while performing procedures and mental calculations.
- Complete tasks accurately and with confidence.
- Adapt procedures to apply them to a new context.

MA.K12.MTR.3.1:

- Use feedback to improve efficiency when performing calculations.

Clarifications:
Teachers who encourage students to complete tasks with mathematical fluency:

- Provide students with the flexibility to solve problems by selecting a procedure that allows them to solve efficiently and accurately.
- Offer multiple opportunities for students to practice efficient and generalizable methods.
- Provide opportunities for students to reflect on the method they used and determine if a more efficient method could have been used.

Engage in discussions that reflect on the mathematical thinking of self and others.
Mathematicians who engage in discussions that reflect on the mathematical thinking of self and others:

- Communicate mathematical ideas, vocabulary and methods effectively.
- Analyze the mathematical thinking of others.
- Compare the efficiency of a method to those expressed by others.
- Recognize errors and suggest how to correctly solve the task.
- Justify results by explaining methods and processes.

MA.K12.MTR.4.1:

- Construct possible arguments based on evidence.

Clarifications:
Teachers who encourage students to engage in discussions that reflect on the mathematical thinking of self and others:

- Establish a culture in which students ask questions of the teacher and their peers, and error is an opportunity for learning.
- Create opportunities for students to discuss their thinking with peers.
- Select, sequence and present student work to advance and deepen understanding of correct and increasingly efficient methods.
- Develop students' ability to justify methods and compare their responses to the responses of their peers.

Use patterns and structure to help understand and connect mathematical concepts.
Mathematicians who use patterns and structure to help understand and connect mathematical concepts:

- Focus on relevant details within a problem.
- Create plans and procedures to logically order events, steps or ideas to solve problems.
- Decompose a complex problem into manageable parts.
- Relate previously learned concepts to new concepts.
- Look for similarities among problems.

MA.K12.MTR.5.1:

- Connect solutions of problems to more complicated large-scale situations.

Clarifications:
Teachers who encourage students to use patterns and structure to help understand and connect mathematical concepts:

- Help students recognize the patterns in the world around them and connect these patterns to mathematical concepts.
- Support students to develop generalizations based on the similarities found among problems.
- Provide opportunities for students to create plans and procedures to solve problems.
- Develop students' ability to construct relationships between their current understanding and more sophisticated ways of thinking.

Assess the reasonableness of solutions.
Mathematicians who assess the reasonableness of solutions:

- Estimate to discover possible solutions.
- Use benchmark quantities to determine if a solution makes sense.
- Check calculations when solving problems.
- Verify possible solutions by explaining the methods used.

MA.K12.MTR.6.1:

- Evaluate results based on the given context.

Clarifications:
Teachers who encourage students to assess the reasonableness of solutions:

- Have students estimate or predict solutions prior to solving.
- Prompt students to continually ask, "Does this solution make sense? How do you know?"
- Reinforce that students check their work as they progress within and after a task.
- Strengthen students' ability to verify solutions through justifications.

Apply mathematics to real-world contexts.
Mathematicians who apply mathematics to real-world contexts:

	• Connect mathematical concepts to everyday experiences. • Use models and methods to understand, represent and solve problems. • Perform investigations to gather data or determine if a method is appropriate. • Redesign models and methods to improve accuracy or efficiency.
MA.K12.MTR.7.1:	**Clarifications:** Teachers who encourage students to apply mathematics to real-world contexts: • Provide opportunities for students to create models, both concrete and abstract, and perform investigations. • Challenge students to question the accuracy of their models and methods. • Support students as they validate conclusions by comparing them to the given situation. • Indicate how various concepts can be applied to other disciplines.
	Cite evidence to explain and justify reasoning.
ELA.K12.EE.1.1:	**Clarifications:** K-1 Students include textual evidence in their oral communication with guidance and support from adults. The evidence can consist of details from the text without naming the text. During 1st grade, students learn how to incorporate the evidence in their writing. 2-3 Students include relevant textual evidence in their written and oral communication. Students should name the text when they refer to it. In 3rd grade, students should use a combination of direct and indirect citations. 4-5 Students continue with previous skills and reference comments made by speakers and peers. Students cite texts that they've directly quoted, paraphrased, or used for information. When writing, students will use the form of citation dictated by the instructor or the style guide referenced by the instructor. 6-8 Students continue with previous skills and use a style guide to create a proper citation. 9-12 Students continue with previous skills and should be aware of existing style guides and the ways in which they differ.
	Read and comprehend grade-level complex texts proficiently.
ELA.K12.EE.2.1:	**Clarifications:** See Text Complexity for grade-level complexity bands and a text complexity rubric.
	Make inferences to support comprehension.
ELA.K12.EE.3.1:	**Clarifications:** Students will make inferences before the words infer or inference are introduced. Kindergarten students will answer questions like "Why is the girl smiling?" or make predictions about what will happen based on the title page. Students will use the terms and apply them in 2nd grade and beyond.
	Use appropriate collaborative techniques and active listening skills when engaging in discussions in a variety of situations.
ELA.K12.EE.4.1:	**Clarifications:** In kindergarten, students learn to listen to one another respectfully. In grades 1-2, students build upon these skills by justifying what they are thinking. For example: "I think _____ because _____." The collaborative conversations are becoming academic conversations. In grades 3-12, students engage in academic conversations discussing claims and justifying their reasoning, refining and applying skills. Students build on ideas, propel the conversation, and support claims and counterclaims with evidence.
	Use the accepted rules governing a specific format to create quality work.
ELA.K12.EE.5.1:	**Clarifications:** Students will incorporate skills learned into work products to produce quality work. For students to incorporate these skills appropriately, they must receive instruction. A 3rd grade student creating a poster board display must have instruction in how to effectively present information to do quality work.
	Use appropriate voice and tone when speaking or writing.
ELA.K12.EE.6.1:	**Clarifications:** In kindergarten and 1st grade, students learn the difference between formal and informal language. For example, the way we talk to our friends differs from the way we speak to adults. In 2nd grade and beyond, students practice appropriate social and academic language to discuss texts.
ELD.K12.ELL.SI.1:	English language learners communicate for social and instructional purposes within the school setting.

General Course Information and Notes

GENERAL NOTES

Florida's Benchmarks for Excellent Student Thinking (B.E.S.T.) Standards
This course includes Florida's B.E.S.T. ELA Expectations (EE) and Mathematical Thinking and Reasoning Standards (MTRs) for students. Florida educators should intentionally embed these standards within the content and their instruction as applicable. For guidance on the implementation of the EEs and MTRs, please visit cpalms.org/Standards/BEST_Standards.aspx and select the appropriate B.E.S.T. Standards package.

English Language Development ELD Standards Special Notes Section:
Teachers are required to provide listening, speaking, reading and writing instruction that allows English language learners (ELL) to communicate for social and instructional purposes within the school setting. For the given level of English language proficiency and with visual, graphic, or interactive support, students will interact with grade level words, expressions, sentences and discourse to process or produce language necessary for academic success. The ELD standard should specify a relevant content area concept or topic of study chosen by curriculum developers and teachers which maximizes an ELL's need for communication and social skills. To access an ELL supporting document which delineates performance definitions and descriptors, please click on the following link: cpalms.org/uploads/docs/standards/eld/SI.pdf

GENERAL INFORMATION

Course Number: 1503310

Course Path: Section: Grades PreK to 12 Education Courses > **Grade Group:** Grades 9 to 12 and Adult Education Courses > **Subject:** Physical Education > **SubSubject:** Team >

Abbreviated Title: BASKETBALL

Number of Credits: Half credit (.5)

Course Length: Semester (S)

Course Type: Core Academic Course

Course Level: 2

Course Status: Draft - Course Pending Approval

Grade Level(s): 9,10,11,12

Graduation Requirement: Physical Education

Educator Certifications

Physical Education (Grades 6-12)
Physical Education (Elementary and Secondary Grades K-12)

Basketball 2 (#1503315) 2022 - And Beyond

Course Standards

Name	Description
PE.912.C.2.20:	Identify appropriate methods to resolve physical conflict.
PE.912.C.2.21:	Diagram, explain and justify the use of advanced offensive, defensive and transition strategies and tactics.
PE.912.C.2.22:	Explain the skill-related components of fitness and how they enhance performance levels. **Clarifications:** The skill-related components of fitness are speed, coordination, balance, power, agility and reaction time.
PE.912.C.2.23:	Apply appropriate technology and analyze data to evaluate, monitor and/or improve performance.
PE.912.C.2.24:	Analyze the mechanical principles as they apply to specific course activities. **Clarifications:** Some examples are balance, force and leverage.
PE.912.C.2.25:	Analyze and evaluate the risks, safety procedures, rules and equipment associated with specific course activities.
PE.912.C.2.26:	Evaluate skill patterns of self and/or partner by detecting and correcting mechanical errors.
PE.912.C.2.28:	Interpret and apply the rules associated with specific course activities.
PE.912.L.3.4:	Identify the in-school opportunities for participation in a variety of physical activities.
PE.912.L.3.5:	Identify the community opportunities for participation in a variety of physical activities.
PE.912.L.3.6:	Identify risks and safety factors that may affect physical activity throughout life.
PE.912.M.1.5:	Apply strategies for self improvement based on individual strengths and needs.
PE.912.M.1.10:	Apply sport specific skills in simulation and in real-life applications. **Clarifications:** An example of a simulation is a practice setting or lead up activity. An example of a real-life application is a game or performance setting.
PE.912.M.1.15:	Select and apply sport/activity specific warm-up and cool-down techniques.
PE.912.M.1.24:	Apply a combination of complex movement patterns in a game setting.
PE.912.M.1.25:	Apply appropriate speed and generation of force when distance running, sprinting, throwing, jumping, striking or kicking.
PE.912.M.1.26:	Analyze and apply offensive, defensive and transition strategies and tactics to reflect a higher order of thinking. **Clarifications:** An example is placing a shot in an open area away from opponent.
PE.912.M.1.30:	Combine and apply movement patterns from simple to complex.
PE.912.M.1.31:	Demonstrate advanced offensive, defensive and transition strategies and tactics.
PE.912.M.1.32:	Apply sport specific skills in a variety of game settings.
PE.912.M.1.33:	Practice complex motor activities in order to improve performance.
PE.912.M.1.34:	Demonstrate use of the mechanical principles as they apply to specific course activities. **Clarifications:** Some examples are balance, force and leverage.
PE.912.M.1.35:	Select proper equipment and apply all appropriate safety procedures necessary for participation.
PE.912.R.5.2:	Develop strategies for including persons of diverse backgrounds and abilities while participating in a variety of physical activities.
PE.912.R.5.3:	Demonstrate sportsmanship during game situations. **Clarifications:** Some examples are controlling emotions, resolving conflicts, respecting opponents and officials, and accepting both victory and defeat.
PE.912.R.5.4:	Maintain appropriate personal, social and ethical behavior while participating in a variety of physical activities. **Clarifications:** Some examples are respecting teammates, opponents and officials, and accepting both victory and defeat.
PE.912.R.5.5:	Demonstrate appropriate etiquette, care of equipment, respect for facilities and safe behaviors while participating in a variety of physical activities.
PE.912.R.6.3:	Analyze the roles of games, sports and/or physical activities in other cultures.
MA.K12.MTR.1.1:	Mathematicians who participate in effortful learning both individually and with others: • Analyze the problem in a way that makes sense given the task. • Ask questions that will help with solving the task. • Build perseverance by modifying methods as needed while solving a challenging task. • Stay engaged and maintain a positive mindset when working to solve tasks. • Help and support each other when attempting a new method or approach. **Clarifications:** Teachers who encourage students to participate actively in effortful learning both individually and with others: • Cultivate a community of growth mindset learners. • Foster perseverance in students by choosing tasks that are challenging. • Develop students' ability to analyze and problem solve. • Recognize students' effort when solving challenging problems.
	Demonstrate understanding by representing problems in multiple ways. Mathematicians who demonstrate understanding by representing problems in multiple ways:

- Build understanding through modeling and using manipulatives.
- Represent solutions to problems in multiple ways using objects, drawings, tables, graphs and equations.
- Progress from modeling problems with objects and drawings to using algorithms and equations.
- Express connections between concepts and representations.

MA.K12.MTR.2.1:

- Choose a representation based on the given context or purpose.

Clarifications:
Teachers who encourage students to demonstrate understanding by representing problems in multiple ways:

- Help students make connections between concepts and representations.
- Provide opportunities for students to use manipulatives when investigating concepts.
- Guide students from concrete to pictorial to abstract representations as understanding progresses.
- Show students that various representations can have different purposes and can be useful in different situations.

Complete tasks with mathematical fluency.
Mathematicians who complete tasks with mathematical fluency:

- Select efficient and appropriate methods for solving problems within the given context.
- Maintain flexibility and accuracy while performing procedures and mental calculations.
- Complete tasks accurately and with confidence.
- Adapt procedures to apply them to a new context.

MA.K12.MTR.3.1:

- Use feedback to improve efficiency when performing calculations.

Clarifications:
Teachers who encourage students to complete tasks with mathematical fluency:

- Provide students with the flexibility to solve problems by selecting a procedure that allows them to solve efficiently and accurately.
- Offer multiple opportunities for students to practice efficient and generalizable methods.
- Provide opportunities for students to reflect on the method they used and determine if a more efficient method could have been used.

Engage in discussions that reflect on the mathematical thinking of self and others.
Mathematicians who engage in discussions that reflect on the mathematical thinking of self and others:

- Communicate mathematical ideas, vocabulary and methods effectively.
- Analyze the mathematical thinking of others.
- Compare the efficiency of a method to those expressed by others.
- Recognize errors and suggest how to correctly solve the task.
- Justify results by explaining methods and processes.

MA.K12.MTR.4.1:

- Construct possible arguments based on evidence.

Clarifications:
Teachers who encourage students to engage in discussions that reflect on the mathematical thinking of self and others:

- Establish a culture in which students ask questions of the teacher and their peers, and error is an opportunity for learning.
- Create opportunities for students to discuss their thinking with peers.
- Select, sequence and present student work to advance and deepen understanding of correct and increasingly efficient methods.
- Develop students' ability to justify methods and compare their responses to the responses of their peers.

Use patterns and structure to help understand and connect mathematical concepts.
Mathematicians who use patterns and structure to help understand and connect mathematical concepts:

- Focus on relevant details within a problem.
- Create plans and procedures to logically order events, steps or ideas to solve problems.
- Decompose a complex problem into manageable parts.
- Relate previously learned concepts to new concepts.
- Look for similarities among problems.

MA.K12.MTR.5.1:

- Connect solutions of problems to more complicated large-scale situations.

Clarifications:
Teachers who encourage students to use patterns and structure to help understand and connect mathematical concepts:

- Help students recognize the patterns in the world around them and connect these patterns to mathematical concepts.
- Support students to develop generalizations based on the similarities found among problems.
- Provide opportunities for students to create plans and procedures to solve problems.
- Develop students' ability to construct relationships between their current understanding and more sophisticated ways of thinking.

Assess the reasonableness of solutions.
Mathematicians who assess the reasonableness of solutions:

- Estimate to discover possible solutions.
- Use benchmark quantities to determine if a solution makes sense.
- Check calculations when solving problems.
- Verify possible solutions by explaining the methods used.

MA.K12.MTR.6.1:

- Evaluate results based on the given context.

Clarifications:
Teachers who encourage students to assess the reasonableness of solutions:

- Have students estimate or predict solutions prior to solving.
- Prompt students to continually ask, "Does this solution make sense? How do you know?"
- Reinforce that students check their work as they progress within and after a task.
- Strengthen students' ability to verify solutions through justifications.

Apply mathematics to real-world contexts.
Mathematicians who apply mathematics to real-world contexts:

	• Connect mathematical concepts to everyday experiences. • Use models and methods to understand, represent and solve problems. • Perform investigations to gather data or determine if a method is appropriate. • Redesign models and methods to improve accuracy or efficiency.
MA.K12.MTR.7.1:	**Clarifications:** Teachers who encourage students to apply mathematics to real-world contexts: • Provide opportunities for students to create models, both concrete and abstract, and perform investigations. • Challenge students to question the accuracy of their models and methods. • Support students as they validate conclusions by comparing them to the given situation. • Indicate how various concepts can be applied to other disciplines.
	Cite evidence to explain and justify reasoning.
ELA.K12.EE.1.1:	**Clarifications:** K-1 Students include textual evidence in their oral communication with guidance and support from adults. The evidence can consist of details from the text without naming the text. During 1st grade, students learn how to incorporate the evidence in their writing. 2-3 Students include relevant textual evidence in their written and oral communication. Students should name the text when they refer to it. In 3rd grade, students should use a combination of direct and indirect citations. 4-5 Students continue with previous skills and reference comments made by speakers and peers. Students cite texts that they've directly quoted, paraphrased, or used for information. When writing, students will use the form of citation dictated by the instructor or the style guide referenced by the instructor. 6-8 Students continue with previous skills and use a style guide to create a proper citation. 9-12 Students continue with previous skills and should be aware of existing style guides and the ways in which they differ.
	Read and comprehend grade-level complex texts proficiently.
ELA.K12.EE.2.1:	**Clarifications:** See Text Complexity for grade-level complexity bands and a text complexity rubric.
	Make inferences to support comprehension.
ELA.K12.EE.3.1:	**Clarifications:** Students will make inferences before the words infer or inference are introduced. Kindergarten students will answer questions like "Why is the girl smiling?" or make predictions about what will happen based on the title page. Students will use the terms and apply them in 2nd grade and beyond.
	Use appropriate collaborative techniques and active listening skills when engaging in discussions in a variety of situations.
ELA.K12.EE.4.1:	**Clarifications:** In kindergarten, students learn to listen to one another respectfully. In grades 1-2, students build upon these skills by justifying what they are thinking. For example: "I think _____ because _____." The collaborative conversations are becoming academic conversations. In grades 3-12, students engage in academic conversations discussing claims and justifying their reasoning, refining and applying skills. Students build on ideas, propel the conversation, and support claims and counterclaims with evidence.
	Use the accepted rules governing a specific format to create quality work.
ELA.K12.EE.5.1:	**Clarifications:** Students will incorporate skills learned into work products to produce quality work. For students to incorporate these skills appropriately, they must receive instruction. A 3rd grade student creating a poster board display must have instruction in how to effectively present information to do quality work.
	Use appropriate voice and tone when speaking or writing.
ELA.K12.EE.6.1:	**Clarifications:** In kindergarten and 1st grade, students learn the difference between formal and informal language. For example, the way we talk to our friends differs from the way we speak to adults. In 2nd grade and beyond, students practice appropriate social and academic language to discuss texts.
ELD.K12.ELL.SI.1:	English language learners communicate for social and instructional purposes within the school setting.

General Course Information and Notes

VERSION DESCRIPTION

The purpose of this course is to provide more in-depth instruction of the fundamental skills, tactics, rules and etiquette in basketball. Introduction to systems of play will be included to enhance the student's understanding. Advanced skills and drills which directly affect student's physical and cognitive abilities will be covered. Students will participate in advanced individual and team techniques in relationship to basketball strategy. Participate in course activities will continue to enhance healthy behaviors that influence students to participate in physical activities throughout their life.

Content could include but not be limited to:

- fundamental basketball skills (passing, dribbling, shooting, rebounding, and defense).
- instruction in principles of motion
- basketball history
- rules and terminology
- offensive strategies (motion offense, spacing, screening, pick and roll)
- man-to-man defense (positioning, fighting screens, taking charges, help)
- zone defenses (1-2-2, 2-1-2, 2-3, Box and 1, Diamond and 1)

- using data and statistical analysis to enhance game play

GENERAL NOTES

Fitness concepts, as they relate to basketball, will continue to be taught as part of the overall physical education curriculum. Florida Standards for English/Language Arts and Mathematics standards have been aligned to this course. Literacy standards and mathematical practices will be integrated where appropriate.

Florida's Benchmarks for Excellent Student Thinking (B.E.S.T.) Standards
This course includes Florida's B.E.S.T. ELA Expectations (EE) and Mathematical Thinking and Reasoning Standards (MTRs) for students. Florida educators should intentionally embed these standards within the content and their instruction as applicable. For guidance on the implementation of the EEs and MTRs, please visit cpalms.org/Standards/BEST_Standards.aspx and select the appropriate B.E.S.T. Standards package.

English Language Development ELD Standards Special Notes Section:
Teachers are required to provide listening, speaking, reading and writing instruction that allows English language learners (ELL) to communicate for social and instructional purposes within the school setting. For the given level of English language proficiency and with visual, graphic, or interactive support, students will interact with grade level words, expressions, sentences and discourse to process or produce language necessary for academic success. The ELD standard should specify a relevant content area concept or topic of study chosen by curriculum developers and teachers which maximizes an ELL's need for communication and social skills. To access an ELL supporting document which delineates performance definitions and descriptors, please click on the following link: cpalms.org/uploads/docs/standards/eld/SI.pdf

VERSION REQUIREMENTS

Students enrolled in this course should have successfully completed Basketball 1. These requirements include, but are not limited to, the benchmarks that are most relevant to this course. Appropriate ELA and Mathematics standards are also included to ensure a comprehensive educational experience.

GENERAL INFORMATION

Course Number: 1503315

Course Path: Section: Grades PreK to 12 Education Courses > **Grade Group:** Grades 9 to 12 and Adult Education Courses > **Subject:** Physical Education > **SubSubject:** Team > **Abbreviated Title:** BASKETBALL 2

Number of Credits: Half credit (.5)

Course Length: Semester (S)

Course Type: Core Academic Course

Course Level: 2

Course Status: Draft - Course Pending Approval

Grade Level(s): 9,10,11,12

Graduation Requirement: Physical Education

Educator Certifications

Physical Education (Grades 6-12)
Physical Education (Elementary and Secondary Grades K-12)

Soccer (#1503320) 2022 - And Beyond

Course Standards

Name	Description
PE.912.C.2.9:	Explain the precautions to be taken when exercising in extreme weather and/or environmental conditions. **Clarifications:** Some examples of precautions are hydration and appropriate attire.
PE.912.C.2.20:	Identify appropriate methods to resolve physical conflict.
PE.912.C.2.21:	Diagram, explain and justify the use of advanced offensive, defensive and transition strategies and tactics.
PE.912.C.2.22:	Explain the skill-related components of fitness and how they enhance performance levels. **Clarifications:** The skill-related components of fitness are speed, coordination, balance, power, agility and reaction time.
PE.912.C.2.23:	Apply appropriate technology and analyze data to evaluate, monitor and/or improve performance.
PE.912.C.2.24:	Analyze the mechanical principles as they apply to specific course activities. **Clarifications:** Some examples are balance, force and leverage.
PE.912.C.2.25:	Analyze and evaluate the risks, safety procedures, rules and equipment associated with specific course activities.
PE.912.C.2.26:	Evaluate skill patterns of self and/or partner by detecting and correcting mechanical errors.
PE.912.C.2.28:	Interpret and apply the rules associated with specific course activities.
PE.912.L.3.4:	Identify the in-school opportunities for participation in a variety of physical activities.
PE.912.L.3.5:	Identify the community opportunities for participation in a variety of physical activities.
PE.912.L.3.6:	Identify risks and safety factors that may affect physical activity throughout life.
PE.912.M.1.5:	Apply strategies for self improvement based on individual strengths and needs.
PE.912.M.1.10:	Apply sport specific skills in simulation and in real-life applications. **Clarifications:** An example of a simulation is a practice setting or lead up activity. An example of a real-life application is a game or performance setting.
PE.912.M.1.15:	Select and apply sport/activity specific warm-up and cool-down techniques.
PE.912.M.1.24:	Apply a combination of complex movement patterns in a game setting.
PE.912.M.1.25:	Apply appropriate speed and generation of force when distance running, sprinting, throwing, jumping, striking or kicking.
PE.912.M.1.26:	Analyze and apply offensive, defensive and transition strategies and tactics to reflect a higher order of thinking. **Clarifications:** An example is placing a shot in an open area away from opponent.
PE.912.M.1.30:	Combine and apply movement patterns from simple to complex.
PE.912.M.1.31:	Demonstrate advanced offensive, defensive and transition strategies and tactics.
PE.912.M.1.32:	Apply sport specific skills in a variety of game settings.
PE.912.M.1.33:	Practice complex motor activities in order to improve performance.
PE.912.M.1.34:	Demonstrate use of the mechanical principles as they apply to specific course activities. **Clarifications:** Some examples are balance, force and leverage.
PE.912.M.1.35:	Select proper equipment and apply all appropriate safety procedures necessary for participation.
PE.912.R.5.2:	Develop strategies for including persons of diverse backgrounds and abilities while participating in a variety of physical activities.
PE.912.R.5.3:	Demonstrate sportsmanship during game situations. **Clarifications:** Some examples are controlling emotions, resolving conflicts, respecting opponents and officials, and accepting both victory and defeat.
PE.912.R.5.4:	Maintain appropriate personal, social and ethical behavior while participating in a variety of physical activities. **Clarifications:** Some examples are respecting teammates, opponents and officials, and accepting both victory and defeat.
PE.912.R.5.5:	Demonstrate appropriate etiquette, care of equipment, respect for facilities and safe behaviors while participating in a variety of physical activities.
PE.912.R.6.3:	Analyze the roles of games, sports and/or physical activities in other cultures.
MA.K12.MTR.1.1:	Mathematicians who participate in effortful learning both individually and with others: • Analyze the problem in a way that makes sense given the task. • Ask questions that will help with solving the task. • Build perseverance by modifying methods as needed while solving a challenging task. • Stay engaged and maintain a positive mindset when working to solve tasks. • Help and support each other when attempting a new method or approach. **Clarifications:** Teachers who encourage students to participate actively in effortful learning both individually and with others: • Cultivate a community of growth mindset learners. • Foster perseverance in students by choosing tasks that are challenging. • Develop students' ability to analyze and problem solve.

- Recognize students' effort when solving challenging problems.

MA.K12.MTR.2.1:

Demonstrate understanding by representing problems in multiple ways.
Mathematicians who demonstrate understanding by representing problems in multiple ways:

- Build understanding through modeling and using manipulatives.
- Represent solutions to problems in multiple ways using objects, drawings, tables, graphs and equations.
- Progress from modeling problems with objects and drawings to using algorithms and equations.
- Express connections between concepts and representations.
- Choose a representation based on the given context or purpose.

Clarifications:
Teachers who encourage students to demonstrate understanding by representing problems in multiple ways:

- Help students make connections between concepts and representations.
- Provide opportunities for students to use manipulatives when investigating concepts.
- Guide students from concrete to pictorial to abstract representations as understanding progresses.
- Show students that various representations can have different purposes and can be useful in different situations.

MA.K12.MTR.3.1:

Complete tasks with mathematical fluency.
Mathematicians who complete tasks with mathematical fluency:

- Select efficient and appropriate methods for solving problems within the given context.
- Maintain flexibility and accuracy while performing procedures and mental calculations.
- Complete tasks accurately and with confidence.
- Adapt procedures to apply them to a new context.
- Use feedback to improve efficiency when performing calculations.

Clarifications:
Teachers who encourage students to complete tasks with mathematical fluency:

- Provide students with the flexibility to solve problems by selecting a procedure that allows them to solve efficiently and accurately.
- Offer multiple opportunities for students to practice efficient and generalizable methods.
- Provide opportunities for students to reflect on the method they used and determine if a more efficient method could have been used.

MA.K12.MTR.4.1:

Engage in discussions that reflect on the mathematical thinking of self and others.
Mathematicians who engage in discussions that reflect on the mathematical thinking of self and others:

- Communicate mathematical ideas, vocabulary and methods effectively.
- Analyze the mathematical thinking of others.
- Compare the efficiency of a method to those expressed by others.
- Recognize errors and suggest how to correctly solve the task.
- Justify results by explaining methods and processes.
- Construct possible arguments based on evidence.

Clarifications:
Teachers who encourage students to engage in discussions that reflect on the mathematical thinking of self and others:

- Establish a culture in which students ask questions of the teacher and their peers, and error is an opportunity for learning.
- Create opportunities for students to discuss their thinking with peers.
- Select, sequence and present student work to advance and deepen understanding of correct and increasingly efficient methods.
- Develop students' ability to justify methods and compare their responses to the responses of their peers.

MA.K12.MTR.5.1:

Use patterns and structure to help understand and connect mathematical concepts.
Mathematicians who use patterns and structure to help understand and connect mathematical concepts:

- Focus on relevant details within a problem.
- Create plans and procedures to logically order events, steps or ideas to solve problems.
- Decompose a complex problem into manageable parts.
- Relate previously learned concepts to new concepts.
- Look for similarities among problems.
- Connect solutions of problems to more complicated large-scale situations.

Clarifications:
Teachers who encourage students to use patterns and structure to help understand and connect mathematical concepts:

- Help students recognize the patterns in the world around them and connect these patterns to mathematical concepts.
- Support students to develop generalizations based on the similarities found among problems.
- Provide opportunities for students to create plans and procedures to solve problems.
- Develop students' ability to construct relationships between their current understanding and more sophisticated ways of thinking.

MA.K12.MTR.6.1:

Assess the reasonableness of solutions.
Mathematicians who assess the reasonableness of solutions:

- Estimate to discover possible solutions.
- Use benchmark quantities to determine if a solution makes sense.
- Check calculations when solving problems.
- Verify possible solutions by explaining the methods used.
- Evaluate results based on the given context.

Clarifications:
Teachers who encourage students to assess the reasonableness of solutions:

- Have students estimate or predict solutions prior to solving.
- Prompt students to continually ask, "Does this solution make sense? How do you know?"

	• Reinforce that students check their work as they progress within and after a task. • Strengthen students' ability to verify solutions through justifications.
MA.K12.MTR.7.1:	Apply mathematics to real-world contexts. Mathematicians who apply mathematics to real-world contexts: • Connect mathematical concepts to everyday experiences. • Use models and methods to understand, represent and solve problems. • Perform investigations to gather data or determine if a method is appropriate. • Redesign models and methods to improve accuracy or efficiency. **Clarifications:** Teachers who encourage students to apply mathematics to real-world contexts: • Provide opportunities for students to create models, both concrete and abstract, and perform investigations. • Challenge students to question the accuracy of their models and methods. • Support students as they validate conclusions by comparing them to the given situation. • Indicate how various concepts can be applied to other disciplines.
ELA.K12.EE.1.1:	Cite evidence to explain and justify reasoning. **Clarifications:** K-1 Students include textual evidence in their oral communication with guidance and support from adults. The evidence can consist of details from the text without naming the text. During 1st grade, students learn how to incorporate the evidence in their writing. 2-3 Students include relevant textual evidence in their written and oral communication. Students should name the text when they refer to it. In 3rd grade, students should use a combination of direct and indirect citations. 4-5 Students continue with previous skills and reference comments made by speakers and peers. Students cite texts that they've directly quoted, paraphrased, or used for information. When writing, students will use the form of citation dictated by the instructor or the style guide referenced by the instructor. 6-8 Students continue with previous skills and use a style guide to create a proper citation. 9-12 Students continue with previous skills and should be aware of existing style guides and the ways in which they differ.
ELA.K12.EE.2.1:	Read and comprehend grade-level complex texts proficiently. **Clarifications:** See Text Complexity for grade-level complexity bands and a text complexity rubric.
ELA.K12.EE.3.1:	Make inferences to support comprehension. **Clarifications:** Students will make inferences before the words infer or inference are introduced. Kindergarten students will answer questions like "Why is the girl smiling?" or make predictions about what will happen based on the title page. Students will use the terms and apply them in 2nd grade and beyond.
ELA.K12.EE.4.1:	Use appropriate collaborative techniques and active listening skills when engaging in discussions in a variety of situations. **Clarifications:** In kindergarten, students learn to listen to one another respectfully. In grades 1-2, students build upon these skills by justifying what they are thinking. For example: "I think _____ because _____." The collaborative conversations are becoming academic conversations. In grades 3-12, students engage in academic conversations discussing claims and justifying their reasoning, refining and applying skills. Students build on ideas, propel the conversation, and support claims and counterclaims with evidence.
ELA.K12.EE.5.1:	Use the accepted rules governing a specific format to create quality work. **Clarifications:** Students will incorporate skills learned into work products to produce quality work. For students to incorporate these skills appropriately, they must receive instruction. A 3rd grade student creating a poster board display must have instruction in how to effectively present information to do quality work.
ELA.K12.EE.6.1:	Use appropriate voice and tone when speaking or writing. **Clarifications:** In kindergarten and 1st grade, students learn the difference between formal and informal language. For example, the way we talk to our friends differs from the way we speak to adults. In 2nd grade and beyond, students practice appropriate social and academic language to discuss texts.
ELD.K12.ELL.SI.1:	English language learners communicate for social and instructional purposes within the school setting.

General Course Information and Notes

GENERAL NOTES

Florida's Benchmarks for Excellent Student Thinking (B.E.S.T.) Standards
This course includes Florida's B.E.S.T. ELA Expectations (EE) and Mathematical Thinking and Reasoning Standards (MTRs) for students. Florida educators should intentionally embed these standards within the content and their instruction as applicable. For guidance on the implementation of the EEs and MTRs, please visit cpalms.org/Standards/BEST_Standards.aspx and select the appropriate B.E.S.T. Standards package.

English Language Development ELD Standards Special Notes Section:
Teachers are required to provide listening, speaking, reading and writing instruction that allows English language learners (ELL) to communicate for social and instructional purposes within the school setting. For the given level of English language proficiency and with visual, graphic, or interactive support, students will interact with grade level words, expressions, sentences and discourse to process or produce language necessary for academic success. The ELD standard should specify a relevant content area

concept or topic of study chosen by curriculum developers and teachers which maximizes an ELL's need for communication and social skills. To access an ELL supporting document which delineates performance definitions and descriptors, please click on the following link: cpalms.org/uploads/docs/standards/eld/SI.pdf

GENERAL INFORMATION

Course Number: 1503320

Course Path: Section: Grades PreK to 12 Education Courses > **Grade Group:** Grades 9 to 12 and Adult Education Courses > **Subject:** Physical Education > **SubSubject:** Team >

Abbreviated Title: SOCCER

Number of Credits: Half credit (.5)

Course Length: Semester (S)

Course Type: Core Academic Course

Course Level: 2

Course Status: Draft - Course Pending Approval

Grade Level(s): 9,10,11,12

Graduation Requirement: Physical Education

Educator Certifications

Physical Education (Grades 6-12)
Physical Education (Elementary and Secondary Grades K-12)

Softball (#1503330) 2022 - And Beyond

Course Standards

Name	Description
PE.912.C.2.7:	Evaluate the effectiveness of specific warm-up and cool-down activities.
PE.912.C.2.9:	Explain the precautions to be taken when exercising in extreme weather and/or environmental conditions. **Clarifications:** Some examples of precautions are hydration and appropriate attire.
PE.912.C.2.20:	Identify appropriate methods to resolve physical conflict.
PE.912.C.2.21:	Diagram, explain and justify the use of advanced offensive, defensive and transition strategies and tactics.
PE.912.C.2.22:	Explain the skill-related components of fitness and how they enhance performance levels. **Clarifications:** The skill-related components of fitness are speed, coordination, balance, power, agility and reaction time.
PE.912.C.2.23:	Apply appropriate technology and analyze data to evaluate, monitor and/or improve performance.
PE.912.C.2.24:	Analyze the mechanical principles as they apply to specific course activities. **Clarifications:** Some examples are balance, force and leverage.
PE.912.C.2.25:	Analyze and evaluate the risks, safety procedures, rules and equipment associated with specific course activities.
PE.912.C.2.26:	Evaluate skill patterns of self and/or partner by detecting and correcting mechanical errors.
PE.912.C.2.28:	Interpret and apply the rules associated with specific course activities.
PE.912.L.3.3:	Identify a variety of activities that promote effective stress management.
PE.912.L.3.6:	Identify risks and safety factors that may affect physical activity throughout life.
PE.912.M.1.5:	Apply strategies for self improvement based on individual strengths and needs.
PE.912.M.1.10:	Apply sport specific skills in simulation and in real-life applications. **Clarifications:** An example of a simulation is a practice setting or lead up activity. An example of a real-life application is a game or performance setting.
PE.912.M.1.15:	Select and apply sport/activity specific warm-up and cool-down techniques.
PE.912.M.1.23:	Demonstrate proficiency of critical elements when striking with objects, implements or body parts.
PE.912.M.1.24:	Apply a combination of complex movement patterns in a game setting.
PE.912.M.1.25:	Apply appropriate speed and generation of force when distance running, sprinting, throwing, jumping, striking or kicking.
PE.912.M.1.26:	Analyze and apply offensive, defensive and transition strategies and tactics to reflect a higher order of thinking. **Clarifications:** An example is placing a shot in an open area away from opponent.
PE.912.M.1.30:	Combine and apply movement patterns from simple to complex.
PE.912.M.1.31:	Demonstrate advanced offensive, defensive and transition strategies and tactics.
PE.912.M.1.32:	Apply sport specific skills in a variety of game settings.
PE.912.M.1.33:	Practice complex motor activities in order to improve performance.
PE.912.M.1.34:	Demonstrate use of the mechanical principles as they apply to specific course activities. **Clarifications:** Some examples are balance, force and leverage.
PE.912.M.1.35:	Select proper equipment and apply all appropriate safety procedures necessary for participation.
PE.912.R.5.2:	Develop strategies for including persons of diverse backgrounds and abilities while participating in a variety of physical activities.
PE.912.R.5.3:	Demonstrate sportsmanship during game situations. **Clarifications:** Some examples are controlling emotions, resolving conflicts, respecting opponents and officials, and accepting both victory and defeat.
PE.912.R.5.4:	Maintain appropriate personal, social and ethical behavior while participating in a variety of physical activities. **Clarifications:** Some examples are respecting teammates, opponents and officials, and accepting both victory and defeat.
PE.912.R.5.5:	Demonstrate appropriate etiquette, care of equipment, respect for facilities and safe behaviors while participating in a variety of physical activities.
PE.912.R.6.3:	Analyze the roles of games, sports and/or physical activities in other cultures.
MA.K12.MTR.1.1:	Mathematicians who participate in effortful learning both individually and with others: • Analyze the problem in a way that makes sense given the task. • Ask questions that will help with solving the task. • Build perseverance by modifying methods as needed while solving a challenging task. • Stay engaged and maintain a positive mindset when working to solve tasks. • Help and support each other when attempting a new method or approach. **Clarifications:** Teachers who encourage students to participate actively in effortful learning both individually and with others: • Cultivate a community of growth mindset learners. • Foster perseverance in students by choosing tasks that are challenging.

- Develop students' ability to analyze and problem solve.
- Recognize students' effort when solving challenging problems.

MA.K12.MTR.2.1:

Demonstrate understanding by representing problems in multiple ways.
Mathematicians who demonstrate understanding by representing problems in multiple ways:

- Build understanding through modeling and using manipulatives.
- Represent solutions to problems in multiple ways using objects, drawings, tables, graphs and equations.
- Progress from modeling problems with objects and drawings to using algorithms and equations.
- Express connections between concepts and representations.
- Choose a representation based on the given context or purpose.

Clarifications:
Teachers who encourage students to demonstrate understanding by representing problems in multiple ways:

- Help students make connections between concepts and representations.
- Provide opportunities for students to use manipulatives when investigating concepts.
- Guide students from concrete to pictorial to abstract representations as understanding progresses.
- Show students that various representations can have different purposes and can be useful in different situations.

MA.K12.MTR.3.1:

Complete tasks with mathematical fluency.
Mathematicians who complete tasks with mathematical fluency:

- Select efficient and appropriate methods for solving problems within the given context.
- Maintain flexibility and accuracy while performing procedures and mental calculations.
- Complete tasks accurately and with confidence.
- Adapt procedures to apply them to a new context.
- Use feedback to improve efficiency when performing calculations.

Clarifications:
Teachers who encourage students to complete tasks with mathematical fluency:

- Provide students with the flexibility to solve problems by selecting a procedure that allows them to solve efficiently and accurately.
- Offer multiple opportunities for students to practice efficient and generalizable methods.
- Provide opportunities for students to reflect on the method they used and determine if a more efficient method could have been used.

MA.K12.MTR.4.1:

Engage in discussions that reflect on the mathematical thinking of self and others.
Mathematicians who engage in discussions that reflect on the mathematical thinking of self and others:

- Communicate mathematical ideas, vocabulary and methods effectively.
- Analyze the mathematical thinking of others.
- Compare the efficiency of a method to those expressed by others.
- Recognize errors and suggest how to correctly solve the task.
- Justify results by explaining methods and processes.
- Construct possible arguments based on evidence.

Clarifications:
Teachers who encourage students to engage in discussions that reflect on the mathematical thinking of self and others:

- Establish a culture in which students ask questions of the teacher and their peers, and error is an opportunity for learning.
- Create opportunities for students to discuss their thinking with peers.
- Select, sequence and present student work to advance and deepen understanding of correct and increasingly efficient methods.
- Develop students' ability to justify methods and compare their responses to the responses of their peers.

MA.K12.MTR.5.1:

Use patterns and structure to help understand and connect mathematical concepts.
Mathematicians who use patterns and structure to help understand and connect mathematical concepts:

- Focus on relevant details within a problem.
- Create plans and procedures to logically order events, steps or ideas to solve problems.
- Decompose a complex problem into manageable parts.
- Relate previously learned concepts to new concepts.
- Look for similarities among problems.
- Connect solutions of problems to more complicated large-scale situations.

Clarifications:
Teachers who encourage students to use patterns and structure to help understand and connect mathematical concepts:

- Help students recognize the patterns in the world around them and connect these patterns to mathematical concepts.
- Support students to develop generalizations based on the similarities found among problems.
- Provide opportunities for students to create plans and procedures to solve problems.
- Develop students' ability to construct relationships between their current understanding and more sophisticated ways of thinking.

MA.K12.MTR.6.1:

Assess the reasonableness of solutions.
Mathematicians who assess the reasonableness of solutions:

- Estimate to discover possible solutions.
- Use benchmark quantities to determine if a solution makes sense.
- Check calculations when solving problems.
- Verify possible solutions by explaining the methods used.
- Evaluate results based on the given context.

Clarifications:
Teachers who encourage students to assess the reasonableness of solutions:

- Have students estimate or predict solutions prior to solving.

	• Prompt students to continually ask, "Does this solution make sense? How do you know?" • Reinforce that students check their work as they progress within and after a task. • Strengthen students' ability to verify solutions through justifications.
MA.K12.MTR.7.1:	Apply mathematics to real-world contexts. Mathematicians who apply mathematics to real-world contexts: • Connect mathematical concepts to everyday experiences. • Use models and methods to understand, represent and solve problems. • Perform investigations to gather data or determine if a method is appropriate. • Redesign models and methods to improve accuracy or efficiency. **Clarifications:** Teachers who encourage students to apply mathematics to real-world contexts: • Provide opportunities for students to create models, both concrete and abstract, and perform investigations. • Challenge students to question the accuracy of their models and methods. • Support students as they validate conclusions by comparing them to the given situation. • Indicate how various concepts can be applied to other disciplines.
ELA.K12.EE.1.1:	Cite evidence to explain and justify reasoning. **Clarifications:** K-1 Students include textual evidence in their oral communication with guidance and support from adults. The evidence can consist of details from the text without naming the text. During 1st grade, students learn how to incorporate the evidence in their writing. 2-3 Students include relevant textual evidence in their written and oral communication. Students should name the text when they refer to it. In 3rd grade, students should use a combination of direct and indirect citations. 4-5 Students continue with previous skills and reference comments made by speakers and peers. Students cite texts that they've directly quoted, paraphrased, or used for information. When writing, students will use the form of citation dictated by the instructor or the style guide referenced by the instructor. 6-8 Students continue with previous skills and use a style guide to create a proper citation. 9-12 Students continue with previous skills and should be aware of existing style guides and the ways in which they differ.
ELA.K12.EE.2.1:	Read and comprehend grade-level complex texts proficiently. **Clarifications:** See Text Complexity for grade-level complexity bands and a text complexity rubric.
ELA.K12.EE.3.1:	Make inferences to support comprehension. **Clarifications:** Students will make inferences before the words infer or inference are introduced. Kindergarten students will answer questions like "Why is the girl smiling?" or make predictions about what will happen based on the title page. Students will use the terms and apply them in 2nd grade and beyond.
ELA.K12.EE.4.1:	Use appropriate collaborative techniques and active listening skills when engaging in discussions in a variety of situations. **Clarifications:** In kindergarten, students learn to listen to one another respectfully. In grades 1-2, students build upon these skills by justifying what they are thinking. For example: "I think _____ because _____." The collaborative conversations are becoming academic conversations. In grades 3-12, students engage in academic conversations discussing claims and justifying their reasoning, refining and applying skills. Students build on ideas, propel the conversation, and support claims and counterclaims with evidence.
ELA.K12.EE.5.1:	Use the accepted rules governing a specific format to create quality work. **Clarifications:** Students will incorporate skills learned into work products to produce quality work. For students to incorporate these skills appropriately, they must receive instruction. A 3rd grade student creating a poster board display must have instruction in how to effectively present information to do quality work.
ELA.K12.EE.6.1:	Use appropriate voice and tone when speaking or writing. **Clarifications:** In kindergarten and 1st grade, students learn the difference between formal and informal language. For example, the way we talk to our friends differs from the way we speak to adults. In 2nd grade and beyond, students practice appropriate social and academic language to discuss texts.
ELD.K12.ELL.SI.1:	English language learners communicate for social and instructional purposes within the school setting.

General Course Information and Notes

GENERAL NOTES

Florida's Benchmarks for Excellent Student Thinking (B.E.S.T.) Standards
This course includes Florida's B.E.S.T. ELA Expectations (EE) and Mathematical Thinking and Reasoning Standards (MTRs) for students. Florida educators should intentionally embed these standards within the content and their instruction as applicable. For guidance on the implementation of the EEs and MTRs, please visit cpalms.org/Standards/BEST_Standards.aspx and select the appropriate B.E.S.T. Standards package.

English Language Development ELD Standards Special Notes Section:
Teachers are required to provide listening, speaking, reading and writing instruction that allows English language learners (ELL) to communicate for social and instructional purposes within the school setting. For the given level of English language proficiency and with visual, graphic, or interactive support, students will interact with grade level

words, expressions, sentences and discourse to process or produce language necessary for academic success. The ELD standard should specify a relevant content area concept or topic of study chosen by curriculum developers and teachers which maximizes an ELL's need for communication and social skills. To access an ELL supporting document which delineates performance definitions and descriptors, please click on the following link: cpalms.org/uploads/docs/standards/eld/SI.pdf

GENERAL INFORMATION

Course Number: 1503330

Course Path: Section: Grades PreK to 12 Education Courses > **Grade Group:** Grades 9 to 12 and Adult Education Courses > **Subject:** Physical Education > **SubSubject:** Team >

Abbreviated Title: SOFTBALL

Number of Credits: Half credit (.5)

Course Length: Semester (S)

Course Type: Core Academic Course

Course Level: 2

Course Status: Draft - Course Pending Approval

Grade Level(s): 9,10,11,12

Graduation Requirement: Physical Education

Educator Certifications

Physical Education (Grades 6-12)
Physical Education (Elementary and Secondary Grades K-12)

Team Sports 1 (#1503350) 2022 - And Beyond

Course Standards

Name	Description
PE.912.C.2.9:	Explain the precautions to be taken when exercising in extreme weather and/or environmental conditions. **Clarifications:** Some examples of precautions are hydration and appropriate attire.
PE.912.C.2.20:	Identify appropriate methods to resolve physical conflict.
PE.912.C.2.21:	Diagram, explain and justify the use of advanced offensive, defensive and transition strategies and tactics.
PE.912.C.2.23:	Apply appropriate technology and analyze data to evaluate, monitor and/or improve performance.
PE.912.C.2.25:	Analyze and evaluate the risks, safety procedures, rules and equipment associated with specific course activities.
PE.912.C.2.28:	Interpret and apply the rules associated with specific course activities.
PE.912.L.3.4:	Identify the in-school opportunities for participation in a variety of physical activities.
PE.912.L.3.5:	Identify the community opportunities for participation in a variety of physical activities.
PE.912.L.3.6:	Identify risks and safety factors that may affect physical activity throughout life.
PE.912.M.1.5:	Apply strategies for self improvement based on individual strengths and needs.
PE.912.M.1.10:	Apply sport specific skills in simulation and in real-life applications. **Clarifications:** An example of a simulation is a practice setting or lead up activity. An example of a real-life application is a game or performance setting.
PE.912.M.1.15:	Select and apply sport/activity specific warm-up and cool-down techniques.
PE.912.M.1.23:	Demonstrate proficiency of critical elements when striking with objects, implements or body parts.
PE.912.M.1.31:	Demonstrate advanced offensive, defensive and transition strategies and tactics.
PE.912.M.1.32:	Apply sport specific skills in a variety of game settings.
PE.912.M.1.33:	Practice complex motor activities in order to improve performance.
PE.912.M.1.35:	Select proper equipment and apply all appropriate safety procedures necessary for participation.
PE.912.R.5.2:	Develop strategies for including persons of diverse backgrounds and abilities while participating in a variety of physical activities.
PE.912.R.5.3:	Demonstrate sportsmanship during game situations. **Clarifications:** Some examples are controlling emotions, resolving conflicts, respecting opponents and officials, and accepting both victory and defeat.
PE.912.R.5.4:	Maintain appropriate personal, social and ethical behavior while participating in a variety of physical activities. **Clarifications:** Some examples are respecting teammates, opponents and officials, and accepting both victory and defeat.
PE.912.R.5.5:	Demonstrate appropriate etiquette, care of equipment, respect for facilities and safe behaviors while participating in a variety of physical activities.
PE.912.R.6.1:	Discuss opportunities for participation in a variety of physical activities outside of the school setting that contribute to personal enjoyment and the attainment or maintenance of a healthy lifestyle.
PE.912.R.6.3:	Analyze the roles of games, sports and/or physical activities in other cultures.
MA.K12.MTR.1.1:	Mathematicians who participate in effortful learning both individually and with others: • Analyze the problem in a way that makes sense given the task. • Ask questions that will help with solving the task. • Build perseverance by modifying methods as needed while solving a challenging task. • Stay engaged and maintain a positive mindset when working to solve tasks. • Help and support each other when attempting a new method or approach. **Clarifications:** Teachers who encourage students to participate actively in effortful learning both individually and with others: • Cultivate a community of growth mindset learners. • Foster perseverance in students by choosing tasks that are challenging. • Develop students' ability to analyze and problem solve. • Recognize students' effort when solving challenging problems.
MA.K12.MTR.2.1:	Demonstrate understanding by representing problems in multiple ways. Mathematicians who demonstrate understanding by representing problems in multiple ways: • Build understanding through modeling and using manipulatives. • Represent solutions to problems in multiple ways using objects, drawings, tables, graphs and equations. • Progress from modeling problems with objects and drawings to using algorithms and equations. • Express connections between concepts and representations. • Choose a representation based on the given context or purpose. **Clarifications:** Teachers who encourage students to demonstrate understanding by representing problems in multiple ways: • Help students make connections between concepts and representations. • Provide opportunities for students to use manipulatives when investigating concepts. • Guide students from concrete to pictorial to abstract representations as understanding progresses. • Show students that various representations can have different purposes and can be useful in different situations.

MA.K12.MTR.3.1:

Complete tasks with mathematical fluency.
Mathematicians who complete tasks with mathematical fluency:

- Select efficient and appropriate methods for solving problems within the given context.
- Maintain flexibility and accuracy while performing procedures and mental calculations.
- Complete tasks accurately and with confidence.
- Adapt procedures to apply them to a new context.
- Use feedback to improve efficiency when performing calculations.

Clarifications:
Teachers who encourage students to complete tasks with mathematical fluency:

- Provide students with the flexibility to solve problems by selecting a procedure that allows them to solve efficiently and accurately.
- Offer multiple opportunities for students to practice efficient and generalizable methods.
- Provide opportunities for students to reflect on the method they used and determine if a more efficient method could have been used.

MA.K12.MTR.4.1:

Engage in discussions that reflect on the mathematical thinking of self and others.
Mathematicians who engage in discussions that reflect on the mathematical thinking of self and others:

- Communicate mathematical ideas, vocabulary and methods effectively.
- Analyze the mathematical thinking of others.
- Compare the efficiency of a method to those expressed by others.
- Recognize errors and suggest how to correctly solve the task.
- Justify results by explaining methods and processes.
- Construct possible arguments based on evidence.

Clarifications:
Teachers who encourage students to engage in discussions that reflect on the mathematical thinking of self and others:

- Establish a culture in which students ask questions of the teacher and their peers, and error is an opportunity for learning.
- Create opportunities for students to discuss their thinking with peers.
- Select, sequence and present student work to advance and deepen understanding of correct and increasingly efficient methods.
- Develop students' ability to justify methods and compare their responses to the responses of their peers.

MA.K12.MTR.5.1:

Use patterns and structure to help understand and connect mathematical concepts.
Mathematicians who use patterns and structure to help understand and connect mathematical concepts:

- Focus on relevant details within a problem.
- Create plans and procedures to logically order events, steps or ideas to solve problems.
- Decompose a complex problem into manageable parts.
- Relate previously learned concepts to new concepts.
- Look for similarities among problems.
- Connect solutions of problems to more complicated large-scale situations.

Clarifications:
Teachers who encourage students to use patterns and structure to help understand and connect mathematical concepts:

- Help students recognize the patterns in the world around them and connect these patterns to mathematical concepts.
- Support students to develop generalizations based on the similarities found among problems.
- Provide opportunities for students to create plans and procedures to solve problems.
- Develop students' ability to construct relationships between their current understanding and more sophisticated ways of thinking.

MA.K12.MTR.6.1:

Assess the reasonableness of solutions.
Mathematicians who assess the reasonableness of solutions:

- Estimate to discover possible solutions.
- Use benchmark quantities to determine if a solution makes sense.
- Check calculations when solving problems.
- Verify possible solutions by explaining the methods used.
- Evaluate results based on the given context.

Clarifications:
Teachers who encourage students to assess the reasonableness of solutions:

- Have students estimate or predict solutions prior to solving.
- Prompt students to continually ask, "Does this solution make sense? How do you know?"
- Reinforce that students check their work as they progress within and after a task.
- Strengthen students' ability to verify solutions through justifications.

MA.K12.MTR.7.1:

Apply mathematics to real-world contexts.
Mathematicians who apply mathematics to real-world contexts:

- Connect mathematical concepts to everyday experiences.
- Use models and methods to understand, represent and solve problems.
- Perform investigations to gather data or determine if a method is appropriate. • Redesign models and methods to improve accuracy or efficiency.

Clarifications:
Teachers who encourage students to apply mathematics to real-world contexts:

- Provide opportunities for students to create models, both concrete and abstract, and perform investigations.
- Challenge students to question the accuracy of their models and methods.
- Support students as they validate conclusions by comparing them to the given situation.
- Indicate how various concepts can be applied to other disciplines.

Cite evidence to explain and justify reasoning.

ELA.K12.EE.1.1:	**Clarifications:** K-1 Students include textual evidence in their oral communication with guidance and support from adults. The evidence can consist of details from the text without naming the text. During 1st grade, students learn how to incorporate the evidence in their writing. 2-3 Students include relevant textual evidence in their written and oral communication. Students should name the text when they refer to it. In 3rd grade, students should use a combination of direct and indirect citations. 4-5 Students continue with previous skills and reference comments made by speakers and peers. Students cite texts that they've directly quoted, paraphrased, or used for information. When writing, students will use the form of citation dictated by the instructor or the style guide referenced by the instructor. 6-8 Students continue with previous skills and use a style guide to create a proper citation. 9-12 Students continue with previous skills and should be aware of existing style guides and the ways in which they differ.
ELA.K12.EE.2.1:	Read and comprehend grade-level complex texts proficiently. **Clarifications:** See Text Complexity for grade-level complexity bands and a text complexity rubric.
ELA.K12.EE.3.1:	Make inferences to support comprehension. **Clarifications:** Students will make inferences before the words infer or inference are introduced. Kindergarten students will answer questions like "Why is the girl smiling?" or make predictions about what will happen based on the title page. Students will use the terms and apply them in 2nd grade and beyond.
ELA.K12.EE.4.1:	Use appropriate collaborative techniques and active listening skills when engaging in discussions in a variety of situations. **Clarifications:** In kindergarten, students learn to listen to one another respectfully. In grades 1-2, students build upon these skills by justifying what they are thinking. For example: "I think _____ because _____." The collaborative conversations are becoming academic conversations. In grades 3-12, students engage in academic conversations discussing claims and justifying their reasoning, refining and applying skills. Students build on ideas, propel the conversation, and support claims and counterclaims with evidence.
ELA.K12.EE.5.1:	Use the accepted rules governing a specific format to create quality work. **Clarifications:** Students will incorporate skills learned into work products to produce quality work. For students to incorporate these skills appropriately, they must receive instruction. A 3rd grade student creating a poster board display must have instruction in how to effectively present information to do quality work.
ELA.K12.EE.6.1:	Use appropriate voice and tone when speaking or writing. **Clarifications:** In kindergarten and 1st grade, students learn the difference between formal and informal language. For example, the way we talk to our friends differs from the way we speak to adults. In 2nd grade and beyond, students practice appropriate social and academic language to discuss texts.
ELD.K12.ELL.SI.1:	English language learners communicate for social and instructional purposes within the school setting.

General Course Information and Notes

VERSION DESCRIPTION

The purpose of this course is to develop the physical skills necessary to be competent in many forms of movement, knowledge of team sports concepts such as offensive and defensive strategies and tactics, and appropriate social behaviors within a team or group setting. The integration of fitness concepts throughout the content is critical to the success of this course.

GENERAL NOTES

Florida's Benchmarks for Excellent Student Thinking (B.E.S.T.) Standards
This course includes Florida's B.E.S.T. ELA Expectations (EE) and Mathematical Thinking and Reasoning Standards (MTRs) for students. Florida educators should intentionally embed these standards within the content and their instruction as applicable. For guidance on the implementation of the EEs and MTRs, please visit cpalms.org/Standards/BEST_Standards.aspx and select the appropriate B.E.S.T. Standards package.

English Language Development ELD Standards Special Notes Section:
Teachers are required to provide listening, speaking, reading and writing instruction that allows English language learners (ELL) to communicate for social and instructional purposes within the school setting. For the given level of English language proficiency and with visual, graphic, or interactive support, students will interact with grade level words, expressions, sentences and discourse to process or produce language necessary for academic success. The ELD standard should specify a relevant content area concept or topic of study chosen by curriculum developers and teachers which maximizes an ELL's need for communication and social skills. To access an ELL supporting document which delineates performance definitions and descriptors, please click on the following link: cpalms.org/uploads/docs/standards/eld/SI.pdf

GENERAL INFORMATION

Course Path: Section: Grades PreK to 12 Education

Course Number: 1503350

Number of Credits: Half credit (.5)

Course Type: Core Academic Course

Course Status: Draft - Course Pending Approval

Grade Level(s): 9,10,11,12

Graduation Requirement: Physical Education

Courses > **Grade Group:** Grades 9 to 12 and Adult Education Courses > **Subject:** Physical Education > **SubSubject:** Team >

Abbreviated Title: TEAM SPRTS 1

Course Length: Semester (S)

Course Level: 2

Educator Certifications

Physical Education (Grades 6-12)
Physical Education (Elementary and Secondary Grades K-12)

Team Sports 2 (#1503360) 2022 - And Beyond

Course Standards

Name	Description
PE.912.C.2.9:	Explain the precautions to be taken when exercising in extreme weather and/or environmental conditions. **Clarifications:** Some examples of precautions are hydration and appropriate attire.
PE.912.C.2.20:	Identify appropriate methods to resolve physical conflict.
PE.912.C.2.21:	Diagram, explain and justify the use of advanced offensive, defensive and transition strategies and tactics.
PE.912.C.2.23:	Apply appropriate technology and analyze data to evaluate, monitor and/or improve performance.
PE.912.C.2.25:	Analyze and evaluate the risks, safety procedures, rules and equipment associated with specific course activities.
PE.912.C.2.26:	Evaluate skill patterns of self and/or partner by detecting and correcting mechanical errors.
PE.912.C.2.27:	Compare and contrast how movement skills from one physical activity can be transferred and used in other physical activities. **Clarifications:** Some examples are volleyball and tennis serve, surfing and skate boarding.
PE.912.C.2.28:	Interpret and apply the rules associated with specific course activities.
PE.912.L.3.4:	Identify the in-school opportunities for participation in a variety of physical activities.
PE.912.L.3.5:	Identify the community opportunities for participation in a variety of physical activities.
PE.912.L.3.6:	Identify risks and safety factors that may affect physical activity throughout life.
PE.912.M.1.5:	Apply strategies for self improvement based on individual strengths and needs.
PE.912.M.1.10:	Apply sport specific skills in simulation and in real-life applications. **Clarifications:** An example of a simulation is a practice setting or lead up activity. An example of a real-life application is a game or performance setting.
PE.912.M.1.15:	Select and apply sport/activity specific warm-up and cool-down techniques.
PE.912.M.1.19:	Use correct body alignment, strength, flexibility and coordination in the performance of technical movements.
PE.912.M.1.23:	Demonstrate proficiency of critical elements when striking with objects, implements or body parts.
PE.912.M.1.31:	Demonstrate advanced offensive, defensive and transition strategies and tactics.
PE.912.M.1.32:	Apply sport specific skills in a variety of game settings.
PE.912.M.1.33:	Practice complex motor activities in order to improve performance.
PE.912.M.1.35:	Select proper equipment and apply all appropriate safety procedures necessary for participation.
PE.912.R.5.2:	Develop strategies for including persons of diverse backgrounds and abilities while participating in a variety of physical activities.
PE.912.R.5.3:	Demonstrate sportsmanship during game situations. **Clarifications:** Some examples are controlling emotions, resolving conflicts, respecting opponents and officials, and accepting both victory and defeat.
PE.912.R.5.4:	Maintain appropriate personal, social and ethical behavior while participating in a variety of physical activities. **Clarifications:** Some examples are respecting teammates, opponents and officials, and accepting both victory and defeat.
PE.912.R.5.5:	Demonstrate appropriate etiquette, care of equipment, respect for facilities and safe behaviors while participating in a variety of physical activities.
PE.912.R.6.1:	Discuss opportunities for participation in a variety of physical activities outside of the school setting that contribute to personal enjoyment and the attainment or maintenance of a healthy lifestyle.
PE.912.R.6.3:	Analyze the roles of games, sports and/or physical activities in other cultures.
MA.K12.MTR.1.1:	Mathematicians who participate in effortful learning both individually and with others: • Analyze the problem in a way that makes sense given the task. • Ask questions that will help with solving the task. • Build perseverance by modifying methods as needed while solving a challenging task. • Stay engaged and maintain a positive mindset when working to solve tasks. • Help and support each other when attempting a new method or approach. **Clarifications:** Teachers who encourage students to participate actively in effortful learning both individually and with others: • Cultivate a community of growth mindset learners. • Foster perseverance in students by choosing tasks that are challenging. • Develop students' ability to analyze and problem solve. • Recognize students' effort when solving challenging problems.
MA.K12.MTR.2.1:	Demonstrate understanding by representing problems in multiple ways. Mathematicians who demonstrate understanding by representing problems in multiple ways: • Build understanding through modeling and using manipulatives. • Represent solutions to problems in multiple ways using objects, drawings, tables, graphs and equations. • Progress from modeling problems with objects and drawings to using algorithms and equations. • Express connections between concepts and representations. • Choose a representation based on the given context or purpose. **Clarifications:**

Teachers who encourage students to demonstrate understanding by representing problems in multiple ways:

- Help students make connections between concepts and representations.
- Provide opportunities for students to use manipulatives when investigating concepts.
- Guide students from concrete to pictorial to abstract representations as understanding progresses.
- Show students that various representations can have different purposes and can be useful in different situations.

MA.K12.MTR.3.1:

Complete tasks with mathematical fluency.
Mathematicians who complete tasks with mathematical fluency:

- Select efficient and appropriate methods for solving problems within the given context.
- Maintain flexibility and accuracy while performing procedures and mental calculations.
- Complete tasks accurately and with confidence.
- Adapt procedures to apply them to a new context.
- Use feedback to improve efficiency when performing calculations.

Clarifications:
Teachers who encourage students to complete tasks with mathematical fluency:

- Provide students with the flexibility to solve problems by selecting a procedure that allows them to solve efficiently and accurately.
- Offer multiple opportunities for students to practice efficient and generalizable methods.
- Provide opportunities for students to reflect on the method they used and determine if a more efficient method could have been used.

MA.K12.MTR.4.1:

Engage in discussions that reflect on the mathematical thinking of self and others.
Mathematicians who engage in discussions that reflect on the mathematical thinking of self and others:

- Communicate mathematical ideas, vocabulary and methods effectively.
- Analyze the mathematical thinking of others.
- Compare the efficiency of a method to those expressed by others.
- Recognize errors and suggest how to correctly solve the task.
- Justify results by explaining methods and processes.
- Construct possible arguments based on evidence.

Clarifications:
Teachers who encourage students to engage in discussions that reflect on the mathematical thinking of self and others:

- Establish a culture in which students ask questions of the teacher and their peers, and error is an opportunity for learning.
- Create opportunities for students to discuss their thinking with peers.
- Select, sequence and present student work to advance and deepen understanding of correct and increasingly efficient methods.
- Develop students' ability to justify methods and compare their responses to the responses of their peers.

MA.K12.MTR.5.1:

Use patterns and structure to help understand and connect mathematical concepts.
Mathematicians who use patterns and structure to help understand and connect mathematical concepts:

- Focus on relevant details within a problem.
- Create plans and procedures to logically order events, steps or ideas to solve problems.
- Decompose a complex problem into manageable parts.
- Relate previously learned concepts to new concepts.
- Look for similarities among problems.
- Connect solutions of problems to more complicated large-scale situations.

Clarifications:
Teachers who encourage students to use patterns and structure to help understand and connect mathematical concepts:

- Help students recognize the patterns in the world around them and connect these patterns to mathematical concepts.
- Support students to develop generalizations based on the similarities found among problems.
- Provide opportunities for students to create plans and procedures to solve problems.
- Develop students' ability to construct relationships between their current understanding and more sophisticated ways of thinking.

MA.K12.MTR.6.1:

Assess the reasonableness of solutions.
Mathematicians who assess the reasonableness of solutions:

- Estimate to discover possible solutions.
- Use benchmark quantities to determine if a solution makes sense.
- Check calculations when solving problems.
- Verify possible solutions by explaining the methods used.
- Evaluate results based on the given context.

Clarifications:
Teachers who encourage students to assess the reasonableness of solutions:

- Have students estimate or predict solutions prior to solving.
- Prompt students to continually ask, "Does this solution make sense? How do you know?"
- Reinforce that students check their work as they progress within and after a task.
- Strengthen students' ability to verify solutions through justifications.

MA.K12.MTR.7.1:

Apply mathematics to real-world contexts.
Mathematicians who apply mathematics to real-world contexts:

- Connect mathematical concepts to everyday experiences.
- Use models and methods to understand, represent and solve problems.
- Perform investigations to gather data or determine if a method is appropriate. • Redesign models and methods to improve accuracy or efficiency.

Clarifications:
Teachers who encourage students to apply mathematics to real-world contexts:

- Provide opportunities for students to create models, both concrete and abstract, and perform investigations.

	• Challenge students to question the accuracy of their models and methods. • Support students as they validate conclusions by comparing them to the given situation. • Indicate how various concepts can be applied to other disciplines.
ELA.K12.EE.1.1:	Cite evidence to explain and justify reasoning. **Clarifications:** K-1 Students include textual evidence in their oral communication with guidance and support from adults. The evidence can consist of details from the text without naming the text. During 1st grade, students learn how to incorporate the evidence in their writing. 2-3 Students include relevant textual evidence in their written and oral communication. Students should name the text when they refer to it. In 3rd grade, students should use a combination of direct and indirect citations. 4-5 Students continue with previous skills and reference comments made by speakers and peers. Students cite texts that they've directly quoted, paraphrased, or used for information. When writing, students will use the form of citation dictated by the instructor or the style guide referenced by the instructor. 6-8 Students continue with previous skills and use a style guide to create a proper citation. 9-12 Students continue with previous skills and should be aware of existing style guides and the ways in which they differ.
ELA.K12.EE.2.1:	Read and comprehend grade-level complex texts proficiently. **Clarifications:** See Text Complexity for grade-level complexity bands and a text complexity rubric.
ELA.K12.EE.3.1:	Make inferences to support comprehension. **Clarifications:** Students will make inferences before the words infer or inference are introduced. Kindergarten students will answer questions like "Why is the girl smiling?" or make predictions about what will happen based on the title page. Students will use the terms and apply them in 2nd grade and beyond.
ELA.K12.EE.4.1:	Use appropriate collaborative techniques and active listening skills when engaging in discussions in a variety of situations. **Clarifications:** In kindergarten, students learn to listen to one another respectfully. In grades 1-2, students build upon these skills by justifying what they are thinking. For example: "I think _____ because _____." The collaborative conversations are becoming academic conversations. In grades 3-12, students engage in academic conversations discussing claims and justifying their reasoning, refining and applying skills. Students build on ideas, propel the conversation, and support claims and counterclaims with evidence.
ELA.K12.EE.5.1:	Use the accepted rules governing a specific format to create quality work. **Clarifications:** Students will incorporate skills learned into work products to produce quality work. For students to incorporate these skills appropriately, they must receive instruction. A 3rd grade student creating a poster board display must have instruction in how to effectively present information to do quality work.
ELA.K12.EE.6.1:	Use appropriate voice and tone when speaking or writing. **Clarifications:** In kindergarten and 1st grade, students learn the difference between formal and informal language. For example, the way we talk to our friends differs from the way we speak to adults. In 2nd grade and beyond, students practice appropriate social and academic language to discuss texts.
ELD.K12.ELL.SI.1:	English language learners communicate for social and instructional purposes within the school setting.

General Course Information and Notes

VERSION DESCRIPTION

The purpose of this course is to develop the physical skills necessary to be competent in many forms of movement, knowledge of team sports concepts such as offensive and defensive strategies and tactics, and appropriate social behaviors within a team or group setting. The integration of fitness concepts throughout the content is critical to the success of this course.

GENERAL NOTES

Florida's Benchmarks for Excellent Student Thinking (B.E.S.T.) Standards
This course includes Florida's B.E.S.T. ELA Expectations (EE) and Mathematical Thinking and Reasoning Standards (MTRs) for students. Florida educators should intentionally embed these standards within the content and their instruction as applicable. For guidance on the implementation of the EEs and MTRs, please visit cpalms.org/Standards/BEST_Standards.aspx and select the appropriate B.E.S.T. Standards package.

English Language Development ELD Standards Special Notes Section:
Teachers are required to provide listening, speaking, reading and writing instruction that allows English language learners (ELL) to communicate for social and instructional purposes within the school setting. For the given level of English language proficiency and with visual, graphic, or interactive support, students will interact with grade level words, expressions, sentences and discourse to process or produce language necessary for academic success. The ELD standard should specify a relevant content area concept or topic of study chosen by curriculum developers and teachers which maximizes an ELL's need for communication and social skills. To access an ELL supporting document which delineates performance definitions and descriptors, please click on the following link: cpalms.org/uploads/docs/standards/eld/SI.pdf

GENERAL INFORMATION

Course Number: 1503360

Course Path: Section: Grades PreK to 12 Education Courses > **Grade Group:** Grades 9 to 12 and Adult Education Courses > **Subject:** Physical Education > **SubSubject:** Team >

Abbreviated Title: TEAM SPRTS 2

Number of Credits: Half credit (.5)

Course Length: Semester (S)

Course Type: Core Academic Course

Course Level: 2

Course Status: Draft - Course Pending Approval

Grade Level(s): 9,10,11,12

Graduation Requirement: Physical Education

Educator Certifications

Physical Education (Grades 6-12)
Physical Education (Elementary and Secondary Grades K-12)

Aerobics 1 (#1503400) 2022 - And Beyond

Course Standards

Name	Description
PE.912.C.2.2:	Apply terminology and etiquette in dance.
PE.912.C.2.5:	Analyze the relationship between music and dance.
PE.912.C.2.15:	Calculate individual target heart-rate zone and analyze how to adjust intensity level to stay within the desired range.
PE.912.C.2.16:	Explain the methods of monitoring levels of intensity during aerobic activity. **Clarifications:** Some examples are a talk test, rate of perceived exertion and checking one's heart rate/pulse.
PE.912.C.2.23:	Apply appropriate technology and analyze data to evaluate, monitor and/or improve performance.
PE.912.L.3.1:	Participate in a variety of physical activities to meet the recommended number of minutes of moderate to vigorous physical activity beyond physical education on five or more days of the week.
PE.912.L.3.2:	Participate in a variety of activities that promote the health-related components of fitness. **Clarifications:** The health-related components of fitness are cardiorespiratory endurance, muscular strength, muscular endurance, flexibility and body composition.
PE.912.L.3.3:	Identify a variety of activities that promote effective stress management.
PE.912.L.3.6:	Identify risks and safety factors that may affect physical activity throughout life.
PE.912.M.1.5:	Apply strategies for self improvement based on individual strengths and needs.
PE.912.M.1.8:	Design and perform a creative movement sequence while working with a small or large group, with or without equipment/props.
PE.912.M.1.14:	Utilize technology to assess, enhance and maintain health and skill-related fitness levels. **Clarifications:** Some examples of technology are Excel spreadsheets or web based programs to chart or log activities, heart rate monitors, videotapes or digital cameras.
PE.912.M.1.15:	Select and apply sport/activity specific warm-up and cool-down techniques.
PE.912.M.1.35:	Select proper equipment and apply all appropriate safety procedures necessary for participation.
PE.912.R.5.2:	Develop strategies for including persons of diverse backgrounds and abilities while participating in a variety of physical activities.
PE.912.R.5.4:	Maintain appropriate personal, social and ethical behavior while participating in a variety of physical activities. **Clarifications:** Some examples are respecting teammates, opponents and officials, and accepting both victory and defeat.
PE.912.R.5.5:	Demonstrate appropriate etiquette, care of equipment, respect for facilities and safe behaviors while participating in a variety of physical activities.
PE.912.R.6.3:	Analyze the roles of games, sports and/or physical activities in other cultures.
MA.K12.MTR.1.1:	Mathematicians who participate in effortful learning both individually and with others: • Analyze the problem in a way that makes sense given the task. • Ask questions that will help with solving the task. • Build perseverance by modifying methods as needed while solving a challenging task. • Stay engaged and maintain a positive mindset when working to solve tasks. • Help and support each other when attempting a new method or approach. **Clarifications:** Teachers who encourage students to participate actively in effortful learning both individually and with others: • Cultivate a community of growth mindset learners. • Foster perseverance in students by choosing tasks that are challenging. • Develop students' ability to analyze and problem solve. • Recognize students' effort when solving challenging problems.
MA.K12.MTR.2.1:	Demonstrate understanding by representing problems in multiple ways. Mathematicians who demonstrate understanding by representing problems in multiple ways: • Build understanding through modeling and using manipulatives. • Represent solutions to problems in multiple ways using objects, drawings, tables, graphs and equations. • Progress from modeling problems with objects and drawings to using algorithms and equations. • Express connections between concepts and representations. • Choose a representation based on the given context or purpose. **Clarifications:** Teachers who encourage students to demonstrate understanding by representing problems in multiple ways: • Help students make connections between concepts and representations. • Provide opportunities for students to use manipulatives when investigating concepts. • Guide students from concrete to pictorial to abstract representations as understanding progresses. • Show students that various representations can have different purposes and can be useful in different situations.
	Complete tasks with mathematical fluency. Mathematicians who complete tasks with mathematical fluency: • Select efficient and appropriate methods for solving problems within the given context.

MA.K12.MTR.3.1:	• Maintain flexibility and accuracy while performing procedures and mental calculations. • Complete tasks accurately and with confidence. • Adapt procedures to apply them to a new context. • Use feedback to improve efficiency when performing calculations. **Clarifications:** Teachers who encourage students to complete tasks with mathematical fluency: • Provide students with the flexibility to solve problems by selecting a procedure that allows them to solve efficiently and accurately. • Offer multiple opportunities for students to practice efficient and generalizable methods. • Provide opportunities for students to reflect on the method they used and determine if a more efficient method could have been used.
MA.K12.MTR.4.1:	Engage in discussions that reflect on the mathematical thinking of self and others. Mathematicians who engage in discussions that reflect on the mathematical thinking of self and others: • Communicate mathematical ideas, vocabulary and methods effectively. • Analyze the mathematical thinking of others. • Compare the efficiency of a method to those expressed by others. • Recognize errors and suggest how to correctly solve the task. • Justify results by explaining methods and processes. • Construct possible arguments based on evidence. **Clarifications:** Teachers who encourage students to engage in discussions that reflect on the mathematical thinking of self and others: • Establish a culture in which students ask questions of the teacher and their peers, and error is an opportunity for learning. • Create opportunities for students to discuss their thinking with peers. • Select, sequence and present student work to advance and deepen understanding of correct and increasingly efficient methods. • Develop students' ability to justify methods and compare their responses to the responses of their peers.
MA.K12.MTR.5.1:	Use patterns and structure to help understand and connect mathematical concepts. Mathematicians who use patterns and structure to help understand and connect mathematical concepts: • Focus on relevant details within a problem. • Create plans and procedures to logically order events, steps or ideas to solve problems. • Decompose a complex problem into manageable parts. • Relate previously learned concepts to new concepts. • Look for similarities among problems. • Connect solutions of problems to more complicated large-scale situations. **Clarifications:** Teachers who encourage students to use patterns and structure to help understand and connect mathematical concepts: • Help students recognize the patterns in the world around them and connect these patterns to mathematical concepts. • Support students to develop generalizations based on the similarities found among problems. • Provide opportunities for students to create plans and procedures to solve problems. • Develop students' ability to construct relationships between their current understanding and more sophisticated ways of thinking.
MA.K12.MTR.6.1:	Assess the reasonableness of solutions. Mathematicians who assess the reasonableness of solutions: • Estimate to discover possible solutions. • Use benchmark quantities to determine if a solution makes sense. • Check calculations when solving problems. • Verify possible solutions by explaining the methods used. • Evaluate results based on the given context. **Clarifications:** Teachers who encourage students to assess the reasonableness of solutions: • Have students estimate or predict solutions prior to solving. • Prompt students to continually ask, "Does this solution make sense? How do you know?" • Reinforce that students check their work as they progress within and after a task. • Strengthen students' ability to verify solutions through justifications.
MA.K12.MTR.7.1:	Apply mathematics to real-world contexts. Mathematicians who apply mathematics to real-world contexts: • Connect mathematical concepts to everyday experiences. • Use models and methods to understand, represent and solve problems. • Perform investigations to gather data or determine if a method is appropriate. • Redesign models and methods to improve accuracy or efficiency. **Clarifications:** Teachers who encourage students to apply mathematics to real-world contexts: • Provide opportunities for students to create models, both concrete and abstract, and perform investigations. • Challenge students to question the accuracy of their models and methods. • Support students as they validate conclusions by comparing them to the given situation. • Indicate how various concepts can be applied to other disciplines.
	Cite evidence to explain and justify reasoning. **Clarifications:** K-1 Students include textual evidence in their oral communication with guidance and support from adults. The evidence can consist of details from the text without naming the text. During 1st grade, students learn how to incorporate the evidence in their writing. 2-3 Students include relevant textual evidence in their written and oral communication. Students should name the text when they refer to it.

ELA.K12.EE.1.1:	In 3rd grade, students should use a combination of direct and indirect citations. 4-5 Students continue with previous skills and reference comments made by speakers and peers. Students cite texts that they've directly quoted, paraphrased, or used for information. When writing, students will use the form of citation dictated by the instructor or the style guide referenced by the instructor. 6-8 Students continue with previous skills and use a style guide to create a proper citation. 9-12 Students continue with previous skills and should be aware of existing style guides and the ways in which they differ.
ELA.K12.EE.2.1:	Read and comprehend grade-level complex texts proficiently. **Clarifications:** See Text Complexity for grade-level complexity bands and a text complexity rubric.
ELA.K12.EE.3.1:	Make inferences to support comprehension. **Clarifications:** Students will make inferences before the words infer or inference are introduced. Kindergarten students will answer questions like "Why is the girl smiling?" or make predictions about what will happen based on the title page. Students will use the terms and apply them in 2nd grade and beyond.
ELA.K12.EE.4.1:	Use appropriate collaborative techniques and active listening skills when engaging in discussions in a variety of situations. **Clarifications:** In kindergarten, students learn to listen to one another respectfully. In grades 1-2, students build upon these skills by justifying what they are thinking. For example: "I think _____ because _____." The collaborative conversations are becoming academic conversations. In grades 3-12, students engage in academic conversations discussing claims and justifying their reasoning, refining and applying skills. Students build on ideas, propel the conversation, and support claims and counterclaims with evidence.
ELA.K12.EE.5.1:	Use the accepted rules governing a specific format to create quality work. **Clarifications:** Students will incorporate skills learned into work products to produce quality work. For students to incorporate these skills appropriately, they must receive instruction. A 3rd grade student creating a poster board display must have instruction in how to effectively present information to do quality work.
ELA.K12.EE.6.1:	Use appropriate voice and tone when speaking or writing. **Clarifications:** In kindergarten and 1st grade, students learn the difference between formal and informal language. For example, the way we talk to our friends differs from the way we speak to adults. In 2nd grade and beyond, students practice appropriate social and academic language to discuss texts.
ELD.K12.ELL.SI.1:	English language learners communicate for social and instructional purposes within the school setting.

General Course Information and Notes

GENERAL NOTES

Florida's Benchmarks for Excellent Student Thinking (B.E.S.T.) Standards
This course includes Florida's B.E.S.T. ELA Expectations (EE) and Mathematical Thinking and Reasoning Standards (MTRs) for students. Florida educators should intentionally embed these standards within the content and their instruction as applicable. For guidance on the implementation of the EEs and MTRs, please visit cpalms.org/Standards/BEST_Standards.aspx and select the appropriate B.E.S.T. Standards package.

English Language Development ELD Standards Special Notes Section:
Teachers are required to provide listening, speaking, reading and writing instruction that allows English language learners (ELL) to communicate for social and instructional purposes within the school setting. For the given level of English language proficiency and with visual, graphic, or interactive support, students will interact with grade level words, expressions, sentences and discourse to process or produce language necessary for academic success. The ELD standard should specify a relevant content area concept or topic of study chosen by curriculum developers and teachers which maximizes an ELL's need for communication and social skills. To access an ELL supporting document which delineates performance definitions and descriptors, please click on the following link: cpalms.org/uploads/docs/standards/eld/SI.pdf

GENERAL INFORMATION

Course Number: 1503400

Course Path: Section: Grades PreK to 12 Education Courses > **Grade Group:** Grades 9 to 12 and Adult Education Courses > **Subject:** Physical Education > **SubSubject:** Fitness >

Abbreviated Title: AEROBICS 1

Number of Credits: Half credit (.5)

Course Length: Semester (S)

Course Type: Core Academic Course

Course Level: 2

Course Status: Draft - Course Pending Approval

Grade Level(s): 9,10,11,12

Graduation Requirement: Physical Education

Educator Certifications

Physical Education (Grades 6-12)
Physical Education (Elementary and Secondary Grades K-12)

Aerobics 2 (#1503410) 2022 - And Beyond

Course Standards

Name	Description
PE.912.C.2.12:	Compare and contrast aerobic versus anaerobic activities.
PE.912.C.2.15:	Calculate individual target heart-rate zone and analyze how to adjust intensity level to stay within the desired range.
PE.912.C.2.16:	Explain the methods of monitoring levels of intensity during aerobic activity. **Clarifications:** Some examples are a talk test, rate of perceived exertion and checking one's heart rate/pulse.
PE.912.C.2.17:	Assess physiological effects of exercise during and after physical activity. **Clarifications:** Some examples are breathing, resting heart rate and blood pressure.
PE.912.C.2.19:	Choreograph complex sequences individually, with a partner or in a small group.
PE.912.C.2.23:	Apply appropriate technology and analyze data to evaluate, monitor and/or improve performance.
PE.912.L.3.1:	Participate in a variety of physical activities to meet the recommended number of minutes of moderate to vigorous physical activity beyond physical education on five or more days of the week.
PE.912.L.3.2:	Participate in a variety of activities that promote the health-related components of fitness. **Clarifications:** The health-related components of fitness are cardiorespiratory endurance, muscular strength, muscular endurance, flexibility and body composition.
PE.912.L.3.3:	Identify a variety of activities that promote effective stress management.
PE.912.L.3.4:	Identify the in-school opportunities for participation in a variety of physical activities.
PE.912.L.3.5:	Identify the community opportunities for participation in a variety of physical activities.
PE.912.L.3.6:	Identify risks and safety factors that may affect physical activity throughout life.
PE.912.M.1.5:	Apply strategies for self improvement based on individual strengths and needs.
PE.912.M.1.6:	Select appropriate music for dance forms and choreograph dance movements to music.
PE.912.M.1.7:	Perform advanced dance sequences from a variety of dances accurately. **Clarifications:** Some examples of dances are hip-hop, social, step and line.
PE.912.M.1.8:	Design and perform a creative movement sequence while working with a small or large group, with or without equipment/props.
PE.912.M.1.9:	Demonstrate complex skills and advanced rhythmic movements in dance. **Clarifications:** Some examples are line, hip-hop, country and folk.
PE.912.M.1.13:	Perform a student-designed cardiorespiratory enhancing workout.
PE.912.M.1.14:	Utilize technology to assess, enhance and maintain health and skill-related fitness levels. **Clarifications:** Some examples of technology are Excel spreadsheets or web based programs to chart or log activities, heart rate monitors, videotapes or digital cameras.
PE.912.M.1.30:	Combine and apply movement patterns from simple to complex.
PE.912.M.1.35:	Select proper equipment and apply all appropriate safety procedures necessary for participation.
PE.912.R.5.2:	Develop strategies for including persons of diverse backgrounds and abilities while participating in a variety of physical activities.
PE.912.R.5.4:	Maintain appropriate personal, social and ethical behavior while participating in a variety of physical activities. **Clarifications:** Some examples are respecting teammates, opponents and officials, and accepting both victory and defeat.
PE.912.R.5.5:	Demonstrate appropriate etiquette, care of equipment, respect for facilities and safe behaviors while participating in a variety of physical activities.
PE.912.R.6.3:	Analyze the roles of games, sports and/or physical activities in other cultures.
MA.K12.MTR.1.1:	Mathematicians who participate in effortful learning both individually and with others: • Analyze the problem in a way that makes sense given the task. • Ask questions that will help with solving the task. • Build perseverance by modifying methods as needed while solving a challenging task. • Stay engaged and maintain a positive mindset when working to solve tasks. • Help and support each other when attempting a new method or approach. **Clarifications:** Teachers who encourage students to participate actively in effortful learning both individually and with others: • Cultivate a community of growth mindset learners. • Foster perseverance in students by choosing tasks that are challenging. • Develop students' ability to analyze and problem solve. • Recognize students' effort when solving challenging problems.
	Demonstrate understanding by representing problems in multiple ways. Mathematicians who demonstrate understanding by representing problems in multiple ways:

- Build understanding through modeling and using manipulatives.
- Represent solutions to problems in multiple ways using objects, drawings, tables, graphs and equations.
- Progress from modeling problems with objects and drawings to using algorithms and equations.
- Express connections between concepts and representations.

MA.K12.MTR.2.1:

- Choose a representation based on the given context or purpose.

Clarifications:
Teachers who encourage students to demonstrate understanding by representing problems in multiple ways:

- Help students make connections between concepts and representations.
- Provide opportunities for students to use manipulatives when investigating concepts.
- Guide students from concrete to pictorial to abstract representations as understanding progresses.
- Show students that various representations can have different purposes and can be useful in different situations.

Complete tasks with mathematical fluency.
Mathematicians who complete tasks with mathematical fluency:

- Select efficient and appropriate methods for solving problems within the given context.
- Maintain flexibility and accuracy while performing procedures and mental calculations.
- Complete tasks accurately and with confidence.
- Adapt procedures to apply them to a new context.

MA.K12.MTR.3.1:

- Use feedback to improve efficiency when performing calculations.

Clarifications:
Teachers who encourage students to complete tasks with mathematical fluency:

- Provide students with the flexibility to solve problems by selecting a procedure that allows them to solve efficiently and accurately.
- Offer multiple opportunities for students to practice efficient and generalizable methods.
- Provide opportunities for students to reflect on the method they used and determine if a more efficient method could have been used.

Engage in discussions that reflect on the mathematical thinking of self and others.
Mathematicians who engage in discussions that reflect on the mathematical thinking of self and others:

- Communicate mathematical ideas, vocabulary and methods effectively.
- Analyze the mathematical thinking of others.
- Compare the efficiency of a method to those expressed by others.
- Recognize errors and suggest how to correctly solve the task.
- Justify results by explaining methods and processes.

MA.K12.MTR.4.1:

- Construct possible arguments based on evidence.

Clarifications:
Teachers who encourage students to engage in discussions that reflect on the mathematical thinking of self and others:

- Establish a culture in which students ask questions of the teacher and their peers, and error is an opportunity for learning.
- Create opportunities for students to discuss their thinking with peers.
- Select, sequence and present student work to advance and deepen understanding of correct and increasingly efficient methods.
- Develop students' ability to justify methods and compare their responses to the responses of their peers.

Use patterns and structure to help understand and connect mathematical concepts.
Mathematicians who use patterns and structure to help understand and connect mathematical concepts:

- Focus on relevant details within a problem.
- Create plans and procedures to logically order events, steps or ideas to solve problems.
- Decompose a complex problem into manageable parts.
- Relate previously learned concepts to new concepts.
- Look for similarities among problems.

MA.K12.MTR.5.1:

- Connect solutions of problems to more complicated large-scale situations.

Clarifications:
Teachers who encourage students to use patterns and structure to help understand and connect mathematical concepts:

- Help students recognize the patterns in the world around them and connect these patterns to mathematical concepts.
- Support students to develop generalizations based on the similarities found among problems.
- Provide opportunities for students to create plans and procedures to solve problems.
- Develop students' ability to construct relationships between their current understanding and more sophisticated ways of thinking.

Assess the reasonableness of solutions.
Mathematicians who assess the reasonableness of solutions:

- Estimate to discover possible solutions.
- Use benchmark quantities to determine if a solution makes sense.
- Check calculations when solving problems.
- Verify possible solutions by explaining the methods used.

MA.K12.MTR.6.1:

- Evaluate results based on the given context.

Clarifications:
Teachers who encourage students to assess the reasonableness of solutions:

- Have students estimate or predict solutions prior to solving.
- Prompt students to continually ask, "Does this solution make sense? How do you know?"
- Reinforce that students check their work as they progress within and after a task.
- Strengthen students' ability to verify solutions through justifications.

Apply mathematics to real-world contexts.
Mathematicians who apply mathematics to real-world contexts:

MA.K12.MTR.7.1:	• Connect mathematical concepts to everyday experiences. • Use models and methods to understand, represent and solve problems. • Perform investigations to gather data or determine if a method is appropriate. • Redesign models and methods to improve accuracy or efficiency. **Clarifications:** Teachers who encourage students to apply mathematics to real-world contexts: • Provide opportunities for students to create models, both concrete and abstract, and perform investigations. • Challenge students to question the accuracy of their models and methods. • Support students as they validate conclusions by comparing them to the given situation. • Indicate how various concepts can be applied to other disciplines.
ELA.K12.EE.1.1:	Cite evidence to explain and justify reasoning. **Clarifications:** K-1 Students include textual evidence in their oral communication with guidance and support from adults. The evidence can consist of details from the text without naming the text. During 1st grade, students learn how to incorporate the evidence in their writing. 2-3 Students include relevant textual evidence in their written and oral communication. Students should name the text when they refer to it. In 3rd grade, students should use a combination of direct and indirect citations. 4-5 Students continue with previous skills and reference comments made by speakers and peers. Students cite texts that they've directly quoted, paraphrased, or used for information. When writing, students will use the form of citation dictated by the instructor or the style guide referenced by the instructor. 6-8 Students continue with previous skills and use a style guide to create a proper citation. 9-12 Students continue with previous skills and should be aware of existing style guides and the ways in which they differ.
ELA.K12.EE.2.1:	Read and comprehend grade-level complex texts proficiently. **Clarifications:** See Text Complexity for grade-level complexity bands and a text complexity rubric.
ELA.K12.EE.3.1:	Make inferences to support comprehension. **Clarifications:** Students will make inferences before the words infer or inference are introduced. Kindergarten students will answer questions like "Why is the girl smiling?" or make predictions about what will happen based on the title page. Students will use the terms and apply them in 2nd grade and beyond.
ELA.K12.EE.4.1:	Use appropriate collaborative techniques and active listening skills when engaging in discussions in a variety of situations. **Clarifications:** In kindergarten, students learn to listen to one another respectfully. In grades 1-2, students build upon these skills by justifying what they are thinking. For example: "I think _____ because _____." The collaborative conversations are becoming academic conversations. In grades 3-12, students engage in academic conversations discussing claims and justifying their reasoning, refining and applying skills. Students build on ideas, propel the conversation, and support claims and counterclaims with evidence.
ELA.K12.EE.5.1:	Use the accepted rules governing a specific format to create quality work. **Clarifications:** Students will incorporate skills learned into work products to produce quality work. For students to incorporate these skills appropriately, they must receive instruction. A 3rd grade student creating a poster board display must have instruction in how to effectively present information to do quality work.
ELA.K12.EE.6.1:	Use appropriate voice and tone when speaking or writing. **Clarifications:** In kindergarten and 1st grade, students learn the difference between formal and informal language. For example, the way we talk to our friends differs from the way we speak to adults. In 2nd grade and beyond, students practice appropriate social and academic language to discuss texts.
ELD.K12.ELL.SI.1:	English language learners communicate for social and instructional purposes within the school setting.

General Course Information and Notes

GENERAL NOTES

Florida's Benchmarks for Excellent Student Thinking (B.E.S.T.) Standards
This course includes Florida's B.E.S.T. ELA Expectations (EE) and Mathematical Thinking and Reasoning Standards (MTRs) for students. Florida educators should intentionally embed these standards within the content and their instruction as applicable. For guidance on the implementation of the EEs and MTRs, please visit cpalms.org/Standards/BEST_Standards.aspx and select the appropriate B.E.S.T. Standards package.

English Language Development ELD Standards Special Notes Section:
Teachers are required to provide listening, speaking, reading and writing instruction that allows English language learners (ELL) to communicate for social and instructional purposes within the school setting. For the given level of English language proficiency and with visual, graphic, or interactive support, students will interact with grade level words, expressions, sentences and discourse to process or produce language necessary for academic success. The ELD standard should specify a relevant content area concept or topic of study chosen by curriculum developers and teachers which maximizes an ELL's need for communication and social skills. To access an ELL supporting document which delineates performance definitions and descriptors, please click on the following link: cpalms.org/uploads/docs/standards/eld/SI.pdf

GENERAL INFORMATION

Course Number: 1503410

Course Path: Section: Grades PreK to 12 Education Courses > **Grade Group:** Grades 9 to 12 and Adult Education Courses > **Subject:** Physical Education > **SubSubject:** Fitness >

Abbreviated Title: AEROBICS 2

Number of Credits: Half credit (.5)

Course Length: Semester (S)

Course Type: Core Academic Course

Course Level: 2

Course Status: Draft - Course Pending Approval

Grade Level(s): 9,10,11,12

Graduation Requirement: Physical Education

Educator Certifications

Physical Education (Grades 6-12)
Physical Education (Elementary and Secondary Grades K-12)

Aerobics 3 (#1503420) 2022 - And Beyond

Course Standards

Name	Description
PE.912.C.2.7:	Evaluate the effectiveness of specific warm-up and cool-down activities.
PE.912.C.2.12:	Compare and contrast aerobic versus anaerobic activities.
PE.912.C.2.17:	Assess physiological effects of exercise during and after physical activity. **Clarifications:** Some examples are breathing, resting heart rate and blood pressure.
PE.912.C.2.19:	Choreograph complex sequences individually, with a partner or in a small group.
PE.912.C.2.23:	Apply appropriate technology and analyze data to evaluate, monitor and/or improve performance.
PE.912.C.2.25:	Analyze and evaluate the risks, safety procedures, rules and equipment associated with specific course activities.
PE.912.L.3.1:	Participate in a variety of physical activities to meet the recommended number of minutes of moderate to vigorous physical activity beyond physical education on five or more days of the week.
PE.912.L.3.2:	Participate in a variety of activities that promote the health-related components of fitness. **Clarifications:** The health-related components of fitness are cardiorespiratory endurance, muscular strength, muscular endurance, flexibility and body composition.
PE.912.L.3.3:	Identify a variety of activities that promote effective stress management.
PE.912.L.3.4:	Identify the in-school opportunities for participation in a variety of physical activities.
PE.912.L.3.5:	Identify the community opportunities for participation in a variety of physical activities.
PE.912.L.3.6:	Identify risks and safety factors that may affect physical activity throughout life.
PE.912.M.1.5:	Apply strategies for self improvement based on individual strengths and needs.
PE.912.M.1.6:	Select appropriate music for dance forms and choreograph dance movements to music.
PE.912.M.1.7:	Perform advanced dance sequences from a variety of dances accurately. **Clarifications:** Some examples of dances are hip-hop, social, step and line.
PE.912.M.1.8:	Design and perform a creative movement sequence while working with a small or large group, with or without equipment/props.
PE.912.M.1.9:	Demonstrate complex skills and advanced rhythmic movements in dance. **Clarifications:** Some examples are line, hip-hop, country and folk.
PE.912.M.1.13:	Perform a student-designed cardiorespiratory enhancing workout.
PE.912.M.1.30:	Combine and apply movement patterns from simple to complex.
PE.912.M.1.35:	Select proper equipment and apply all appropriate safety procedures necessary for participation.
PE.912.R.5.2:	Develop strategies for including persons of diverse backgrounds and abilities while participating in a variety of physical activities.
PE.912.R.5.4:	Maintain appropriate personal, social and ethical behavior while participating in a variety of physical activities. **Clarifications:** Some examples are respecting teammates, opponents and officials, and accepting both victory and defeat.
PE.912.R.5.5:	Demonstrate appropriate etiquette, care of equipment, respect for facilities and safe behaviors while participating in a variety of physical activities.
PE.912.R.6.3:	Analyze the roles of games, sports and/or physical activities in other cultures.
MA.K12.MTR.1.1:	Mathematicians who participate in effortful learning both individually and with others: • Analyze the problem in a way that makes sense given the task. • Ask questions that will help with solving the task. • Build perseverance by modifying methods as needed while solving a challenging task. • Stay engaged and maintain a positive mindset when working to solve tasks. • Help and support each other when attempting a new method or approach. **Clarifications:** Teachers who encourage students to participate actively in effortful learning both individually and with others: • Cultivate a community of growth mindset learners. • Foster perseverance in students by choosing tasks that are challenging. • Develop students' ability to analyze and problem solve. • Recognize students' effort when solving challenging problems.
MA.K12.MTR.2.1:	Demonstrate understanding by representing problems in multiple ways. Mathematicians who demonstrate understanding by representing problems in multiple ways: • Build understanding through modeling and using manipulatives. • Represent solutions to problems in multiple ways using objects, drawings, tables, graphs and equations. • Progress from modeling problems with objects and drawings to using algorithms and equations. • Express connections between concepts and representations. • Choose a representation based on the given context or purpose. **Clarifications:** Teachers who encourage students to demonstrate understanding by representing problems in multiple ways:

- Help students make connections between concepts and representations.
- Provide opportunities for students to use manipulatives when investigating concepts.
- Guide students from concrete to pictorial to abstract representations as understanding progresses.
- Show students that various representations can have different purposes and can be useful in different situations.

MA.K12.MTR.3.1:

Complete tasks with mathematical fluency.
Mathematicians who complete tasks with mathematical fluency:

- Select efficient and appropriate methods for solving problems within the given context.
- Maintain flexibility and accuracy while performing procedures and mental calculations.
- Complete tasks accurately and with confidence.
- Adapt procedures to apply them to a new context.
- Use feedback to improve efficiency when performing calculations.

Clarifications:
Teachers who encourage students to complete tasks with mathematical fluency:

- Provide students with the flexibility to solve problems by selecting a procedure that allows them to solve efficiently and accurately.
- Offer multiple opportunities for students to practice efficient and generalizable methods.
- Provide opportunities for students to reflect on the method they used and determine if a more efficient method could have been used.

MA.K12.MTR.4.1:

Engage in discussions that reflect on the mathematical thinking of self and others.
Mathematicians who engage in discussions that reflect on the mathematical thinking of self and others:

- Communicate mathematical ideas, vocabulary and methods effectively.
- Analyze the mathematical thinking of others.
- Compare the efficiency of a method to those expressed by others.
- Recognize errors and suggest how to correctly solve the task.
- Justify results by explaining methods and processes.
- Construct possible arguments based on evidence.

Clarifications:
Teachers who encourage students to engage in discussions that reflect on the mathematical thinking of self and others:

- Establish a culture in which students ask questions of the teacher and their peers, and error is an opportunity for learning.
- Create opportunities for students to discuss their thinking with peers.
- Select, sequence and present student work to advance and deepen understanding of correct and increasingly efficient methods.
- Develop students' ability to justify methods and compare their responses to the responses of their peers.

MA.K12.MTR.5.1:

Use patterns and structure to help understand and connect mathematical concepts.
Mathematicians who use patterns and structure to help understand and connect mathematical concepts:

- Focus on relevant details within a problem.
- Create plans and procedures to logically order events, steps or ideas to solve problems.
- Decompose a complex problem into manageable parts.
- Relate previously learned concepts to new concepts.
- Look for similarities among problems.
- Connect solutions of problems to more complicated large-scale situations.

Clarifications:
Teachers who encourage students to use patterns and structure to help understand and connect mathematical concepts:

- Help students recognize the patterns in the world around them and connect these patterns to mathematical concepts.
- Support students to develop generalizations based on the similarities found among problems.
- Provide opportunities for students to create plans and procedures to solve problems.
- Develop students' ability to construct relationships between their current understanding and more sophisticated ways of thinking.

MA.K12.MTR.6.1:

Assess the reasonableness of solutions.
Mathematicians who assess the reasonableness of solutions:

- Estimate to discover possible solutions.
- Use benchmark quantities to determine if a solution makes sense.
- Check calculations when solving problems.
- Verify possible solutions by explaining the methods used.
- Evaluate results based on the given context.

Clarifications:
Teachers who encourage students to assess the reasonableness of solutions:

- Have students estimate or predict solutions prior to solving.
- Prompt students to continually ask, "Does this solution make sense? How do you know?"
- Reinforce that students check their work as they progress within and after a task.
- Strengthen students' ability to verify solutions through justifications.

MA.K12.MTR.7.1:

Apply mathematics to real-world contexts.
Mathematicians who apply mathematics to real-world contexts:

- Connect mathematical concepts to everyday experiences.
- Use models and methods to understand, represent and solve problems.
- Perform investigations to gather data or determine if a method is appropriate. • Redesign models and methods to improve accuracy or efficiency.

Clarifications:
Teachers who encourage students to apply mathematics to real-world contexts:

- Provide opportunities for students to create models, both concrete and abstract, and perform investigations.

	• Challenge students to question the accuracy of their models and methods. • Support students as they validate conclusions by comparing them to the given situation. • Indicate how various concepts can be applied to other disciplines.
ELA.K12.EE.1.1:	Cite evidence to explain and justify reasoning. **Clarifications:** K-1 Students include textual evidence in their oral communication with guidance and support from adults. The evidence can consist of details from the text without naming the text. During 1st grade, students learn how to incorporate the evidence in their writing. 2-3 Students include relevant textual evidence in their written and oral communication. Students should name the text when they refer to it. In 3rd grade, students should use a combination of direct and indirect citations. 4-5 Students continue with previous skills and reference comments made by speakers and peers. Students cite texts that they've directly quoted, paraphrased, or used for information. When writing, students will use the form of citation dictated by the instructor or the style guide referenced by the instructor. 6-8 Students continue with previous skills and use a style guide to create a proper citation. 9-12 Students continue with previous skills and should be aware of existing style guides and the ways in which they differ.
ELA.K12.EE.2.1:	Read and comprehend grade-level complex texts proficiently. **Clarifications:** See Text Complexity for grade-level complexity bands and a text complexity rubric.
ELA.K12.EE.3.1:	Make inferences to support comprehension. **Clarifications:** Students will make inferences before the words infer or inference are introduced. Kindergarten students will answer questions like "Why is the girl smiling?" or make predictions about what will happen based on the title page. Students will use the terms and apply them in 2nd grade and beyond.
ELA.K12.EE.4.1:	Use appropriate collaborative techniques and active listening skills when engaging in discussions in a variety of situations. **Clarifications:** In kindergarten, students learn to listen to one another respectfully. In grades 1-2, students build upon these skills by justifying what they are thinking. For example: "I think _____ because _____." The collaborative conversations are becoming academic conversations. In grades 3-12, students engage in academic conversations discussing claims and justifying their reasoning, refining and applying skills. Students build on ideas, propel the conversation, and support claims and counterclaims with evidence.
ELA.K12.EE.5.1:	Use the accepted rules governing a specific format to create quality work. **Clarifications:** Students will incorporate skills learned into work products to produce quality work. For students to incorporate these skills appropriately, they must receive instruction. A 3rd grade student creating a poster board display must have instruction in how to effectively present information to do quality work.
ELA.K12.EE.6.1:	Use appropriate voice and tone when speaking or writing. **Clarifications:** In kindergarten and 1st grade, students learn the difference between formal and informal language. For example, the way we talk to our friends differs from the way we speak to adults. In 2nd grade and beyond, students practice appropriate social and academic language to discuss texts.
ELD.K12.ELL.SI.1:	English language learners communicate for social and instructional purposes within the school setting.

General Course Information and Notes

GENERAL NOTES

Florida's Benchmarks for Excellent Student Thinking (B.E.S.T.) Standards
This course includes Florida's B.E.S.T. ELA Expectations (EE) and Mathematical Thinking and Reasoning Standards (MTRs) for students. Florida educators should intentionally embed these standards within the content and their instruction as applicable. For guidance on the implementation of the EEs and MTRs, please visit cpalms.org/Standards/BEST_Standards.aspx and select the appropriate B.E.S.T. Standards package.

English Language Development ELD Standards Special Notes Section:
Teachers are required to provide listening, speaking, reading and writing instruction that allows English language learners (ELL) to communicate for social and instructional purposes within the school setting. For the given level of English language proficiency and with visual, graphic, or interactive support, students will interact with grade level words, expressions, sentences and discourse to process or produce language necessary for academic success. The ELD standard should specify a relevant content area concept or topic of study chosen by curriculum developers and teachers which maximizes an ELL's need for communication and social skills. To access an ELL supporting document which delineates performance definitions and descriptors, please click on the following link: cpalms.org/uploads/docs/standards/eld/SI.pdf

GENERAL INFORMATION

Course Number: 1503420

Course Path: Section: Grades PreK to 12 Education Courses > **Grade Group:** Grades 9 to 12 and Adult Education Courses > **Subject:** Physical Education > **SubSubject:** Fitness >

Abbreviated Title: AEROBICS 3
Number of Credits: Half credit (.5)
Course Length: Semester (S)
Course Type: Core Academic Course
Course Level: 2
Course Status: Draft - Course Pending Approval
Grade Level(s): 9,10,11,12
Graduation Requirement: Physical Education

Educator Certifications

Physical Education (Grades 6-12)
Physical Education (Elementary and Secondary Grades K-12)

Golf 1 (#1504400) 2022 - And Beyond

Course Standards

Name	Description
PE.912.C.2.23:	Apply appropriate technology and analyze data to evaluate, monitor and/or improve performance.
PE.912.C.2.24:	Analyze the mechanical principles as they apply to specific course activities. **Clarifications:** Some examples are balance, force and leverage.
PE.912.C.2.26:	Evaluate skill patterns of self and/or partner by detecting and correcting mechanical errors.
PE.912.C.2.28:	Interpret and apply the rules associated with specific course activities.
PE.912.L.3.3:	Identify a variety of activities that promote effective stress management.
PE.912.L.3.4:	Identify the in-school opportunities for participation in a variety of physical activities.
PE.912.L.3.5:	Identify the community opportunities for participation in a variety of physical activities.
PE.912.M.1.5:	Apply strategies for self improvement based on individual strengths and needs.
PE.912.M.1.10:	Apply sport specific skills in simulation and in real-life applications. **Clarifications:** An example of a simulation is a practice setting or lead up activity. An example of a real-life application is a game or performance setting.
PE.912.M.1.15:	Select and apply sport/activity specific warm-up and cool-down techniques.
PE.912.M.1.23:	Demonstrate proficiency of critical elements when striking with objects, implements or body parts.
PE.912.M.1.25:	Apply appropriate speed and generation of force when distance running, sprinting, throwing, jumping, striking or kicking.
PE.912.M.1.32:	Apply sport specific skills in a variety of game settings.
PE.912.M.1.33:	Practice complex motor activities in order to improve performance.
PE.912.M.1.34:	Demonstrate use of the mechanical principles as they apply to specific course activities. **Clarifications:** Some examples are balance, force and leverage.
PE.912.M.1.35:	Select proper equipment and apply all appropriate safety procedures necessary for participation.
PE.912.R.5.3:	Demonstrate sportsmanship during game situations. **Clarifications:** Some examples are controlling emotions, resolving conflicts, respecting opponents and officials, and accepting both victory and defeat.
PE.912.R.5.4:	Maintain appropriate personal, social and ethical behavior while participating in a variety of physical activities. **Clarifications:** Some examples are respecting teammates, opponents and officials, and accepting both victory and defeat.
PE.912.R.5.5:	Demonstrate appropriate etiquette, care of equipment, respect for facilities and safe behaviors while participating in a variety of physical activities.
PE.912.R.6.3:	Analyze the roles of games, sports and/or physical activities in other cultures.
MA.K12.MTR.1.1:	Mathematicians who participate in effortful learning both individually and with others: • Analyze the problem in a way that makes sense given the task. • Ask questions that will help with solving the task. • Build perseverance by modifying methods as needed while solving a challenging task. • Stay engaged and maintain a positive mindset when working to solve tasks. • Help and support each other when attempting a new method or approach. **Clarifications:** Teachers who encourage students to participate actively in effortful learning both individually and with others: • Cultivate a community of growth mindset learners. • Foster perseverance in students by choosing tasks that are challenging. • Develop students' ability to analyze and problem solve. • Recognize students' effort when solving challenging problems.
MA.K12.MTR.2.1:	Demonstrate understanding by representing problems in multiple ways. Mathematicians who demonstrate understanding by representing problems in multiple ways: • Build understanding through modeling and using manipulatives. • Represent solutions to problems in multiple ways using objects, drawings, tables, graphs and equations. • Progress from modeling problems with objects and drawings to using algorithms and equations. • Express connections between concepts and representations. • Choose a representation based on the given context or purpose. **Clarifications:** Teachers who encourage students to demonstrate understanding by representing problems in multiple ways: • Help students make connections between concepts and representations. • Provide opportunities for students to use manipulatives when investigating concepts. • Guide students from concrete to pictorial to abstract representations as understanding progresses. • Show students that various representations can have different purposes and can be useful in different situations.
	Complete tasks with mathematical fluency. Mathematicians who complete tasks with mathematical fluency:

MA.K12.MTR.3.1:	• Select efficient and appropriate methods for solving problems within the given context. • Maintain flexibility and accuracy while performing procedures and mental calculations. • Complete tasks accurately and with confidence. • Adapt procedures to apply them to a new context. • Use feedback to improve efficiency when performing calculations. **Clarifications:** Teachers who encourage students to complete tasks with mathematical fluency: • Provide students with the flexibility to solve problems by selecting a procedure that allows them to solve efficiently and accurately. • Offer multiple opportunities for students to practice efficient and generalizable methods. • Provide opportunities for students to reflect on the method they used and determine if a more efficient method could have been used.
MA.K12.MTR.4.1:	Engage in discussions that reflect on the mathematical thinking of self and others. Mathematicians who engage in discussions that reflect on the mathematical thinking of self and others: • Communicate mathematical ideas, vocabulary and methods effectively. • Analyze the mathematical thinking of others. • Compare the efficiency of a method to those expressed by others. • Recognize errors and suggest how to correctly solve the task. • Justify results by explaining methods and processes. • Construct possible arguments based on evidence. **Clarifications:** Teachers who encourage students to engage in discussions that reflect on the mathematical thinking of self and others: • Establish a culture in which students ask questions of the teacher and their peers, and error is an opportunity for learning. • Create opportunities for students to discuss their thinking with peers. • Select, sequence and present student work to advance and deepen understanding of correct and increasingly efficient methods. • Develop students' ability to justify methods and compare their responses to the responses of their peers.
MA.K12.MTR.5.1:	Use patterns and structure to help understand and connect mathematical concepts. Mathematicians who use patterns and structure to help understand and connect mathematical concepts: • Focus on relevant details within a problem. • Create plans and procedures to logically order events, steps or ideas to solve problems. • Decompose a complex problem into manageable parts. • Relate previously learned concepts to new concepts. • Look for similarities among problems. • Connect solutions of problems to more complicated large-scale situations. **Clarifications:** Teachers who encourage students to use patterns and structure to help understand and connect mathematical concepts: • Help students recognize the patterns in the world around them and connect these patterns to mathematical concepts. • Support students to develop generalizations based on the similarities found among problems. • Provide opportunities for students to create plans and procedures to solve problems. • Develop students' ability to construct relationships between their current understanding and more sophisticated ways of thinking.
MA.K12.MTR.6.1:	Assess the reasonableness of solutions. Mathematicians who assess the reasonableness of solutions: • Estimate to discover possible solutions. • Use benchmark quantities to determine if a solution makes sense. • Check calculations when solving problems. • Verify possible solutions by explaining the methods used. • Evaluate results based on the given context. **Clarifications:** Teachers who encourage students to assess the reasonableness of solutions: • Have students estimate or predict solutions prior to solving. • Prompt students to continually ask, "Does this solution make sense? How do you know?" • Reinforce that students check their work as they progress within and after a task. • Strengthen students' ability to verify solutions through justifications.
MA.K12.MTR.7.1:	Apply mathematics to real-world contexts. Mathematicians who apply mathematics to real-world contexts: • Connect mathematical concepts to everyday experiences. • Use models and methods to understand, represent and solve problems. • Perform investigations to gather data or determine if a method is appropriate. • Redesign models and methods to improve accuracy or efficiency. **Clarifications:** Teachers who encourage students to apply mathematics to real-world contexts: • Provide opportunities for students to create models, both concrete and abstract, and perform investigations. • Challenge students to question the accuracy of their models and methods. • Support students as they validate conclusions by comparing them to the given situation. • Indicate how various concepts can be applied to other disciplines.
	Cite evidence to explain and justify reasoning. **Clarifications:** K-1 Students include textual evidence in their oral communication with guidance and support from adults. The evidence can consist of details

ELA.K12.EE.1.1:	from the text without naming the text. During 1st grade, students learn how to incorporate the evidence in their writing. 2-3 Students include relevant textual evidence in their written and oral communication. Students should name the text when they refer to it. In 3rd grade, students should use a combination of direct and indirect citations. 4-5 Students continue with previous skills and reference comments made by speakers and peers. Students cite texts that they've directly quoted, paraphrased, or used for information. When writing, students will use the form of citation dictated by the instructor or the style guide referenced by the instructor. 6-8 Students continue with previous skills and use a style guide to create a proper citation. 9-12 Students continue with previous skills and should be aware of existing style guides and the ways in which they differ.
ELA.K12.EE.2.1:	Read and comprehend grade-level complex texts proficiently. **Clarifications:** See Text Complexity for grade-level complexity bands and a text complexity rubric.
ELA.K12.EE.3.1:	Make inferences to support comprehension. **Clarifications:** Students will make inferences before the words infer or inference are introduced. Kindergarten students will answer questions like "Why is the girl smiling?" or make predictions about what will happen based on the title page. Students will use the terms and apply them in 2nd grade and beyond.
ELA.K12.EE.4.1:	Use appropriate collaborative techniques and active listening skills when engaging in discussions in a variety of situations. **Clarifications:** In kindergarten, students learn to listen to one another respectfully. In grades 1-2, students build upon these skills by justifying what they are thinking. For example: "I think _____ because _____." The collaborative conversations are becoming academic conversations. In grades 3-12, students engage in academic conversations discussing claims and justifying their reasoning, refining and applying skills. Students build on ideas, propel the conversation, and support claims and counterclaims with evidence.
ELA.K12.EE.5.1:	Use the accepted rules governing a specific format to create quality work. **Clarifications:** Students will incorporate skills learned into work products to produce quality work. For students to incorporate these skills appropriately, they must receive instruction. A 3rd grade student creating a poster board display must have instruction in how to effectively present information to do quality work.
ELA.K12.EE.6.1:	Use appropriate voice and tone when speaking or writing. **Clarifications:** In kindergarten and 1st grade, students learn the difference between formal and informal language. For example, the way we talk to our friends differs from the way we speak to adults. In 2nd grade and beyond, students practice appropriate social and academic language to discuss texts.
ELD.K12.ELL.SI.1:	English language learners communicate for social and instructional purposes within the school setting.

General Course Information and Notes

GENERAL NOTES

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This course includes Florida's B.E.S.T. ELA Expectations (EE) and Mathematical Thinking and Reasoning Standards (MTRs) for students. Florida educators should intentionally embed these standards within the content and their instruction as applicable. For guidance on the implementation of the EEs and MTRs, please visit cpalms.org/Standards/BEST_Standards.aspx and select the appropriate B.E.S.T. Standards package.

English Language Development ELD Standards Special Notes Section:
Teachers are required to provide listening, speaking, reading and writing instruction that allows English language learners (ELL) to communicate for social and instructional purposes within the school setting. For the given level of English language proficiency and with visual, graphic, or interactive support, students will interact with grade level words, expressions, sentences and discourse to process or produce language necessary for academic success. The ELD standard should specify a relevant content area concept or topic of study chosen by curriculum developers and teachers which maximizes an ELL's need for communication and social skills. To access an ELL supporting document which delineates performance definitions and descriptors, please click on the following link: cpalms.org/uploads/docs/standards/eld/SI.pdf

GENERAL INFORMATION

Course Number: 1504400

Course Path: Section: Grades PreK to 12 Education Courses > **Grade Group:** Grades 9 to 12 and Adult Education Courses > **Subject:** Physical Education > **SubSubject:** Individual and Dual >

Abbreviated Title: GOLF 1

Number of Credits: Half credit (.5)

Course Length: Semester (S)

Course Type: Core Academic Course

Course Level: 2

Course Status: Draft - Course Pending Approval

Grade Level(s): 9,10,11,12

Graduation Requirement: Physical Education

Educator Certifications

Physical Education (Grades 6-12)
Physical Education (Elementary and Secondary Grades K-12)

Swimming 1 (#1504460) 2022 - And Beyond

Course Standards

Name	Description
PE.912.C.2.9:	Explain the precautions to be taken when exercising in extreme weather and/or environmental conditions. **Clarifications:** Some examples of precautions are hydration and appropriate attire.
PE.912.C.2.23:	Apply appropriate technology and analyze data to evaluate, monitor and/or improve performance.
PE.912.C.2.26:	Evaluate skill patterns of self and/or partner by detecting and correcting mechanical errors.
PE.912.L.3.4:	Identify the in-school opportunities for participation in a variety of physical activities.
PE.912.L.3.5:	Identify the community opportunities for participation in a variety of physical activities.
PE.912.L.3.6:	Identify risks and safety factors that may affect physical activity throughout life.
PE.912.M.1.1:	Demonstrate critical elements of basic skills relating to aquatics. **Clarifications:** Some examples are use of swim strokes, use of mask and fins and use of emergency safety equipment.
PE.912.M.1.2:	Demonstrate proficiency in combination of motor skills related to aquatics. **Clarifications:** Some examples are rhythmic breathing, coordinated movements with arms and legs and body alignment while entering water.
PE.912.M.1.3:	Perform a basic water rescue, with or without equipment, without entering the water.
PE.912.M.1.10:	Apply sport specific skills in simulation and in real-life applications. **Clarifications:** An example of a simulation is a practice setting or lead up activity. An example of a real-life application is a game or performance setting.
PE.912.M.1.15:	Select and apply sport/activity specific warm-up and cool-down techniques.
PE.912.M.1.33:	Practice complex motor activities in order to improve performance.
PE.912.M.1.34:	Demonstrate use of the mechanical principles as they apply to specific course activities. **Clarifications:** Some examples are balance, force and leverage.
PE.912.M.1.35:	Select proper equipment and apply all appropriate safety procedures necessary for participation.
PE.912.R.5.3:	Demonstrate sportsmanship during game situations. **Clarifications:** Some examples are controlling emotions, resolving conflicts, respecting opponents and officials, and accepting both victory and defeat.
PE.912.R.5.4:	Maintain appropriate personal, social and ethical behavior while participating in a variety of physical activities. **Clarifications:** Some examples are respecting teammates, opponents and officials, and accepting both victory and defeat.
PE.912.R.5.5:	Demonstrate appropriate etiquette, care of equipment, respect for facilities and safe behaviors while participating in a variety of physical activities.
PE.912.R.6.3:	Analyze the roles of games, sports and/or physical activities in other cultures.
MA.K12.MTR.1.1:	Mathematicians who participate in effortful learning both individually and with others: • Analyze the problem in a way that makes sense given the task. • Ask questions that will help with solving the task. • Build perseverance by modifying methods as needed while solving a challenging task. • Stay engaged and maintain a positive mindset when working to solve tasks. • Help and support each other when attempting a new method or approach. **Clarifications:** Teachers who encourage students to participate actively in effortful learning both individually and with others: • Cultivate a community of growth mindset learners. • Foster perseverance in students by choosing tasks that are challenging. • Develop students' ability to analyze and problem solve. • Recognize students' effort when solving challenging problems.
MA.K12.MTR.2.1:	Demonstrate understanding by representing problems in multiple ways. Mathematicians who demonstrate understanding by representing problems in multiple ways: • Build understanding through modeling and using manipulatives. • Represent solutions to problems in multiple ways using objects, drawings, tables, graphs and equations. • Progress from modeling problems with objects and drawings to using algorithms and equations. • Express connections between concepts and representations. • Choose a representation based on the given context or purpose. **Clarifications:** Teachers who encourage students to demonstrate understanding by representing problems in multiple ways: • Help students make connections between concepts and representations. • Provide opportunities for students to use manipulatives when investigating concepts. • Guide students from concrete to pictorial to abstract representations as understanding progresses.

	• Show students that various representations can have different purposes and can be useful in different situations.
MA.K12.MTR.3.1:	Complete tasks with mathematical fluency. Mathematicians who complete tasks with mathematical fluency: • Select efficient and appropriate methods for solving problems within the given context. • Maintain flexibility and accuracy while performing procedures and mental calculations. • Complete tasks accurately and with confidence. • Adapt procedures to apply them to a new context. • Use feedback to improve efficiency when performing calculations. **Clarifications:** Teachers who encourage students to complete tasks with mathematical fluency: • Provide students with the flexibility to solve problems by selecting a procedure that allows them to solve efficiently and accurately. • Offer multiple opportunities for students to practice efficient and generalizable methods. • Provide opportunities for students to reflect on the method they used and determine if a more efficient method could have been used.
MA.K12.MTR.4.1:	Engage in discussions that reflect on the mathematical thinking of self and others. Mathematicians who engage in discussions that reflect on the mathematical thinking of self and others: • Communicate mathematical ideas, vocabulary and methods effectively. • Analyze the mathematical thinking of others. • Compare the efficiency of a method to those expressed by others. • Recognize errors and suggest how to correctly solve the task. • Justify results by explaining methods and processes. • Construct possible arguments based on evidence. **Clarifications:** Teachers who encourage students to engage in discussions that reflect on the mathematical thinking of self and others: • Establish a culture in which students ask questions of the teacher and their peers, and error is an opportunity for learning. • Create opportunities for students to discuss their thinking with peers. • Select, sequence and present student work to advance and deepen understanding of correct and increasingly efficient methods. • Develop students' ability to justify methods and compare their responses to the responses of their peers.
MA.K12.MTR.5.1:	Use patterns and structure to help understand and connect mathematical concepts. Mathematicians who use patterns and structure to help understand and connect mathematical concepts: • Focus on relevant details within a problem. • Create plans and procedures to logically order events, steps or ideas to solve problems. • Decompose a complex problem into manageable parts. • Relate previously learned concepts to new concepts. • Look for similarities among problems. • Connect solutions of problems to more complicated large-scale situations. **Clarifications:** Teachers who encourage students to use patterns and structure to help understand and connect mathematical concepts: • Help students recognize the patterns in the world around them and connect these patterns to mathematical concepts. • Support students to develop generalizations based on the similarities found among problems. • Provide opportunities for students to create plans and procedures to solve problems. • Develop students' ability to construct relationships between their current understanding and more sophisticated ways of thinking.
MA.K12.MTR.6.1:	Assess the reasonableness of solutions. Mathematicians who assess the reasonableness of solutions: • Estimate to discover possible solutions. • Use benchmark quantities to determine if a solution makes sense. • Check calculations when solving problems. • Verify possible solutions by explaining the methods used. • Evaluate results based on the given context. **Clarifications:** Teachers who encourage students to assess the reasonableness of solutions: • Have students estimate or predict solutions prior to solving. • Prompt students to continually ask, "Does this solution make sense? How do you know?" • Reinforce that students check their work as they progress within and after a task. • Strengthen students' ability to verify solutions through justifications.
MA.K12.MTR.7.1:	Apply mathematics to real-world contexts. Mathematicians who apply mathematics to real-world contexts: • Connect mathematical concepts to everyday experiences. • Use models and methods to understand, represent and solve problems. • Perform investigations to gather data or determine if a method is appropriate. • Redesign models and methods to improve accuracy or efficiency. **Clarifications:** Teachers who encourage students to apply mathematics to real-world contexts: • Provide opportunities for students to create models, both concrete and abstract, and perform investigations. • Challenge students to question the accuracy of their models and methods. • Support students as they validate conclusions by comparing them to the given situation. • Indicate how various concepts can be applied to other disciplines.

ELA.K12.EE.1.1:	Cite evidence to explain and justify reasoning. **Clarifications:** K-1 Students include textual evidence in their oral communication with guidance and support from adults. The evidence can consist of details from the text without naming the text. During 1st grade, students learn how to incorporate the evidence in their writing. 2-3 Students include relevant textual evidence in their written and oral communication. Students should name the text when they refer to it. In 3rd grade, students should use a combination of direct and indirect citations. 4-5 Students continue with previous skills and reference comments made by speakers and peers. Students cite texts that they've directly quoted, paraphrased, or used for information. When writing, students will use the form of citation dictated by the instructor or the style guide referenced by the instructor. 6-8 Students continue with previous skills and use a style guide to create a proper citation. 9-12 Students continue with previous skills and should be aware of existing style guides and the ways in which they differ.
ELA.K12.EE.2.1:	Read and comprehend grade-level complex texts proficiently. **Clarifications:** See Text Complexity for grade-level complexity bands and a text complexity rubric.
ELA.K12.EE.3.1:	Make inferences to support comprehension. **Clarifications:** Students will make inferences before the words infer or inference are introduced. Kindergarten students will answer questions like "Why is the girl smiling?" or make predictions about what will happen based on the title page. Students will use the terms and apply them in 2nd grade and beyond.
ELA.K12.EE.4.1:	Use appropriate collaborative techniques and active listening skills when engaging in discussions in a variety of situations. **Clarifications:** In kindergarten, students learn to listen to one another respectfully. In grades 1-2, students build upon these skills by justifying what they are thinking. For example: "I think _____ because _____." The collaborative conversations are becoming academic conversations. In grades 3-12, students engage in academic conversations discussing claims and justifying their reasoning, refining and applying skills. Students build on ideas, propel the conversation, and support claims and counterclaims with evidence.
ELA.K12.EE.5.1:	Use the accepted rules governing a specific format to create quality work. **Clarifications:** Students will incorporate skills learned into work products to produce quality work. For students to incorporate these skills appropriately, they must receive instruction. A 3rd grade student creating a poster board display must have instruction in how to effectively present information to do quality work.
ELA.K12.EE.6.1:	Use appropriate voice and tone when speaking or writing. **Clarifications:** In kindergarten and 1st grade, students learn the difference between formal and informal language. For example, the way we talk to our friends differs from the way we speak to adults. In 2nd grade and beyond, students practice appropriate social and academic language to discuss texts.
ELD.K12.ELL.SI.1:	English language learners communicate for social and instructional purposes within the school setting.

General Course Information and Notes

GENERAL NOTES

Florida's Benchmarks for Excellent Student Thinking (B.E.S.T.) Standards
This course includes Florida's B.E.S.T. ELA Expectations (EE) and Mathematical Thinking and Reasoning Standards (MTRs) for students. Florida educators should intentionally embed these standards within the content and their instruction as applicable. For guidance on the implementation of the EEs and MTRs, please visit cpalms.org/Standards/BEST_Standards.aspx and select the appropriate B.E.S.T. Standards package.

English Language Development ELD Standards Special Notes Section:
Teachers are required to provide listening, speaking, reading and writing instruction that allows English language learners (ELL) to communicate for social and instructional purposes within the school setting. For the given level of English language proficiency and with visual, graphic, or interactive support, students will interact with grade level words, expressions, sentences and discourse to process or produce language necessary for academic success. The ELD standard should specify a relevant content area concept or topic of study chosen by curriculum developers and teachers which maximizes an ELL's need for communication and social skills. To access an ELL supporting document which delineates performance definitions and descriptors, please click on the following link: cpalms.org/uploads/docs/standards/eld/SI.pdf

QUALIFICATIONS

As well as any certification requirements listed on the course description, the following qualifications may also be acceptable for the course:

American Red Cross Water Safety Instructor or equivalent.

GENERAL INFORMATION

Course Number: 1504460

Course Path: Section: Grades PreK to 12 Education Courses > **Grade Group:** Grades 9 to 12 and Adult Education Courses > **Subject:** Physical Education > **SubSubject:** Individual and Dual > **Abbreviated Title:** SWIMMING 1

Number of Credits: Half credit (.5)

Course Length: Semester (S)

Course Type: Core Academic Course

Course Level: 2

Course Status: Draft - Course Pending Approval

Grade Level(s): 9,10,11,12

Graduation Requirement: Physical Education

Swimming 2 (#1504470) 2022 - And Beyond

Course Standards

Name	Description
PE.912.C.2.1:	Identify and describe the critical elements of a basic water rescue.
PE.912.C.2.7:	Evaluate the effectiveness of specific warm-up and cool-down activities.
PE.912.C.2.9:	Explain the precautions to be taken when exercising in extreme weather and/or environmental conditions. **Clarifications:** Some examples of precautions are hydration and appropriate attire.
PE.912.C.2.23:	Apply appropriate technology and analyze data to evaluate, monitor and/or improve performance.
PE.912.C.2.26:	Evaluate skill patterns of self and/or partner by detecting and correcting mechanical errors.
PE.912.L.3.4:	Identify the in-school opportunities for participation in a variety of physical activities.
PE.912.L.3.5:	Identify the community opportunities for participation in a variety of physical activities.
PE.912.L.3.6:	Identify risks and safety factors that may affect physical activity throughout life.
PE.912.M.1.1:	Demonstrate critical elements of basic skills relating to aquatics. **Clarifications:** Some examples are use of swim strokes, use of mask and fins and use of emergency safety equipment.
PE.912.M.1.2:	Demonstrate proficiency in combination of motor skills related to aquatics. **Clarifications:** Some examples are rhythmic breathing, coordinated movements with arms and legs and body alignment while entering water.
PE.912.M.1.3:	Perform a basic water rescue, with or without equipment, without entering the water.
PE.912.M.1.4:	Perform refinement of one or more swim strokes to enhance efficiency, power and cardiorespiratory endurance in a variety of aquatics settings. **Clarifications:** Some examples of aquatic settings are a pool, a lake and open water.
PE.912.M.1.5:	Apply strategies for self improvement based on individual strengths and needs.
PE.912.M.1.10:	Apply sport specific skills in simulation and in real-life applications. **Clarifications:** An example of a simulation is a practice setting or lead up activity. An example of a real-life application is a game or performance setting.
PE.912.M.1.30:	Combine and apply movement patterns from simple to complex.
PE.912.M.1.33:	Practice complex motor activities in order to improve performance.
PE.912.M.1.34:	Demonstrate use of the mechanical principles as they apply to specific course activities. **Clarifications:** Some examples are balance, force and leverage.
PE.912.M.1.35:	Select proper equipment and apply all appropriate safety procedures necessary for participation.
PE.912.R.5.3:	Demonstrate sportsmanship during game situations. **Clarifications:** Some examples are controlling emotions, resolving conflicts, respecting opponents and officials, and accepting both victory and defeat.
PE.912.R.5.4:	Maintain appropriate personal, social and ethical behavior while participating in a variety of physical activities. **Clarifications:** Some examples are respecting teammates, opponents and officials, and accepting both victory and defeat.
PE.912.R.5.5:	Demonstrate appropriate etiquette, care of equipment, respect for facilities and safe behaviors while participating in a variety of physical activities.
PE.912.R.6.3:	Analyze the roles of games, sports and/or physical activities in other cultures.
MA.K12.MTR.1.1:	Mathematicians who participate in effortful learning both individually and with others: • Analyze the problem in a way that makes sense given the task. • Ask questions that will help with solving the task. • Build perseverance by modifying methods as needed while solving a challenging task. • Stay engaged and maintain a positive mindset when working to solve tasks. • Help and support each other when attempting a new method or approach. **Clarifications:** Teachers who encourage students to participate actively in effortful learning both individually and with others: • Cultivate a community of growth mindset learners. • Foster perseverance in students by choosing tasks that are challenging. • Develop students' ability to analyze and problem solve. • Recognize students' effort when solving challenging problems.
	Demonstrate understanding by representing problems in multiple ways. Mathematicians who demonstrate understanding by representing problems in multiple ways: • Build understanding through modeling and using manipulatives. • Represent solutions to problems in multiple ways using objects, drawings, tables, graphs and equations. • Progress from modeling problems with objects and drawings to using algorithms and equations. • Express connections between concepts and representations.

MA.K12.MTR.2.1:

- Choose a representation based on the given context or purpose.

Clarifications:
Teachers who encourage students to demonstrate understanding by representing problems in multiple ways:

- Help students make connections between concepts and representations.
- Provide opportunities for students to use manipulatives when investigating concepts.
- Guide students from concrete to pictorial to abstract representations as understanding progresses.
- Show students that various representations can have different purposes and can be useful in different situations.

MA.K12.MTR.3.1:

Complete tasks with mathematical fluency.
Mathematicians who complete tasks with mathematical fluency:

- Select efficient and appropriate methods for solving problems within the given context.
- Maintain flexibility and accuracy while performing procedures and mental calculations.
- Complete tasks accurately and with confidence.
- Adapt procedures to apply them to a new context.
- Use feedback to improve efficiency when performing calculations.

Clarifications:
Teachers who encourage students to complete tasks with mathematical fluency:

- Provide students with the flexibility to solve problems by selecting a procedure that allows them to solve efficiently and accurately.
- Offer multiple opportunities for students to practice efficient and generalizable methods.
- Provide opportunities for students to reflect on the method they used and determine if a more efficient method could have been used.

MA.K12.MTR.4.1:

Engage in discussions that reflect on the mathematical thinking of self and others.
Mathematicians who engage in discussions that reflect on the mathematical thinking of self and others:

- Communicate mathematical ideas, vocabulary and methods effectively.
- Analyze the mathematical thinking of others.
- Compare the efficiency of a method to those expressed by others.
- Recognize errors and suggest how to correctly solve the task.
- Justify results by explaining methods and processes.
- Construct possible arguments based on evidence.

Clarifications:
Teachers who encourage students to engage in discussions that reflect on the mathematical thinking of self and others:

- Establish a culture in which students ask questions of the teacher and their peers, and error is an opportunity for learning.
- Create opportunities for students to discuss their thinking with peers.
- Select, sequence and present student work to advance and deepen understanding of correct and increasingly efficient methods.
- Develop students' ability to justify methods and compare their responses to the responses of their peers.

MA.K12.MTR.5.1:

Use patterns and structure to help understand and connect mathematical concepts.
Mathematicians who use patterns and structure to help understand and connect mathematical concepts:

- Focus on relevant details within a problem.
- Create plans and procedures to logically order events, steps or ideas to solve problems.
- Decompose a complex problem into manageable parts.
- Relate previously learned concepts to new concepts.
- Look for similarities among problems.
- Connect solutions of problems to more complicated large-scale situations.

Clarifications:
Teachers who encourage students to use patterns and structure to help understand and connect mathematical concepts:

- Help students recognize the patterns in the world around them and connect these patterns to mathematical concepts.
- Support students to develop generalizations based on the similarities found among problems.
- Provide opportunities for students to create plans and procedures to solve problems.
- Develop students' ability to construct relationships between their current understanding and more sophisticated ways of thinking.

MA.K12.MTR.6.1:

Assess the reasonableness of solutions.
Mathematicians who assess the reasonableness of solutions:

- Estimate to discover possible solutions.
- Use benchmark quantities to determine if a solution makes sense.
- Check calculations when solving problems.
- Verify possible solutions by explaining the methods used.
- Evaluate results based on the given context.

Clarifications:
Teachers who encourage students to assess the reasonableness of solutions:

- Have students estimate or predict solutions prior to solving.
- Prompt students to continually ask, "Does this solution make sense? How do you know?"
- Reinforce that students check their work as they progress within and after a task.
- Strengthen students' ability to verify solutions through justifications.

Apply mathematics to real-world contexts.
Mathematicians who apply mathematics to real-world contexts:

- Connect mathematical concepts to everyday experiences.
- Use models and methods to understand, represent and solve problems.
- Perform investigations to gather data or determine if a method is appropriate. • Redesign models and methods to improve accuracy or efficiency.

MA.K12.MTR.7.1:	**Clarifications:** Teachers who encourage students to apply mathematics to real-world contexts: • Provide opportunities for students to create models, both concrete and abstract, and perform investigations. • Challenge students to question the accuracy of their models and methods. • Support students as they validate conclusions by comparing them to the given situation. • Indicate how various concepts can be applied to other disciplines.
ELA.K12.EE.1.1:	Cite evidence to explain and justify reasoning. **Clarifications:** K-1 Students include textual evidence in their oral communication with guidance and support from adults. The evidence can consist of details from the text without naming the text. During 1st grade, students learn how to incorporate the evidence in their writing. 2-3 Students include relevant textual evidence in their written and oral communication. Students should name the text when they refer to it. In 3rd grade, students should use a combination of direct and indirect citations. 4-5 Students continue with previous skills and reference comments made by speakers and peers. Students cite texts that they've directly quoted, paraphrased, or used for information. When writing, students will use the form of citation dictated by the instructor or the style guide referenced by the instructor. 6-8 Students continue with previous skills and use a style guide to create a proper citation. 9-12 Students continue with previous skills and should be aware of existing style guides and the ways in which they differ.
ELA.K12.EE.2.1:	Read and comprehend grade-level complex texts proficiently. **Clarifications:** See Text Complexity for grade-level complexity bands and a text complexity rubric.
ELA.K12.EE.3.1:	Make inferences to support comprehension. **Clarifications:** Students will make inferences before the words infer or inference are introduced. Kindergarten students will answer questions like "Why is the girl smiling?" or make predictions about what will happen based on the title page. Students will use the terms and apply them in 2nd grade and beyond.
ELA.K12.EE.4.1:	Use appropriate collaborative techniques and active listening skills when engaging in discussions in a variety of situations. **Clarifications:** In kindergarten, students learn to listen to one another respectfully. In grades 1-2, students build upon these skills by justifying what they are thinking. For example: "I think _____ because _____." The collaborative conversations are becoming academic conversations. In grades 3-12, students engage in academic conversations discussing claims and justifying their reasoning, refining and applying skills. Students build on ideas, propel the conversation, and support claims and counterclaims with evidence.
ELA.K12.EE.5.1:	Use the accepted rules governing a specific format to create quality work. **Clarifications:** Students will incorporate skills learned into work products to produce quality work. For students to incorporate these skills appropriately, they must receive instruction. A 3rd grade student creating a poster board display must have instruction in how to effectively present information to do quality work.
ELA.K12.EE.6.1:	Use appropriate voice and tone when speaking or writing. **Clarifications:** In kindergarten and 1st grade, students learn the difference between formal and informal language. For example, the way we talk to our friends differs from the way we speak to adults. In 2nd grade and beyond, students practice appropriate social and academic language to discuss texts.
ELD.K12.ELL.SI.1:	English language learners communicate for social and instructional purposes within the school setting.

General Course Information and Notes

GENERAL NOTES

Florida's Benchmarks for Excellent Student Thinking (B.E.S.T.) Standards
This course includes Florida's B.E.S.T. ELA Expectations (EE) and Mathematical Thinking and Reasoning Standards (MTRs) for students. Florida educators should intentionally embed these standards within the content and their instruction as applicable. For guidance on the implementation of the EEs and MTRs, please visit cpalms.org/Standards/BEST_Standards.aspx and select the appropriate B.E.S.T. Standards package.

English Language Development ELD Standards Special Notes Section:
Teachers are required to provide listening, speaking, reading and writing instruction that allows English language learners (ELL) to communicate for social and instructional purposes within the school setting. For the given level of English language proficiency and with visual, graphic, or interactive support, students will interact with grade level words, expressions, sentences and discourse to process or produce language necessary for academic success. The ELD standard should specify a relevant content area concept or topic of study chosen by curriculum developers and teachers which maximizes an ELL's need for communication and social skills. To access an ELL supporting document which delineates performance definitions and descriptors, please click on the following link: cpalms.org/uploads/docs/standards/eld/SI.pdf

QUALIFICATIONS

As well as any certification requirements listed on the course description, the following qualifications may also be acceptable for the course:

American Red Cross Water Safety Instructor or equivalent.

GENERAL INFORMATION

Course Number: 1504470

Course Path: Section: Grades PreK to 12 Education Courses > **Grade Group:** Grades 9 to 12 and Adult Education Courses > **Subject:** Physical Education > **SubSubject:** Individual and Dual >

Abbreviated Title: SWIMMING 2

Number of Credits: Half credit (.5)

Course Length: Semester (S)

Course Type: Core Academic Course

Course Level: 2

Course Status: Draft - Course Pending Approval

Grade Level(s): 9,10,11,12

Graduation Requirement: Physical Education

Water Safety (#1504490) 2022 - And Beyond

Course Standards

Name	Description
PE.912.C.2.7:	Evaluate the effectiveness of specific warm-up and cool-down activities.
PE.912.C.2.8:	Differentiate between the three different types of heat illnesses associated with fluid loss. **Clarifications:** The three types of heat illnesses are heat cramps, heat exhaustion and heat stroke.
PE.912.C.2.9:	Explain the precautions to be taken when exercising in extreme weather and/or environmental conditions. **Clarifications:** Some examples of precautions are hydration and appropriate attire.
PE.912.C.2.20:	Identify appropriate methods to resolve physical conflict.
PE.912.C.2.24:	Analyze the mechanical principles as they apply to specific course activities. **Clarifications:** Some examples are balance, force and leverage.
PE.912.C.2.25:	Analyze and evaluate the risks, safety procedures, rules and equipment associated with specific course activities.
PE.912.C.2.26:	Evaluate skill patterns of self and/or partner by detecting and correcting mechanical errors.
PE.912.L.3.3:	Identify a variety of activities that promote effective stress management.
PE.912.L.3.4:	Identify the in-school opportunities for participation in a variety of physical activities.
PE.912.L.3.5:	Identify the community opportunities for participation in a variety of physical activities.
PE.912.L.3.6:	Identify risks and safety factors that may affect physical activity throughout life.
PE.912.M.1.1:	Demonstrate critical elements of basic skills relating to aquatics. **Clarifications:** Some examples are use of swim strokes, use of mask and fins and use of emergency safety equipment.
PE.912.M.1.2:	Demonstrate proficiency in combination of motor skills related to aquatics. **Clarifications:** Some examples are rhythmic breathing, coordinated movements with arms and legs and body alignment while entering water.
PE.912.M.1.3:	Perform a basic water rescue, with or without equipment, without entering the water.
PE.912.M.1.4:	Perform refinement of one or more swim strokes to enhance efficiency, power and cardiorespiratory endurance in a variety of aquatics settings. **Clarifications:** Some examples of aquatic settings are a pool, a lake and open water.
PE.912.M.1.5:	Apply strategies for self improvement based on individual strengths and needs.
PE.912.M.1.17:	Demonstrate basic cardiopulmonary resuscitation (CPR) procedures.
PE.912.M.1.33:	Practice complex motor activities in order to improve performance.
PE.912.M.1.34:	Demonstrate use of the mechanical principles as they apply to specific course activities. **Clarifications:** Some examples are balance, force and leverage.
PE.912.M.1.35:	Select proper equipment and apply all appropriate safety procedures necessary for participation.
PE.912.R.5.1:	Describe ways to act independently of peer pressure during physical activities.
PE.912.R.5.4:	Maintain appropriate personal, social and ethical behavior while participating in a variety of physical activities. **Clarifications:** Some examples are respecting teammates, opponents and officials, and accepting both victory and defeat.
PE.912.R.5.5:	Demonstrate appropriate etiquette, care of equipment, respect for facilities and safe behaviors while participating in a variety of physical activities.
MA.K12.MTR.1.1:	Mathematicians who participate in effortful learning both individually and with others: • Analyze the problem in a way that makes sense given the task. • Ask questions that will help with solving the task. • Build perseverance by modifying methods as needed while solving a challenging task. • Stay engaged and maintain a positive mindset when working to solve tasks. • Help and support each other when attempting a new method or approach. **Clarifications:** Teachers who encourage students to participate actively in effortful learning both individually and with others: • Cultivate a community of growth mindset learners. • Foster perseverance in students by choosing tasks that are challenging. • Develop students' ability to analyze and problem solve. • Recognize students' effort when solving challenging problems.
	Demonstrate understanding by representing problems in multiple ways. Mathematicians who demonstrate understanding by representing problems in multiple ways: • Build understanding through modeling and using manipulatives. • Represent solutions to problems in multiple ways using objects, drawings, tables, graphs and equations. • Progress from modeling problems with objects and drawings to using algorithms and equations.

- Express connections between concepts and representations.

MA.K12.MTR.2.1:

- Choose a representation based on the given context or purpose.

Clarifications:
Teachers who encourage students to demonstrate understanding by representing problems in multiple ways:

- Help students make connections between concepts and representations.
- Provide opportunities for students to use manipulatives when investigating concepts.
- Guide students from concrete to pictorial to abstract representations as understanding progresses.
- Show students that various representations can have different purposes and can be useful in different situations.

Complete tasks with mathematical fluency.
Mathematicians who complete tasks with mathematical fluency:

- Select efficient and appropriate methods for solving problems within the given context.
- Maintain flexibility and accuracy while performing procedures and mental calculations.
- Complete tasks accurately and with confidence.
- Adapt procedures to apply them to a new context.

MA.K12.MTR.3.1:

- Use feedback to improve efficiency when performing calculations.

Clarifications:
Teachers who encourage students to complete tasks with mathematical fluency:

- Provide students with the flexibility to solve problems by selecting a procedure that allows them to solve efficiently and accurately.
- Offer multiple opportunities for students to practice efficient and generalizable methods.
- Provide opportunities for students to reflect on the method they used and determine if a more efficient method could have been used.

Engage in discussions that reflect on the mathematical thinking of self and others.
Mathematicians who engage in discussions that reflect on the mathematical thinking of self and others:

- Communicate mathematical ideas, vocabulary and methods effectively.
- Analyze the mathematical thinking of others.
- Compare the efficiency of a method to those expressed by others.
- Recognize errors and suggest how to correctly solve the task.
- Justify results by explaining methods and processes.

MA.K12.MTR.4.1:

- Construct possible arguments based on evidence.

Clarifications:
Teachers who encourage students to engage in discussions that reflect on the mathematical thinking of self and others:

- Establish a culture in which students ask questions of the teacher and their peers, and error is an opportunity for learning.
- Create opportunities for students to discuss their thinking with peers.
- Select, sequence and present student work to advance and deepen understanding of correct and increasingly efficient methods.
- Develop students' ability to justify methods and compare their responses to the responses of their peers.

Use patterns and structure to help understand and connect mathematical concepts.
Mathematicians who use patterns and structure to help understand and connect mathematical concepts:

- Focus on relevant details within a problem.
- Create plans and procedures to logically order events, steps or ideas to solve problems.
- Decompose a complex problem into manageable parts.
- Relate previously learned concepts to new concepts.
- Look for similarities among problems.

MA.K12.MTR.5.1:

- Connect solutions of problems to more complicated large-scale situations.

Clarifications:
Teachers who encourage students to use patterns and structure to help understand and connect mathematical concepts:

- Help students recognize the patterns in the world around them and connect these patterns to mathematical concepts.
- Support students to develop generalizations based on the similarities found among problems.
- Provide opportunities for students to create plans and procedures to solve problems.
- Develop students' ability to construct relationships between their current understanding and more sophisticated ways of thinking.

Assess the reasonableness of solutions.
Mathematicians who assess the reasonableness of solutions:

- Estimate to discover possible solutions.
- Use benchmark quantities to determine if a solution makes sense.
- Check calculations when solving problems.
- Verify possible solutions by explaining the methods used.

MA.K12.MTR.6.1:

- Evaluate results based on the given context.

Clarifications:
Teachers who encourage students to assess the reasonableness of solutions:

- Have students estimate or predict solutions prior to solving.
- Prompt students to continually ask, "Does this solution make sense? How do you know?"
- Reinforce that students check their work as they progress within and after a task.
- Strengthen students' ability to verify solutions through justifications.

Apply mathematics to real-world contexts.
Mathematicians who apply mathematics to real-world contexts:

- Connect mathematical concepts to everyday experiences.
- Use models and methods to understand, represent and solve problems.

MA.K12.MTR.7.1:	• Perform investigations to gather data or determine if a method is appropriate. • Redesign models and methods to improve accuracy or efficiency. **Clarifications:** Teachers who encourage students to apply mathematics to real-world contexts: • Provide opportunities for students to create models, both concrete and abstract, and perform investigations. • Challenge students to question the accuracy of their models and methods. • Support students as they validate conclusions by comparing them to the given situation. • Indicate how various concepts can be applied to other disciplines.
ELA.K12.EE.1.1:	Cite evidence to explain and justify reasoning. **Clarifications:** K-1 Students include textual evidence in their oral communication with guidance and support from adults. The evidence can consist of details from the text without naming the text. During 1st grade, students learn how to incorporate the evidence in their writing. 2-3 Students include relevant textual evidence in their written and oral communication. Students should name the text when they refer to it. In 3rd grade, students should use a combination of direct and indirect citations. 4-5 Students continue with previous skills and reference comments made by speakers and peers. Students cite texts that they've directly quoted, paraphrased, or used for information. When writing, students will use the form of citation dictated by the instructor or the style guide referenced by the instructor. 6-8 Students continue with previous skills and use a style guide to create a proper citation. 9-12 Students continue with previous skills and should be aware of existing style guides and the ways in which they differ.
ELA.K12.EE.2.1:	Read and comprehend grade-level complex texts proficiently. **Clarifications:** See Text Complexity for grade-level complexity bands and a text complexity rubric.
ELA.K12.EE.3.1:	Make inferences to support comprehension. **Clarifications:** Students will make inferences before the words infer or inference are introduced. Kindergarten students will answer questions like "Why is the girl smiling?" or make predictions about what will happen based on the title page. Students will use the terms and apply them in 2nd grade and beyond.
ELA.K12.EE.4.1:	Use appropriate collaborative techniques and active listening skills when engaging in discussions in a variety of situations. **Clarifications:** In kindergarten, students learn to listen to one another respectfully. In grades 1-2, students build upon these skills by justifying what they are thinking. For example: "I think _____ because _____." The collaborative conversations are becoming academic conversations. In grades 3-12, students engage in academic conversations discussing claims and justifying their reasoning, refining and applying skills. Students build on ideas, propel the conversation, and support claims and counterclaims with evidence.
ELA.K12.EE.5.1:	Use the accepted rules governing a specific format to create quality work. **Clarifications:** Students will incorporate skills learned into work products to produce quality work. For students to incorporate these skills appropriately, they must receive instruction. A 3rd grade student creating a poster board display must have instruction in how to effectively present information to do quality work.
ELA.K12.EE.6.1:	Use appropriate voice and tone when speaking or writing. **Clarifications:** In kindergarten and 1st grade, students learn the difference between formal and informal language. For example, the way we talk to our friends differs from the way we speak to adults. In 2nd grade and beyond, students practice appropriate social and academic language to discuss texts.
ELD.K12.ELL.SI.1:	English language learners communicate for social and instructional purposes within the school setting.

General Course Information and Notes

GENERAL NOTES

Florida's Benchmarks for Excellent Student Thinking (B.E.S.T.) Standards
This course includes Florida's B.E.S.T. ELA Expectations (EE) and Mathematical Thinking and Reasoning Standards (MTRs) for students. Florida educators should intentionally embed these standards within the content and their instruction as applicable. For guidance on the implementation of the EEs and MTRs, please visit cpalms.org/Standards/BEST_Standards.aspx and select the appropriate B.E.S.T. Standards package.

English Language Development ELD Standards Special Notes Section:
Teachers are required to provide listening, speaking, reading and writing instruction that allows English language learners (ELL) to communicate for social and instructional purposes within the school setting. For the given level of English language proficiency and with visual, graphic, or interactive support, students will interact with grade level words, expressions, sentences and discourse to process or produce language necessary for academic success. The ELD standard should specify a relevant content area concept or topic of study chosen by curriculum developers and teachers which maximizes an ELL's need for communication and social skills. To access an ELL supporting document which delineates performance definitions and descriptors, please click on the following link: cpalms.org/uploads/docs/standards/eld/SI.pdf

QUALIFICATIONS

As well as any certification requirements listed on the course description, the following qualifications may also be acceptable for the course:

American Red Cross Water Safety Instructor or equivalent.

GENERAL INFORMATION

Course Number: 1504490

Course Path: Section: Grades PreK to 12 Education Courses > **Grade Group:** Grades 9 to 12 and Adult Education Courses > **Subject:** Physical Education > **SubSubject:** Individual and Dual >

Abbreviated Title: WATER SAFETY

Number of Credits: Half credit (.5)

Course Length: Semester (S)

Course Type: Core Academic Course

Course Level: 2

Course Status: Draft - Course Pending Approval

Grade Level(s): 9,10,11,12

Graduation Requirement: Physical Education

Tennis 1 (#1504500) 2022 - And Beyond

Course Standards

Name	Description
PE.912.C.2.23:	Apply appropriate technology and analyze data to evaluate, monitor and/or improve performance.
PE.912.C.2.26:	Evaluate skill patterns of self and/or partner by detecting and correcting mechanical errors.
PE.912.C.2.28:	Interpret and apply the rules associated with specific course activities.
PE.912.L.3.4:	Identify the in-school opportunities for participation in a variety of physical activities.
PE.912.L.3.5:	Identify the community opportunities for participation in a variety of physical activities.
PE.912.L.3.6:	Identify risks and safety factors that may affect physical activity throughout life.
PE.912.M.1.5:	Apply strategies for self improvement based on individual strengths and needs.
PE.912.M.1.10:	Apply sport specific skills in simulation and in real-life applications. **Clarifications:** An example of a simulation is a practice setting or lead up activity. An example of a real-life application is a game or performance setting.
PE.912.M.1.15:	Select and apply sport/activity specific warm-up and cool-down techniques.
PE.912.M.1.23:	Demonstrate proficiency of critical elements when striking with objects, implements or body parts.
PE.912.M.1.24:	Apply a combination of complex movement patterns in a game setting.
PE.912.M.1.25:	Apply appropriate speed and generation of force when distance running, sprinting, throwing, jumping, striking or kicking.
PE.912.M.1.31:	Demonstrate advanced offensive, defensive and transition strategies and tactics.
PE.912.M.1.32:	Apply sport specific skills in a variety of game settings.
PE.912.M.1.33:	Practice complex motor activities in order to improve performance.
PE.912.M.1.34:	Demonstrate use of the mechanical principles as they apply to specific course activities. **Clarifications:** Some examples are balance, force and leverage.
PE.912.M.1.35:	Select proper equipment and apply all appropriate safety procedures necessary for participation.
PE.912.R.5.3:	Demonstrate sportsmanship during game situations. **Clarifications:** Some examples are controlling emotions, resolving conflicts, respecting opponents and officials, and accepting both victory and defeat.
PE.912.R.5.4:	Maintain appropriate personal, social and ethical behavior while participating in a variety of physical activities. **Clarifications:** Some examples are respecting teammates, opponents and officials, and accepting both victory and defeat.
PE.912.R.5.5:	Demonstrate appropriate etiquette, care of equipment, respect for facilities and safe behaviors while participating in a variety of physical activities.
PE.912.R.6.3:	Analyze the roles of games, sports and/or physical activities in other cultures.
MA.K12.MTR.1.1:	Mathematicians who participate in effortful learning both individually and with others: • Analyze the problem in a way that makes sense given the task. • Ask questions that will help with solving the task. • Build perseverance by modifying methods as needed while solving a challenging task. • Stay engaged and maintain a positive mindset when working to solve tasks. • Help and support each other when attempting a new method or approach. **Clarifications:** Teachers who encourage students to participate actively in effortful learning both individually and with others: • Cultivate a community of growth mindset learners. • Foster perseverance in students by choosing tasks that are challenging. • Develop students' ability to analyze and problem solve. • Recognize students' effort when solving challenging problems.
MA.K12.MTR.2.1:	Demonstrate understanding by representing problems in multiple ways. Mathematicians who demonstrate understanding by representing problems in multiple ways: • Build understanding through modeling and using manipulatives. • Represent solutions to problems in multiple ways using objects, drawings, tables, graphs and equations. • Progress from modeling problems with objects and drawings to using algorithms and equations. • Express connections between concepts and representations. • Choose a representation based on the given context or purpose. **Clarifications:** Teachers who encourage students to demonstrate understanding by representing problems in multiple ways: • Help students make connections between concepts and representations. • Provide opportunities for students to use manipulatives when investigating concepts. • Guide students from concrete to pictorial to abstract representations as understanding progresses. • Show students that various representations can have different purposes and can be useful in different situations.
	Complete tasks with mathematical fluency. Mathematicians who complete tasks with mathematical fluency: • Select efficient and appropriate methods for solving problems within the given context.

MA.K12.MTR.3.1:

- Maintain flexibility and accuracy while performing procedures and mental calculations.
- Complete tasks accurately and with confidence.
- Adapt procedures to apply them to a new context.
- Use feedback to improve efficiency when performing calculations.

Clarifications:
Teachers who encourage students to complete tasks with mathematical fluency:

- Provide students with the flexibility to solve problems by selecting a procedure that allows them to solve efficiently and accurately.
- Offer multiple opportunities for students to practice efficient and generalizable methods.
- Provide opportunities for students to reflect on the method they used and determine if a more efficient method could have been used.

MA.K12.MTR.4.1:

Engage in discussions that reflect on the mathematical thinking of self and others.
Mathematicians who engage in discussions that reflect on the mathematical thinking of self and others:

- Communicate mathematical ideas, vocabulary and methods effectively.
- Analyze the mathematical thinking of others.
- Compare the efficiency of a method to those expressed by others.
- Recognize errors and suggest how to correctly solve the task.
- Justify results by explaining methods and processes.
- Construct possible arguments based on evidence.

Clarifications:
Teachers who encourage students to engage in discussions that reflect on the mathematical thinking of self and others:

- Establish a culture in which students ask questions of the teacher and their peers, and error is an opportunity for learning.
- Create opportunities for students to discuss their thinking with peers.
- Select, sequence and present student work to advance and deepen understanding of correct and increasingly efficient methods.
- Develop students' ability to justify methods and compare their responses to the responses of their peers.

MA.K12.MTR.5.1:

Use patterns and structure to help understand and connect mathematical concepts.
Mathematicians who use patterns and structure to help understand and connect mathematical concepts:

- Focus on relevant details within a problem.
- Create plans and procedures to logically order events, steps or ideas to solve problems.
- Decompose a complex problem into manageable parts.
- Relate previously learned concepts to new concepts.
- Look for similarities among problems.
- Connect solutions of problems to more complicated large-scale situations.

Clarifications:
Teachers who encourage students to use patterns and structure to help understand and connect mathematical concepts:

- Help students recognize the patterns in the world around them and connect these patterns to mathematical concepts.
- Support students to develop generalizations based on the similarities found among problems.
- Provide opportunities for students to create plans and procedures to solve problems.
- Develop students' ability to construct relationships between their current understanding and more sophisticated ways of thinking.

MA.K12.MTR.6.1:

Assess the reasonableness of solutions.
Mathematicians who assess the reasonableness of solutions:

- Estimate to discover possible solutions.
- Use benchmark quantities to determine if a solution makes sense.
- Check calculations when solving problems.
- Verify possible solutions by explaining the methods used.
- Evaluate results based on the given context.

Clarifications:
Teachers who encourage students to assess the reasonableness of solutions:

- Have students estimate or predict solutions prior to solving.
- Prompt students to continually ask, "Does this solution make sense? How do you know?"
- Reinforce that students check their work as they progress within and after a task.
- Strengthen students' ability to verify solutions through justifications.

MA.K12.MTR.7.1:

Apply mathematics to real-world contexts.
Mathematicians who apply mathematics to real-world contexts:

- Connect mathematical concepts to everyday experiences.
- Use models and methods to understand, represent and solve problems.
- Perform investigations to gather data or determine if a method is appropriate. • Redesign models and methods to improve accuracy or efficiency.

Clarifications:
Teachers who encourage students to apply mathematics to real-world contexts:

- Provide opportunities for students to create models, both concrete and abstract, and perform investigations.
- Challenge students to question the accuracy of their models and methods.
- Support students as they validate conclusions by comparing them to the given situation.
- Indicate how various concepts can be applied to other disciplines.

Cite evidence to explain and justify reasoning.

Clarifications:
K-1 Students include textual evidence in their oral communication with guidance and support from adults. The evidence can consist of details from the text without naming the text. During 1st grade, students learn how to incorporate the evidence in their writing.
2-3 Students include relevant textual evidence in their written and oral communication. Students should name the text when they refer to it.

ELA.K12.EE.1.1:	In 3rd grade, students should use a combination of direct and indirect citations. 4-5 Students continue with previous skills and reference comments made by speakers and peers. Students cite texts that they've directly quoted, paraphrased, or used for information. When writing, students will use the form of citation dictated by the instructor or the style guide referenced by the instructor. 6-8 Students continue with previous skills and use a style guide to create a proper citation. 9-12 Students continue with previous skills and should be aware of existing style guides and the ways in which they differ.
ELA.K12.EE.2.1:	Read and comprehend grade-level complex texts proficiently. **Clarifications:** See Text Complexity for grade-level complexity bands and a text complexity rubric.
ELA.K12.EE.3.1:	Make inferences to support comprehension. **Clarifications:** Students will make inferences before the words infer or inference are introduced. Kindergarten students will answer questions like "Why is the girl smiling?" or make predictions about what will happen based on the title page. Students will use the terms and apply them in 2nd grade and beyond.
ELA.K12.EE.4.1:	Use appropriate collaborative techniques and active listening skills when engaging in discussions in a variety of situations. **Clarifications:** In kindergarten, students learn to listen to one another respectfully. In grades 1-2, students build upon these skills by justifying what they are thinking. For example: "I think _____ because _____." The collaborative conversations are becoming academic conversations. In grades 3-12, students engage in academic conversations discussing claims and justifying their reasoning, refining and applying skills. Students build on ideas, propel the conversation, and support claims and counterclaims with evidence.
ELA.K12.EE.5.1:	Use the accepted rules governing a specific format to create quality work. **Clarifications:** Students will incorporate skills learned into work products to produce quality work. For students to incorporate these skills appropriately, they must receive instruction. A 3rd grade student creating a poster board display must have instruction in how to effectively present information to do quality work.
ELA.K12.EE.6.1:	Use appropriate voice and tone when speaking or writing. **Clarifications:** In kindergarten and 1st grade, students learn the difference between formal and informal language. For example, the way we talk to our friends differs from the way we speak to adults. In 2nd grade and beyond, students practice appropriate social and academic language to discuss texts.
ELD.K12.ELL.SI.1:	English language learners communicate for social and instructional purposes within the school setting.

General Course Information and Notes

GENERAL NOTES

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This course includes Florida's B.E.S.T. ELA Expectations (EE) and Mathematical Thinking and Reasoning Standards (MTRs) for students. Florida educators should intentionally embed these standards within the content and their instruction as applicable. For guidance on the implementation of the EEs and MTRs, please visit cpalms.org/Standards/BEST_Standards.aspx and select the appropriate B.E.S.T. Standards package.

English Language Development ELD Standards Special Notes Section:
Teachers are required to provide listening, speaking, reading and writing instruction that allows English language learners (ELL) to communicate for social and instructional purposes within the school setting. For the given level of English language proficiency and with visual, graphic, or interactive support, students will interact with grade level words, expressions, sentences and discourse to process or produce language necessary for academic success. The ELD standard should specify a relevant content area concept or topic of study chosen by curriculum developers and teachers which maximizes an ELL's need for communication and social skills. To access an ELL supporting document which delineates performance definitions and descriptors, please click on the following link: cpalms.org/uploads/docs/standards/eld/SI.pdf

GENERAL INFORMATION

Course Number: 1504500

Course Path: Section: Grades PreK to 12 Education Courses > **Grade Group:** Grades 9 to 12 and Adult Education Courses > **Subject:** Physical Education > **SubSubject:** Individual and Dual > **Abbreviated Title:** TENNIS 1

Number of Credits: Half credit (.5)

Course Length: Semester (S)

Course Type: Core Academic Course

Course Level: 2

Course Status: Draft - Course Pending Approval

Grade Level(s): 9,10,11,12

Graduation Requirement: Physical Education

Educator Certifications

Physical Education (Grades 6-12)
Physical Education (Elementary and Secondary Grades K-12)

Tennis 2 (#1504510) 2022 - And Beyond

Course Standards

Name	Description
PE.912.C.2.9:	Explain the precautions to be taken when exercising in extreme weather and/or environmental conditions. **Clarifications:** Some examples of precautions are hydration and appropriate attire.
PE.912.C.2.23:	Apply appropriate technology and analyze data to evaluate, monitor and/or improve performance.
PE.912.C.2.26:	Evaluate skill patterns of self and/or partner by detecting and correcting mechanical errors.
PE.912.C.2.28:	Interpret and apply the rules associated with specific course activities.
PE.912.L.3.4:	Identify the in-school opportunities for participation in a variety of physical activities.
PE.912.L.3.5:	Identify the community opportunities for participation in a variety of physical activities.
PE.912.L.3.6:	Identify risks and safety factors that may affect physical activity throughout life.
PE.912.M.1.5:	Apply strategies for self improvement based on individual strengths and needs.
PE.912.M.1.10:	Apply sport specific skills in simulation and in real-life applications. **Clarifications:** An example of a simulation is a practice setting or lead up activity. An example of a real-life application is a game or performance setting.
PE.912.M.1.22:	Demonstrate proficiency in advanced combinations of motor skills for a variety of individual and dual sports.
PE.912.M.1.23:	Demonstrate proficiency of critical elements when striking with objects, implements or body parts.
PE.912.M.1.24:	Apply a combination of complex movement patterns in a game setting.
PE.912.M.1.25:	Apply appropriate speed and generation of force when distance running, sprinting, throwing, jumping, striking or kicking.
PE.912.M.1.26:	Analyze and apply offensive, defensive and transition strategies and tactics to reflect a higher order of thinking. **Clarifications:** An example is placing a shot in an open area away from opponent.
PE.912.M.1.30:	Combine and apply movement patterns from simple to complex.
PE.912.M.1.31:	Demonstrate advanced offensive, defensive and transition strategies and tactics.
PE.912.M.1.32:	Apply sport specific skills in a variety of game settings.
PE.912.M.1.33:	Practice complex motor activities in order to improve performance.
PE.912.M.1.34:	Demonstrate use of the mechanical principles as they apply to specific course activities. **Clarifications:** Some examples are balance, force and leverage.
PE.912.M.1.35:	Select proper equipment and apply all appropriate safety procedures necessary for participation.
PE.912.R.5.3:	Demonstrate sportsmanship during game situations. **Clarifications:** Some examples are controlling emotions, resolving conflicts, respecting opponents and officials, and accepting both victory and defeat.
PE.912.R.5.4:	Maintain appropriate personal, social and ethical behavior while participating in a variety of physical activities. **Clarifications:** Some examples are respecting teammates, opponents and officials, and accepting both victory and defeat.
PE.912.R.5.5:	Demonstrate appropriate etiquette, care of equipment, respect for facilities and safe behaviors while participating in a variety of physical activities.
PE.912.R.6.3:	Analyze the roles of games, sports and/or physical activities in other cultures.
MA.K12.MTR.1.1:	Mathematicians who participate in effortful learning both individually and with others: • Analyze the problem in a way that makes sense given the task. • Ask questions that will help with solving the task. • Build perseverance by modifying methods as needed while solving a challenging task. • Stay engaged and maintain a positive mindset when working to solve tasks. • Help and support each other when attempting a new method or approach. **Clarifications:** Teachers who encourage students to participate actively in effortful learning both individually and with others: • Cultivate a community of growth mindset learners. • Foster perseverance in students by choosing tasks that are challenging. • Develop students' ability to analyze and problem solve. • Recognize students' effort when solving challenging problems.
MA.K12.MTR.2.1:	Demonstrate understanding by representing problems in multiple ways. Mathematicians who demonstrate understanding by representing problems in multiple ways: • Build understanding through modeling and using manipulatives. • Represent solutions to problems in multiple ways using objects, drawings, tables, graphs and equations. • Progress from modeling problems with objects and drawings to using algorithms and equations. • Express connections between concepts and representations. • Choose a representation based on the given context or purpose. **Clarifications:**

Teachers who encourage students to demonstrate understanding by representing problems in multiple ways:

- Help students make connections between concepts and representations.
- Provide opportunities for students to use manipulatives when investigating concepts.
- Guide students from concrete to pictorial to abstract representations as understanding progresses.
- Show students that various representations can have different purposes and can be useful in different situations.

MA.K12.MTR.3.1:

Complete tasks with mathematical fluency.
Mathematicians who complete tasks with mathematical fluency:

- Select efficient and appropriate methods for solving problems within the given context.
- Maintain flexibility and accuracy while performing procedures and mental calculations.
- Complete tasks accurately and with confidence.
- Adapt procedures to apply them to a new context.
- Use feedback to improve efficiency when performing calculations.

Clarifications:
Teachers who encourage students to complete tasks with mathematical fluency:

- Provide students with the flexibility to solve problems by selecting a procedure that allows them to solve efficiently and accurately.
- Offer multiple opportunities for students to practice efficient and generalizable methods.
- Provide opportunities for students to reflect on the method they used and determine if a more efficient method could have been used.

MA.K12.MTR.4.1:

Engage in discussions that reflect on the mathematical thinking of self and others.
Mathematicians who engage in discussions that reflect on the mathematical thinking of self and others:

- Communicate mathematical ideas, vocabulary and methods effectively.
- Analyze the mathematical thinking of others.
- Compare the efficiency of a method to those expressed by others.
- Recognize errors and suggest how to correctly solve the task.
- Justify results by explaining methods and processes.
- Construct possible arguments based on evidence.

Clarifications:
Teachers who encourage students to engage in discussions that reflect on the mathematical thinking of self and others:

- Establish a culture in which students ask questions of the teacher and their peers, and error is an opportunity for learning.
- Create opportunities for students to discuss their thinking with peers.
- Select, sequence and present student work to advance and deepen understanding of correct and increasingly efficient methods.
- Develop students' ability to justify methods and compare their responses to the responses of their peers.

MA.K12.MTR.5.1:

Use patterns and structure to help understand and connect mathematical concepts.
Mathematicians who use patterns and structure to help understand and connect mathematical concepts:

- Focus on relevant details within a problem.
- Create plans and procedures to logically order events, steps or ideas to solve problems.
- Decompose a complex problem into manageable parts.
- Relate previously learned concepts to new concepts.
- Look for similarities among problems.
- Connect solutions of problems to more complicated large-scale situations.

Clarifications:
Teachers who encourage students to use patterns and structure to help understand and connect mathematical concepts:

- Help students recognize the patterns in the world around them and connect these patterns to mathematical concepts.
- Support students to develop generalizations based on the similarities found among problems.
- Provide opportunities for students to create plans and procedures to solve problems.
- Develop students' ability to construct relationships between their current understanding and more sophisticated ways of thinking.

MA.K12.MTR.6.1:

Assess the reasonableness of solutions.
Mathematicians who assess the reasonableness of solutions:

- Estimate to discover possible solutions.
- Use benchmark quantities to determine if a solution makes sense.
- Check calculations when solving problems.
- Verify possible solutions by explaining the methods used.
- Evaluate results based on the given context.

Clarifications:
Teachers who encourage students to assess the reasonableness of solutions:

- Have students estimate or predict solutions prior to solving.
- Prompt students to continually ask, "Does this solution make sense? How do you know?"
- Reinforce that students check their work as they progress within and after a task.
- Strengthen students' ability to verify solutions through justifications.

MA.K12.MTR.7.1:

Apply mathematics to real-world contexts.
Mathematicians who apply mathematics to real-world contexts:

- Connect mathematical concepts to everyday experiences.
- Use models and methods to understand, represent and solve problems.
- Perform investigations to gather data or determine if a method is appropriate. • Redesign models and methods to improve accuracy or efficiency.

Clarifications:
Teachers who encourage students to apply mathematics to real-world contexts:

- Provide opportunities for students to create models, both concrete and abstract, and perform investigations.

	• Challenge students to question the accuracy of their models and methods. • Support students as they validate conclusions by comparing them to the given situation. • Indicate how various concepts can be applied to other disciplines.
ELA.K12.EE.1.1:	Cite evidence to explain and justify reasoning. **Clarifications:** K-1 Students include textual evidence in their oral communication with guidance and support from adults. The evidence can consist of details from the text without naming the text. During 1st grade, students learn how to incorporate the evidence in their writing. 2-3 Students include relevant textual evidence in their written and oral communication. Students should name the text when they refer to it. In 3rd grade, students should use a combination of direct and indirect citations. 4-5 Students continue with previous skills and reference comments made by speakers and peers. Students cite texts that they've directly quoted, paraphrased, or used for information. When writing, students will use the form of citation dictated by the instructor or the style guide referenced by the instructor. 6-8 Students continue with previous skills and use a style guide to create a proper citation. 9-12 Students continue with previous skills and should be aware of existing style guides and the ways in which they differ.
ELA.K12.EE.2.1:	Read and comprehend grade-level complex texts proficiently. **Clarifications:** See Text Complexity for grade-level complexity bands and a text complexity rubric.
ELA.K12.EE.3.1:	Make inferences to support comprehension. **Clarifications:** Students will make inferences before the words infer or inference are introduced. Kindergarten students will answer questions like "Why is the girl smiling?" or make predictions about what will happen based on the title page. Students will use the terms and apply them in 2nd grade and beyond.
ELA.K12.EE.4.1:	Use appropriate collaborative techniques and active listening skills when engaging in discussions in a variety of situations. **Clarifications:** In kindergarten, students learn to listen to one another respectfully. In grades 1-2, students build upon these skills by justifying what they are thinking. For example: "I think _____ because _____." The collaborative conversations are becoming academic conversations. In grades 3-12, students engage in academic conversations discussing claims and justifying their reasoning, refining and applying skills. Students build on ideas, propel the conversation, and support claims and counterclaims with evidence.
ELA.K12.EE.5.1:	Use the accepted rules governing a specific format to create quality work. **Clarifications:** Students will incorporate skills learned into work products to produce quality work. For students to incorporate these skills appropriately, they must receive instruction. A 3rd grade student creating a poster board display must have instruction in how to effectively present information to do quality work.
ELA.K12.EE.6.1:	Use appropriate voice and tone when speaking or writing. **Clarifications:** In kindergarten and 1st grade, students learn the difference between formal and informal language. For example, the way we talk to our friends differs from the way we speak to adults. In 2nd grade and beyond, students practice appropriate social and academic language to discuss texts.
ELD.K12.ELL.SI.1:	English language learners communicate for social and instructional purposes within the school setting.

General Course Information and Notes

GENERAL NOTES

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This course includes Florida's B.E.S.T. ELA Expectations (EE) and Mathematical Thinking and Reasoning Standards (MTRs) for students. Florida educators should intentionally embed these standards within the content and their instruction as applicable. For guidance on the implementation of the EEs and MTRs, please visit cpalms.org/Standards/BEST_Standards.aspx and select the appropriate B.E.S.T. Standards package.

English Language Development ELD Standards Special Notes Section:
Teachers are required to provide listening, speaking, reading and writing instruction that allows English language learners (ELL) to communicate for social and instructional purposes within the school setting. For the given level of English language proficiency and with visual, graphic, or interactive support, students will interact with grade level words, expressions, sentences and discourse to process or produce language necessary for academic success. The ELD standard should specify a relevant content area concept or topic of study chosen by curriculum developers and teachers which maximizes an ELL's need for communication and social skills. To access an ELL supporting document which delineates performance definitions and descriptors, please click on the following link: cpalms.org/uploads/docs/standards/eld/SI.pdf

GENERAL INFORMATION

Course Number: 1504510

Course Path: Section: Grades PreK to 12 Education Courses > **Grade Group:** Grades 9 to 12 and Adult Education Courses > **Subject:** Physical Education > **SubSubject:** Individual and Dual >

Abbreviated Title: TENNIS 2
Number of Credits: Half credit (.5)
Course Length: Semester (S)
Course Type: Core Academic Course
Course Level: 2
Course Status: Draft - Course Pending Approval
Grade Level(s): 9,10,11,12
Graduation Requirement: Physical Education

Educator Certifications

Physical Education (Grades 6-12)
Physical Education (Elementary and Secondary Grades K-12)

Tennis 3 (#1504520) 2022 - And Beyond

Course Standards

Name	Description
PE.912.C.2.9:	Explain the precautions to be taken when exercising in extreme weather and/or environmental conditions. **Clarifications:** Some examples of precautions are hydration and appropriate attire.
PE.912.C.2.21:	Diagram, explain and justify the use of advanced offensive, defensive and transition strategies and tactics.
PE.912.C.2.23:	Apply appropriate technology and analyze data to evaluate, monitor and/or improve performance.
PE.912.C.2.25:	Analyze and evaluate the risks, safety procedures, rules and equipment associated with specific course activities.
PE.912.C.2.26:	Evaluate skill patterns of self and/or partner by detecting and correcting mechanical errors.
PE.912.C.2.28:	Interpret and apply the rules associated with specific course activities.
PE.912.L.3.4:	Identify the in-school opportunities for participation in a variety of physical activities.
PE.912.L.3.5:	Identify the community opportunities for participation in a variety of physical activities.
PE.912.L.3.6:	Identify risks and safety factors that may affect physical activity throughout life.
PE.912.M.1.5:	Apply strategies for self improvement based on individual strengths and needs.
PE.912.M.1.10:	Apply sport specific skills in simulation and in real-life applications. **Clarifications:** An example of a simulation is a practice setting or lead up activity. An example of a real-life application is a game or performance setting.
PE.912.M.1.22:	Demonstrate proficiency in advanced combinations of motor skills for a variety of individual and dual sports.
PE.912.M.1.23:	Demonstrate proficiency of critical elements when striking with objects, implements or body parts.
PE.912.M.1.24:	Apply a combination of complex movement patterns in a game setting.
PE.912.M.1.26:	Analyze and apply offensive, defensive and transition strategies and tactics to reflect a higher order of thinking. **Clarifications:** An example is placing a shot in an open area away from opponent.
PE.912.M.1.30:	Combine and apply movement patterns from simple to complex.
PE.912.M.1.32:	Apply sport specific skills in a variety of game settings.
PE.912.M.1.33:	Practice complex motor activities in order to improve performance.
PE.912.M.1.34:	Demonstrate use of the mechanical principles as they apply to specific course activities. **Clarifications:** Some examples are balance, force and leverage.
PE.912.M.1.35:	Select proper equipment and apply all appropriate safety procedures necessary for participation.
PE.912.R.5.3:	Demonstrate sportsmanship during game situations. **Clarifications:** Some examples are controlling emotions, resolving conflicts, respecting opponents and officials, and accepting both victory and defeat.
PE.912.R.5.4:	Maintain appropriate personal, social and ethical behavior while participating in a variety of physical activities. **Clarifications:** Some examples are respecting teammates, opponents and officials, and accepting both victory and defeat.
PE.912.R.5.5:	Demonstrate appropriate etiquette, care of equipment, respect for facilities and safe behaviors while participating in a variety of physical activities.
PE.912.R.6.3:	Analyze the roles of games, sports and/or physical activities in other cultures.
MA.K12.MTR.1.1:	Mathematicians who participate in effortful learning both individually and with others: • Analyze the problem in a way that makes sense given the task. • Ask questions that will help with solving the task. • Build perseverance by modifying methods as needed while solving a challenging task. • Stay engaged and maintain a positive mindset when working to solve tasks. • Help and support each other when attempting a new method or approach. **Clarifications:** Teachers who encourage students to participate actively in effortful learning both individually and with others: • Cultivate a community of growth mindset learners. • Foster perseverance in students by choosing tasks that are challenging. • Develop students' ability to analyze and problem solve. • Recognize students' effort when solving challenging problems.
MA.K12.MTR.2.1:	Demonstrate understanding by representing problems in multiple ways. Mathematicians who demonstrate understanding by representing problems in multiple ways: • Build understanding through modeling and using manipulatives. • Represent solutions to problems in multiple ways using objects, drawings, tables, graphs and equations. • Progress from modeling problems with objects and drawings to using algorithms and equations. • Express connections between concepts and representations. • Choose a representation based on the given context or purpose. **Clarifications:**

Teachers who encourage students to demonstrate understanding by representing problems in multiple ways:

- Help students make connections between concepts and representations.
- Provide opportunities for students to use manipulatives when investigating concepts.
- Guide students from concrete to pictorial to abstract representations as understanding progresses.
- Show students that various representations can have different purposes and can be useful in different situations.

MA.K12.MTR.3.1:

Complete tasks with mathematical fluency.
Mathematicians who complete tasks with mathematical fluency:

- Select efficient and appropriate methods for solving problems within the given context.
- Maintain flexibility and accuracy while performing procedures and mental calculations.
- Complete tasks accurately and with confidence.
- Adapt procedures to apply them to a new context.
- Use feedback to improve efficiency when performing calculations.

Clarifications:
Teachers who encourage students to complete tasks with mathematical fluency:

- Provide students with the flexibility to solve problems by selecting a procedure that allows them to solve efficiently and accurately.
- Offer multiple opportunities for students to practice efficient and generalizable methods.
- Provide opportunities for students to reflect on the method they used and determine if a more efficient method could have been used.

MA.K12.MTR.4.1:

Engage in discussions that reflect on the mathematical thinking of self and others.
Mathematicians who engage in discussions that reflect on the mathematical thinking of self and others:

- Communicate mathematical ideas, vocabulary and methods effectively.
- Analyze the mathematical thinking of others.
- Compare the efficiency of a method to those expressed by others.
- Recognize errors and suggest how to correctly solve the task.
- Justify results by explaining methods and processes.
- Construct possible arguments based on evidence.

Clarifications:
Teachers who encourage students to engage in discussions that reflect on the mathematical thinking of self and others:

- Establish a culture in which students ask questions of the teacher and their peers, and error is an opportunity for learning.
- Create opportunities for students to discuss their thinking with peers.
- Select, sequence and present student work to advance and deepen understanding of correct and increasingly efficient methods.
- Develop students' ability to justify methods and compare their responses to the responses of their peers.

MA.K12.MTR.5.1:

Use patterns and structure to help understand and connect mathematical concepts.
Mathematicians who use patterns and structure to help understand and connect mathematical concepts:

- Focus on relevant details within a problem.
- Create plans and procedures to logically order events, steps or ideas to solve problems.
- Decompose a complex problem into manageable parts.
- Relate previously learned concepts to new concepts.
- Look for similarities among problems.
- Connect solutions of problems to more complicated large-scale situations.

Clarifications:
Teachers who encourage students to use patterns and structure to help understand and connect mathematical concepts:

- Help students recognize the patterns in the world around them and connect these patterns to mathematical concepts.
- Support students to develop generalizations based on the similarities found among problems.
- Provide opportunities for students to create plans and procedures to solve problems.
- Develop students' ability to construct relationships between their current understanding and more sophisticated ways of thinking.

MA.K12.MTR.6.1:

Assess the reasonableness of solutions.
Mathematicians who assess the reasonableness of solutions:

- Estimate to discover possible solutions.
- Use benchmark quantities to determine if a solution makes sense.
- Check calculations when solving problems.
- Verify possible solutions by explaining the methods used.
- Evaluate results based on the given context.

Clarifications:
Teachers who encourage students to assess the reasonableness of solutions:

- Have students estimate or predict solutions prior to solving.
- Prompt students to continually ask, "Does this solution make sense? How do you know?"
- Reinforce that students check their work as they progress within and after a task.
- Strengthen students' ability to verify solutions through justifications.

MA.K12.MTR.7.1:

Apply mathematics to real-world contexts.
Mathematicians who apply mathematics to real-world contexts:

- Connect mathematical concepts to everyday experiences.
- Use models and methods to understand, represent and solve problems.
- Perform investigations to gather data or determine if a method is appropriate. • Redesign models and methods to improve accuracy or efficiency.

Clarifications:
Teachers who encourage students to apply mathematics to real-world contexts:

- Provide opportunities for students to create models, both concrete and abstract, and perform investigations.

	• Challenge students to question the accuracy of their models and methods. • Support students as they validate conclusions by comparing them to the given situation. • Indicate how various concepts can be applied to other disciplines.
ELA.K12.EE.1.1:	Cite evidence to explain and justify reasoning. **Clarifications:** K-1 Students include textual evidence in their oral communication with guidance and support from adults. The evidence can consist of details from the text without naming the text. During 1st grade, students learn how to incorporate the evidence in their writing. 2-3 Students include relevant textual evidence in their written and oral communication. Students should name the text when they refer to it. In 3rd grade, students should use a combination of direct and indirect citations. 4-5 Students continue with previous skills and reference comments made by speakers and peers. Students cite texts that they've directly quoted, paraphrased, or used for information. When writing, students will use the form of citation dictated by the instructor or the style guide referenced by the instructor. 6-8 Students continue with previous skills and use a style guide to create a proper citation. 9-12 Students continue with previous skills and should be aware of existing style guides and the ways in which they differ.
ELA.K12.EE.2.1:	Read and comprehend grade-level complex texts proficiently. **Clarifications:** See Text Complexity for grade-level complexity bands and a text complexity rubric.
ELA.K12.EE.3.1:	Make inferences to support comprehension. **Clarifications:** Students will make inferences before the words infer or inference are introduced. Kindergarten students will answer questions like "Why is the girl smiling?" or make predictions about what will happen based on the title page. Students will use the terms and apply them in 2nd grade and beyond.
ELA.K12.EE.4.1:	Use appropriate collaborative techniques and active listening skills when engaging in discussions in a variety of situations. **Clarifications:** In kindergarten, students learn to listen to one another respectfully. In grades 1-2, students build upon these skills by justifying what they are thinking. For example: "I think _____ because _____." The collaborative conversations are becoming academic conversations. In grades 3-12, students engage in academic conversations discussing claims and justifying their reasoning, refining and applying skills. Students build on ideas, propel the conversation, and support claims and counterclaims with evidence.
ELA.K12.EE.5.1:	Use the accepted rules governing a specific format to create quality work. **Clarifications:** Students will incorporate skills learned into work products to produce quality work. For students to incorporate these skills appropriately, they must receive instruction. A 3rd grade student creating a poster board display must have instruction in how to effectively present information to do quality work.
ELA.K12.EE.6.1:	Use appropriate voice and tone when speaking or writing. **Clarifications:** In kindergarten and 1st grade, students learn the difference between formal and informal language. For example, the way we talk to our friends differs from the way we speak to adults. In 2nd grade and beyond, students practice appropriate social and academic language to discuss texts.
ELD.K12.ELL.SI.1:	English language learners communicate for social and instructional purposes within the school setting.

General Course Information and Notes

GENERAL NOTES

Florida's Benchmarks for Excellent Student Thinking (B.E.S.T.) Standards
This course includes Florida's B.E.S.T. ELA Expectations (EE) and Mathematical Thinking and Reasoning Standards (MTRs) for students. Florida educators should intentionally embed these standards within the content and their instruction as applicable. For guidance on the implementation of the EEs and MTRs, please visit cpalms.org/Standards/BEST_Standards.aspx and select the appropriate B.E.S.T. Standards package.

English Language Development ELD Standards Special Notes Section:
Teachers are required to provide listening, speaking, reading and writing instruction that allows English language learners (ELL) to communicate for social and instructional purposes within the school setting. For the given level of English language proficiency and with visual, graphic, or interactive support, students will interact with grade level words, expressions, sentences and discourse to process or produce language necessary for academic success. The ELD standard should specify a relevant content area concept or topic of study chosen by curriculum developers and teachers which maximizes an ELL's need for communication and social skills. To access an ELL supporting document which delineates performance definitions and descriptors, please click on the following link: cpalms.org/uploads/docs/standards/eld/SI.pdf

GENERAL INFORMATION

Course Number: 1504520

Course Path: Section: Grades PreK to 12 Education Courses > **Grade Group:** Grades 9 to 12 and Adult Education Courses > **Subject:** Physical Education > **SubSubject:** Individual and Dual >

Abbreviated Title: TENNIS 3
Number of Credits: Half credit (.5)
Course Length: Semester (S)
Course Type: Core Academic Course
Course Level: 2
Course Status: Draft - Course Pending Approval
Grade Level(s): 9,10,11,12
Graduation Requirement: Physical Education

Educator Certifications

Physical Education (Grades 6-12)
Physical Education (Elementary and Secondary Grades K-12)

Racquetball 1 (#1505430) 2022 - And Beyond

Course Standards

Name	Description
PE.912.C.2.23:	Apply appropriate technology and analyze data to evaluate, monitor and/or improve performance.
PE.912.C.2.25:	Analyze and evaluate the risks, safety procedures, rules and equipment associated with specific course activities.
PE.912.C.2.26:	Evaluate skill patterns of self and/or partner by detecting and correcting mechanical errors.
PE.912.C.2.28:	Interpret and apply the rules associated with specific course activities.
PE.912.L.3.4:	Identify the in-school opportunities for participation in a variety of physical activities.
PE.912.L.3.5:	Identify the community opportunities for participation in a variety of physical activities.
PE.912.L.3.6:	Identify risks and safety factors that may affect physical activity throughout life.
PE.912.M.1.5:	Apply strategies for self improvement based on individual strengths and needs.
PE.912.M.1.15:	Select and apply sport/activity specific warm-up and cool-down techniques.
PE.912.M.1.23:	Demonstrate proficiency of critical elements when striking with objects, implements or body parts.
PE.912.M.1.25:	Apply appropriate speed and generation of force when distance running, sprinting, throwing, jumping, striking or kicking.
PE.912.M.1.31:	Demonstrate advanced offensive, defensive and transition strategies and tactics.
PE.912.M.1.32:	Apply sport specific skills in a variety of game settings.
PE.912.M.1.33:	Practice complex motor activities in order to improve performance.
PE.912.M.1.34:	Demonstrate use of the mechanical principles as they apply to specific course activities. **Clarifications:** Some examples are balance, force and leverage.
PE.912.M.1.35:	Select proper equipment and apply all appropriate safety procedures necessary for participation.
PE.912.R.5.3:	Demonstrate sportsmanship during game situations. **Clarifications:** Some examples are controlling emotions, resolving conflicts, respecting opponents and officials, and accepting both victory and defeat.
PE.912.R.5.4:	Maintain appropriate personal, social and ethical behavior while participating in a variety of physical activities. **Clarifications:** Some examples are respecting teammates, opponents and officials, and accepting both victory and defeat.
PE.912.R.5.5:	Demonstrate appropriate etiquette, care of equipment, respect for facilities and safe behaviors while participating in a variety of physical activities.
PE.912.R.6.3:	Analyze the roles of games, sports and/or physical activities in other cultures.
MA.K12.MTR.1.1:	Mathematicians who participate in effortful learning both individually and with others: • Analyze the problem in a way that makes sense given the task. • Ask questions that will help with solving the task. • Build perseverance by modifying methods as needed while solving a challenging task. • Stay engaged and maintain a positive mindset when working to solve tasks. • Help and support each other when attempting a new method or approach. **Clarifications:** Teachers who encourage students to participate actively in effortful learning both individually and with others: • Cultivate a community of growth mindset learners. • Foster perseverance in students by choosing tasks that are challenging. • Develop students' ability to analyze and problem solve. • Recognize students' effort when solving challenging problems.
MA.K12.MTR.2.1:	Demonstrate understanding by representing problems in multiple ways. Mathematicians who demonstrate understanding by representing problems in multiple ways: • Build understanding through modeling and using manipulatives. • Represent solutions to problems in multiple ways using objects, drawings, tables, graphs and equations. • Progress from modeling problems with objects and drawings to using algorithms and equations. • Express connections between concepts and representations. • Choose a representation based on the given context or purpose. **Clarifications:** Teachers who encourage students to demonstrate understanding by representing problems in multiple ways: • Help students make connections between concepts and representations. • Provide opportunities for students to use manipulatives when investigating concepts. • Guide students from concrete to pictorial to abstract representations as understanding progresses. • Show students that various representations can have different purposes and can be useful in different situations.
	Complete tasks with mathematical fluency. Mathematicians who complete tasks with mathematical fluency: • Select efficient and appropriate methods for solving problems within the given context. • Maintain flexibility and accuracy while performing procedures and mental calculations. • Complete tasks accurately and with confidence.

MA.K12.MTR.3.1:	• Adapt procedures to apply them to a new context. • Use feedback to improve efficiency when performing calculations. **Clarifications:** Teachers who encourage students to complete tasks with mathematical fluency: • Provide students with the flexibility to solve problems by selecting a procedure that allows them to solve efficiently and accurately. • Offer multiple opportunities for students to practice efficient and generalizable methods. • Provide opportunities for students to reflect on the method they used and determine if a more efficient method could have been used.
MA.K12.MTR.4.1:	Engage in discussions that reflect on the mathematical thinking of self and others. Mathematicians who engage in discussions that reflect on the mathematical thinking of self and others: • Communicate mathematical ideas, vocabulary and methods effectively. • Analyze the mathematical thinking of others. • Compare the efficiency of a method to those expressed by others. • Recognize errors and suggest how to correctly solve the task. • Justify results by explaining methods and processes. • Construct possible arguments based on evidence. **Clarifications:** Teachers who encourage students to engage in discussions that reflect on the mathematical thinking of self and others: • Establish a culture in which students ask questions of the teacher and their peers, and error is an opportunity for learning. • Create opportunities for students to discuss their thinking with peers. • Select, sequence and present student work to advance and deepen understanding of correct and increasingly efficient methods. • Develop students' ability to justify methods and compare their responses to the responses of their peers.
MA.K12.MTR.5.1:	Use patterns and structure to help understand and connect mathematical concepts. Mathematicians who use patterns and structure to help understand and connect mathematical concepts: • Focus on relevant details within a problem. • Create plans and procedures to logically order events, steps or ideas to solve problems. • Decompose a complex problem into manageable parts. • Relate previously learned concepts to new concepts. • Look for similarities among problems. • Connect solutions of problems to more complicated large-scale situations. **Clarifications:** Teachers who encourage students to use patterns and structure to help understand and connect mathematical concepts: • Help students recognize the patterns in the world around them and connect these patterns to mathematical concepts. • Support students to develop generalizations based on the similarities found among problems. • Provide opportunities for students to create plans and procedures to solve problems. • Develop students' ability to construct relationships between their current understanding and more sophisticated ways of thinking.
MA.K12.MTR.6.1:	Assess the reasonableness of solutions. Mathematicians who assess the reasonableness of solutions: • Estimate to discover possible solutions. • Use benchmark quantities to determine if a solution makes sense. • Check calculations when solving problems. • Verify possible solutions by explaining the methods used. • Evaluate results based on the given context. **Clarifications:** Teachers who encourage students to assess the reasonableness of solutions: • Have students estimate or predict solutions prior to solving. • Prompt students to continually ask, "Does this solution make sense? How do you know?" • Reinforce that students check their work as they progress within and after a task. • Strengthen students' ability to verify solutions through justifications.
MA.K12.MTR.7.1:	Apply mathematics to real-world contexts. Mathematicians who apply mathematics to real-world contexts: • Connect mathematical concepts to everyday experiences. • Use models and methods to understand, represent and solve problems. • Perform investigations to gather data or determine if a method is appropriate. • Redesign models and methods to improve accuracy or efficiency. **Clarifications:** Teachers who encourage students to apply mathematics to real-world contexts: • Provide opportunities for students to create models, both concrete and abstract, and perform investigations. • Challenge students to question the accuracy of their models and methods. • Support students as they validate conclusions by comparing them to the given situation. • Indicate how various concepts can be applied to other disciplines.
ELA.K12.EE.1.1:	Cite evidence to explain and justify reasoning. **Clarifications:** K-1 Students include textual evidence in their oral communication with guidance and support from adults. The evidence can consist of details from the text without naming the text. During 1st grade, students learn how to incorporate the evidence in their writing. 2-3 Students include relevant textual evidence in their written and oral communication. Students should name the text when they refer to it. In 3rd grade, students should use a combination of direct and indirect citations. 4-5 Students continue with previous skills and reference comments made by speakers and peers. Students cite texts that they've directly

	quoted, paraphrased, or used for information. When writing, students will use the form of citation dictated by the instructor or the style guide referenced by the instructor. 6-8 Students continue with previous skills and use a style guide to create a proper citation. 9-12 Students continue with previous skills and should be aware of existing style guides and the ways in which they differ.
ELA.K12.EE.2.1:	Read and comprehend grade-level complex texts proficiently. **Clarifications:** See Text Complexity for grade-level complexity bands and a text complexity rubric.
ELA.K12.EE.3.1:	Make inferences to support comprehension. **Clarifications:** Students will make inferences before the words infer or inference are introduced. Kindergarten students will answer questions like "Why is the girl smiling?" or make predictions about what will happen based on the title page. Students will use the terms and apply them in 2nd grade and beyond.
ELA.K12.EE.4.1:	Use appropriate collaborative techniques and active listening skills when engaging in discussions in a variety of situations. **Clarifications:** In kindergarten, students learn to listen to one another respectfully. In grades 1-2, students build upon these skills by justifying what they are thinking. For example: "I think _____ because _____." The collaborative conversations are becoming academic conversations. In grades 3-12, students engage in academic conversations discussing claims and justifying their reasoning, refining and applying skills. Students build on ideas, propel the conversation, and support claims and counterclaims with evidence.
ELA.K12.EE.5.1:	Use the accepted rules governing a specific format to create quality work. **Clarifications:** Students will incorporate skills learned into work products to produce quality work. For students to incorporate these skills appropriately, they must receive instruction. A 3rd grade student creating a poster board display must have instruction in how to effectively present information to do quality work.
ELA.K12.EE.6.1:	Use appropriate voice and tone when speaking or writing. **Clarifications:** In kindergarten and 1st grade, students learn the difference between formal and informal language. For example, the way we talk to our friends differs from the way we speak to adults. In 2nd grade and beyond, students practice appropriate social and academic language to discuss texts.
ELD.K12.ELL.SI.1:	English language learners communicate for social and instructional purposes within the school setting.

General Course Information and Notes

GENERAL NOTES

Florida's Benchmarks for Excellent Student Thinking (B.E.S.T.) Standards
This course includes Florida's B.E.S.T. ELA Expectations (EE) and Mathematical Thinking and Reasoning Standards (MTRs) for students. Florida educators should intentionally embed these standards within the content and their instruction as applicable. For guidance on the implementation of the EEs and MTRs, please visit cpalms.org/Standards/BEST_Standards.aspx and select the appropriate B.E.S.T. Standards package.

English Language Development ELD Standards Special Notes Section:
Teachers are required to provide listening, speaking, reading and writing instruction that allows English language learners (ELL) to communicate for social and instructional purposes within the school setting. For the given level of English language proficiency and with visual, graphic, or interactive support, students will interact with grade level words, expressions, sentences and discourse to process or produce language necessary for academic success. The ELD standard should specify a relevant content area concept or topic of study chosen by curriculum developers and teachers which maximizes an ELL's need for communication and social skills. To access an ELL supporting document which delineates performance definitions and descriptors, please click on the following link: cpalms.org/uploads/docs/standards/eld/SI.pdf

GENERAL INFORMATION

Course Number: 1505430

Course Path: Section: Grades PreK to 12 Education Courses > **Grade Group:** Grades 9 to 12 and Adult Education Courses > **Subject:** Physical Education > **SubSubject:** Individual and Dual >

Abbreviated Title: RACQUETBALL 1

Number of Credits: Half credit (.5)

Course Length: Semester (S)

Course Type: Core Academic Course

Course Level: 2

Course Status: Draft - Course Pending Approval

Grade Level(s): 9,10,11,12

Graduation Requirement: Physical Education

Educator Certifications

Physical Education (Grades 6-12)
Physical Education (Elementary and Secondary Grades K-12)

Racquetball 2 (#1505440) 2022 - And Beyond

Course Standards

Name	Description
PE.912.C.2.21:	Diagram, explain and justify the use of advanced offensive, defensive and transition strategies and tactics.
PE.912.C.2.23:	Apply appropriate technology and analyze data to evaluate, monitor and/or improve performance.
PE.912.C.2.25:	Analyze and evaluate the risks, safety procedures, rules and equipment associated with specific course activities.
PE.912.C.2.26:	Evaluate skill patterns of self and/or partner by detecting and correcting mechanical errors.
PE.912.C.2.28:	Interpret and apply the rules associated with specific course activities.
PE.912.L.3.3:	Identify a variety of activities that promote effective stress management.
PE.912.L.3.4:	Identify the in-school opportunities for participation in a variety of physical activities.
PE.912.L.3.5:	Identify the community opportunities for participation in a variety of physical activities.
PE.912.M.1.5:	Apply strategies for self improvement based on individual strengths and needs.
PE.912.M.1.22:	Demonstrate proficiency in advanced combinations of motor skills for a variety of individual and dual sports.
PE.912.M.1.23:	Demonstrate proficiency of critical elements when striking with objects, implements or body parts.
PE.912.M.1.24:	Apply a combination of complex movement patterns in a game setting.
PE.912.M.1.25:	Apply appropriate speed and generation of force when distance running, sprinting, throwing, jumping, striking or kicking.
PE.912.M.1.26:	Analyze and apply offensive, defensive and transition strategies and tactics to reflect a higher order of thinking. **Clarifications:** An example is placing a shot in an open area away from opponent.
PE.912.M.1.32:	Apply sport specific skills in a variety of game settings.
PE.912.M.1.33:	Practice complex motor activities in order to improve performance.
PE.912.M.1.34:	Demonstrate use of the mechanical principles as they apply to specific course activities. **Clarifications:** Some examples are balance, force and leverage.
PE.912.M.1.35:	Select proper equipment and apply all appropriate safety procedures necessary for participation.
PE.912.R.5.3:	Demonstrate sportsmanship during game situations. **Clarifications:** Some examples are controlling emotions, resolving conflicts, respecting opponents and officials, and accepting both victory and defeat.
PE.912.R.5.4:	Maintain appropriate personal, social and ethical behavior while participating in a variety of physical activities. **Clarifications:** Some examples are respecting teammates, opponents and officials, and accepting both victory and defeat.
PE.912.R.5.5:	Demonstrate appropriate etiquette, care of equipment, respect for facilities and safe behaviors while participating in a variety of physical activities.
PE.912.R.6.3:	Analyze the roles of games, sports and/or physical activities in other cultures.
MA.K12.MTR.1.1:	Mathematicians who participate in effortful learning both individually and with others: • Analyze the problem in a way that makes sense given the task. • Ask questions that will help with solving the task. • Build perseverance by modifying methods as needed while solving a challenging task. • Stay engaged and maintain a positive mindset when working to solve tasks. • Help and support each other when attempting a new method or approach. **Clarifications:** Teachers who encourage students to participate actively in effortful learning both individually and with others: • Cultivate a community of growth mindset learners. • Foster perseverance in students by choosing tasks that are challenging. • Develop students' ability to analyze and problem solve. • Recognize students' effort when solving challenging problems.
MA.K12.MTR.2.1:	Demonstrate understanding by representing problems in multiple ways. Mathematicians who demonstrate understanding by representing problems in multiple ways: • Build understanding through modeling and using manipulatives. • Represent solutions to problems in multiple ways using objects, drawings, tables, graphs and equations. • Progress from modeling problems with objects and drawings to using algorithms and equations. • Express connections between concepts and representations. • Choose a representation based on the given context or purpose. **Clarifications:** Teachers who encourage students to demonstrate understanding by representing problems in multiple ways: • Help students make connections between concepts and representations. • Provide opportunities for students to use manipulatives when investigating concepts. • Guide students from concrete to pictorial to abstract representations as understanding progresses. • Show students that various representations can have different purposes and can be useful in different situations.
	Complete tasks with mathematical fluency. Mathematicians who complete tasks with mathematical fluency:

MA.K12.MTR.3.1:

- Select efficient and appropriate methods for solving problems within the given context.
- Maintain flexibility and accuracy while performing procedures and mental calculations.
- Complete tasks accurately and with confidence.
- Adapt procedures to apply them to a new context.
- Use feedback to improve efficiency when performing calculations.

Clarifications:
Teachers who encourage students to complete tasks with mathematical fluency:

- Provide students with the flexibility to solve problems by selecting a procedure that allows them to solve efficiently and accurately.
- Offer multiple opportunities for students to practice efficient and generalizable methods.
- Provide opportunities for students to reflect on the method they used and determine if a more efficient method could have been used.

MA.K12.MTR.4.1:

Engage in discussions that reflect on the mathematical thinking of self and others.
Mathematicians who engage in discussions that reflect on the mathematical thinking of self and others:

- Communicate mathematical ideas, vocabulary and methods effectively.
- Analyze the mathematical thinking of others.
- Compare the efficiency of a method to those expressed by others.
- Recognize errors and suggest how to correctly solve the task.
- Justify results by explaining methods and processes.
- Construct possible arguments based on evidence.

Clarifications:
Teachers who encourage students to engage in discussions that reflect on the mathematical thinking of self and others:

- Establish a culture in which students ask questions of the teacher and their peers, and error is an opportunity for learning.
- Create opportunities for students to discuss their thinking with peers.
- Select, sequence and present student work to advance and deepen understanding of correct and increasingly efficient methods.
- Develop students' ability to justify methods and compare their responses to the responses of their peers.

MA.K12.MTR.5.1:

Use patterns and structure to help understand and connect mathematical concepts.
Mathematicians who use patterns and structure to help understand and connect mathematical concepts:

- Focus on relevant details within a problem.
- Create plans and procedures to logically order events, steps or ideas to solve problems.
- Decompose a complex problem into manageable parts.
- Relate previously learned concepts to new concepts.
- Look for similarities among problems.
- Connect solutions of problems to more complicated large-scale situations.

Clarifications:
Teachers who encourage students to use patterns and structure to help understand and connect mathematical concepts:

- Help students recognize the patterns in the world around them and connect these patterns to mathematical concepts.
- Support students to develop generalizations based on the similarities found among problems.
- Provide opportunities for students to create plans and procedures to solve problems.
- Develop students' ability to construct relationships between their current understanding and more sophisticated ways of thinking.

MA.K12.MTR.6.1:

Assess the reasonableness of solutions.
Mathematicians who assess the reasonableness of solutions:

- Estimate to discover possible solutions.
- Use benchmark quantities to determine if a solution makes sense.
- Check calculations when solving problems.
- Verify possible solutions by explaining the methods used.
- Evaluate results based on the given context.

Clarifications:
Teachers who encourage students to assess the reasonableness of solutions:

- Have students estimate or predict solutions prior to solving.
- Prompt students to continually ask, "Does this solution make sense? How do you know?"
- Reinforce that students check their work as they progress within and after a task.
- Strengthen students' ability to verify solutions through justifications.

MA.K12.MTR.7.1:

Apply mathematics to real-world contexts.
Mathematicians who apply mathematics to real-world contexts:

- Connect mathematical concepts to everyday experiences.
- Use models and methods to understand, represent and solve problems.
- Perform investigations to gather data or determine if a method is appropriate. • Redesign models and methods to improve accuracy or efficiency.

Clarifications:
Teachers who encourage students to apply mathematics to real-world contexts:

- Provide opportunities for students to create models, both concrete and abstract, and perform investigations.
- Challenge students to question the accuracy of their models and methods.
- Support students as they validate conclusions by comparing them to the given situation.
- Indicate how various concepts can be applied to other disciplines.

Cite evidence to explain and justify reasoning.

Clarifications:
K-1 Students include textual evidence in their oral communication with guidance and support from adults. The evidence can consist of details from the text without naming the text. During 1st grade, students learn how to incorporate the evidence in their writing.

ELA.K12.EE.1.1:	2-3 Students include relevant textual evidence in their written and oral communication. Students should name the text when they refer to it. In 3rd grade, students should use a combination of direct and indirect citations. 4-5 Students continue with previous skills and reference comments made by speakers and peers. Students cite texts that they've directly quoted, paraphrased, or used for information. When writing, students will use the form of citation dictated by the instructor or the style guide referenced by the instructor. 6-8 Students continue with previous skills and use a style guide to create a proper citation. 9-12 Students continue with previous skills and should be aware of existing style guides and the ways in which they differ.
ELA.K12.EE.2.1:	Read and comprehend grade-level complex texts proficiently. **Clarifications:** See Text Complexity for grade-level complexity bands and a text complexity rubric.
ELA.K12.EE.3.1:	Make inferences to support comprehension. **Clarifications:** Students will make inferences before the words infer or inference are introduced. Kindergarten students will answer questions like "Why is the girl smiling?" or make predictions about what will happen based on the title page. Students will use the terms and apply them in 2nd grade and beyond.
ELA.K12.EE.4.1:	Use appropriate collaborative techniques and active listening skills when engaging in discussions in a variety of situations. **Clarifications:** In kindergarten, students learn to listen to one another respectfully. In grades 1-2, students build upon these skills by justifying what they are thinking. For example: "I think _____ because _____." The collaborative conversations are becoming academic conversations. In grades 3-12, students engage in academic conversations discussing claims and justifying their reasoning, refining and applying skills. Students build on ideas, propel the conversation, and support claims and counterclaims with evidence.
ELA.K12.EE.5.1:	Use the accepted rules governing a specific format to create quality work. **Clarifications:** Students will incorporate skills learned into work products to produce quality work. For students to incorporate these skills appropriately, they must receive instruction. A 3rd grade student creating a poster board display must have instruction in how to effectively present information to do quality work.
ELA.K12.EE.6.1:	Use appropriate voice and tone when speaking or writing. **Clarifications:** In kindergarten and 1st grade, students learn the difference between formal and informal language. For example, the way we talk to our friends differs from the way we speak to adults. In 2nd grade and beyond, students practice appropriate social and academic language to discuss texts.
ELD.K12.ELL.SI.1:	English language learners communicate for social and instructional purposes within the school setting.

General Course Information and Notes

GENERAL NOTES

English Language Development ELD Standards Special Notes Section:
Teachers are required to provide listening, speaking, reading and writing instruction that allows English language learners (ELL) to communicate for social and instructional purposes within the school setting. For the given level of English language proficiency and with visual, graphic, or interactive support, students will interact with grade level words, expressions, sentences and discourse to process or produce language necessary for academic success. The ELD standard should specify a relevant content area concept or topic of study chosen by curriculum developers and teachers which maximizes an ELL's need for communication and social skills. To access an ELL supporting document which delineates performance definitions and descriptors, please click on the following link: cpalms.org/uploads/docs/standards/eld/SI.pdf

Florida's Benchmarks for Excellent Student Thinking (B.E.S.T.) Standards
This course includes Florida's B.E.S.T. ELA Expectations (EE) and Mathematical Thinking and Reasoning Standards (MTRs) for students. Florida educators should intentionally embed these standards within the content and their instruction as applicable. For guidance on the implementation of the EEs and MTRs, please visit cpalms.org/Standards/BEST_Standards.aspx and select the appropriate B.E.S.T. Standards package.

GENERAL INFORMATION

Course Number: 1505440

Course Path: Section: Grades PreK to 12 Education Courses > **Grade Group:** Grades 9 to 12 and Adult Education Courses > **Subject:** Physical Education > **SubSubject:** Individual and Dual > **Abbreviated Title:** RACQUETBALL 2

Number of Credits: Half credit (.5)

Course Length: Semester (S)

Course Type: Core Academic Course

Course Level: 2

Course Status: Draft - Course Pending Approval

Grade Level(s): 9,10,11,12

Graduation Requirement: Physical Education

Educator Certifications

Physical Education (Grades 6-12)
Physical Education (Elementary and Secondary Grades K-12)

Volleyball 1 (#1505500) 2022 - And Beyond

Course Standards

Name	Description
PE.912.C.2.23:	Apply appropriate technology and analyze data to evaluate, monitor and/or improve performance.
PE.912.C.2.25:	Analyze and evaluate the risks, safety procedures, rules and equipment associated with specific course activities.
PE.912.C.2.26:	Evaluate skill patterns of self and/or partner by detecting and correcting mechanical errors.
PE.912.C.2.28:	Interpret and apply the rules associated with specific course activities.
PE.912.L.3.3:	Identify a variety of activities that promote effective stress management.
PE.912.L.3.4:	Identify the in-school opportunities for participation in a variety of physical activities.
PE.912.L.3.5:	Identify the community opportunities for participation in a variety of physical activities.
PE.912.M.1.5:	Apply strategies for self improvement based on individual strengths and needs.
PE.912.M.1.10:	Apply sport specific skills in simulation and in real-life applications. **Clarifications:** An example of a simulation is a practice setting or lead up activity. An example of a real-life application is a game or performance setting.
PE.912.M.1.15:	Select and apply sport/activity specific warm-up and cool-down techniques.
PE.912.M.1.25:	Apply appropriate speed and generation of force when distance running, sprinting, throwing, jumping, striking or kicking.
PE.912.M.1.30:	Combine and apply movement patterns from simple to complex.
PE.912.M.1.31:	Demonstrate advanced offensive, defensive and transition strategies and tactics.
PE.912.M.1.32:	Apply sport specific skills in a variety of game settings.
PE.912.M.1.33:	Practice complex motor activities in order to improve performance.
PE.912.M.1.34:	Demonstrate use of the mechanical principles as they apply to specific course activities. **Clarifications:** Some examples are balance, force and leverage.
PE.912.M.1.35:	Select proper equipment and apply all appropriate safety procedures necessary for participation.
PE.912.R.5.3:	Demonstrate sportsmanship during game situations. **Clarifications:** Some examples are controlling emotions, resolving conflicts, respecting opponents and officials, and accepting both victory and defeat.
PE.912.R.5.4:	Maintain appropriate personal, social and ethical behavior while participating in a variety of physical activities. **Clarifications:** Some examples are respecting teammates, opponents and officials, and accepting both victory and defeat.
PE.912.R.5.5:	Demonstrate appropriate etiquette, care of equipment, respect for facilities and safe behaviors while participating in a variety of physical activities.
PE.912.R.6.3:	Analyze the roles of games, sports and/or physical activities in other cultures.
MA.K12.MTR.1.1:	Mathematicians who participate in effortful learning both individually and with others: • Analyze the problem in a way that makes sense given the task. • Ask questions that will help with solving the task. • Build perseverance by modifying methods as needed while solving a challenging task. • Stay engaged and maintain a positive mindset when working to solve tasks. • Help and support each other when attempting a new method or approach. **Clarifications:** Teachers who encourage students to participate actively in effortful learning both individually and with others: • Cultivate a community of growth mindset learners. • Foster perseverance in students by choosing tasks that are challenging. • Develop students' ability to analyze and problem solve. • Recognize students' effort when solving challenging problems.
MA.K12.MTR.2.1:	Demonstrate understanding by representing problems in multiple ways. Mathematicians who demonstrate understanding by representing problems in multiple ways: • Build understanding through modeling and using manipulatives. • Represent solutions to problems in multiple ways using objects, drawings, tables, graphs and equations. • Progress from modeling problems with objects and drawings to using algorithms and equations. • Express connections between concepts and representations. • Choose a representation based on the given context or purpose. **Clarifications:** Teachers who encourage students to demonstrate understanding by representing problems in multiple ways: • Help students make connections between concepts and representations. • Provide opportunities for students to use manipulatives when investigating concepts. • Guide students from concrete to pictorial to abstract representations as understanding progresses. • Show students that various representations can have different purposes and can be useful in different situations.
	Complete tasks with mathematical fluency. Mathematicians who complete tasks with mathematical fluency: • Select efficient and appropriate methods for solving problems within the given context.

MA.K12.MTR.3.1:	• Maintain flexibility and accuracy while performing procedures and mental calculations. • Complete tasks accurately and with confidence. • Adapt procedures to apply them to a new context. • Use feedback to improve efficiency when performing calculations. **Clarifications:** Teachers who encourage students to complete tasks with mathematical fluency: • Provide students with the flexibility to solve problems by selecting a procedure that allows them to solve efficiently and accurately. • Offer multiple opportunities for students to practice efficient and generalizable methods. • Provide opportunities for students to reflect on the method they used and determine if a more efficient method could have been used.
MA.K12.MTR.4.1:	Engage in discussions that reflect on the mathematical thinking of self and others. Mathematicians who engage in discussions that reflect on the mathematical thinking of self and others: • Communicate mathematical ideas, vocabulary and methods effectively. • Analyze the mathematical thinking of others. • Compare the efficiency of a method to those expressed by others. • Recognize errors and suggest how to correctly solve the task. • Justify results by explaining methods and processes. • Construct possible arguments based on evidence. **Clarifications:** Teachers who encourage students to engage in discussions that reflect on the mathematical thinking of self and others: • Establish a culture in which students ask questions of the teacher and their peers, and error is an opportunity for learning. • Create opportunities for students to discuss their thinking with peers. • Select, sequence and present student work to advance and deepen understanding of correct and increasingly efficient methods. • Develop students' ability to justify methods and compare their responses to the responses of their peers.
MA.K12.MTR.5.1:	Use patterns and structure to help understand and connect mathematical concepts. Mathematicians who use patterns and structure to help understand and connect mathematical concepts: • Focus on relevant details within a problem. • Create plans and procedures to logically order events, steps or ideas to solve problems. • Decompose a complex problem into manageable parts. • Relate previously learned concepts to new concepts. • Look for similarities among problems. • Connect solutions of problems to more complicated large-scale situations. **Clarifications:** Teachers who encourage students to use patterns and structure to help understand and connect mathematical concepts: • Help students recognize the patterns in the world around them and connect these patterns to mathematical concepts. • Support students to develop generalizations based on the similarities found among problems. • Provide opportunities for students to create plans and procedures to solve problems. • Develop students' ability to construct relationships between their current understanding and more sophisticated ways of thinking.
MA.K12.MTR.6.1:	Assess the reasonableness of solutions. Mathematicians who assess the reasonableness of solutions: • Estimate to discover possible solutions. • Use benchmark quantities to determine if a solution makes sense. • Check calculations when solving problems. • Verify possible solutions by explaining the methods used. • Evaluate results based on the given context. **Clarifications:** Teachers who encourage students to assess the reasonableness of solutions: • Have students estimate or predict solutions prior to solving. • Prompt students to continually ask, "Does this solution make sense? How do you know?" • Reinforce that students check their work as they progress within and after a task. • Strengthen students' ability to verify solutions through justifications.
MA.K12.MTR.7.1:	Apply mathematics to real-world contexts. Mathematicians who apply mathematics to real-world contexts: • Connect mathematical concepts to everyday experiences. • Use models and methods to understand, represent and solve problems. • Perform investigations to gather data or determine if a method is appropriate. • Redesign models and methods to improve accuracy or efficiency. **Clarifications:** Teachers who encourage students to apply mathematics to real-world contexts: • Provide opportunities for students to create models, both concrete and abstract, and perform investigations. • Challenge students to question the accuracy of their models and methods. • Support students as they validate conclusions by comparing them to the given situation. • Indicate how various concepts can be applied to other disciplines.
	Cite evidence to explain and justify reasoning. **Clarifications:** K-1 Students include textual evidence in their oral communication with guidance and support from adults. The evidence can consist of details from the text without naming the text. During 1st grade, students learn how to incorporate the evidence in their writing. 2-3 Students include relevant textual evidence in their written and oral communication. Students should name the text when they refer to it.

ELA.K12.EE.1.1:	In 3rd grade, students should use a combination of direct and indirect citations. 4-5 Students continue with previous skills and reference comments made by speakers and peers. Students cite texts that they've directly quoted, paraphrased, or used for information. When writing, students will use the form of citation dictated by the instructor or the style guide referenced by the instructor. 6-8 Students continue with previous skills and use a style guide to create a proper citation. 9-12 Students continue with previous skills and should be aware of existing style guides and the ways in which they differ.
ELA.K12.EE.2.1:	Read and comprehend grade-level complex texts proficiently. **Clarifications:** See Text Complexity for grade-level complexity bands and a text complexity rubric.
ELA.K12.EE.3.1:	Make inferences to support comprehension. **Clarifications:** Students will make inferences before the words infer or inference are introduced. Kindergarten students will answer questions like "Why is the girl smiling?" or make predictions about what will happen based on the title page. Students will use the terms and apply them in 2nd grade and beyond.
ELA.K12.EE.4.1:	Use appropriate collaborative techniques and active listening skills when engaging in discussions in a variety of situations. **Clarifications:** In kindergarten, students learn to listen to one another respectfully. In grades 1-2, students build upon these skills by justifying what they are thinking. For example: "I think _____ because _____." The collaborative conversations are becoming academic conversations. In grades 3-12, students engage in academic conversations discussing claims and justifying their reasoning, refining and applying skills. Students build on ideas, propel the conversation, and support claims and counterclaims with evidence.
ELA.K12.EE.5.1:	Use the accepted rules governing a specific format to create quality work. **Clarifications:** Students will incorporate skills learned into work products to produce quality work. For students to incorporate these skills appropriately, they must receive instruction. A 3rd grade student creating a poster board display must have instruction in how to effectively present information to do quality work.
ELA.K12.EE.6.1:	Use appropriate voice and tone when speaking or writing. **Clarifications:** In kindergarten and 1st grade, students learn the difference between formal and informal language. For example, the way we talk to our friends differs from the way we speak to adults. In 2nd grade and beyond, students practice appropriate social and academic language to discuss texts.
ELD.K12.ELL.SI.1:	English language learners communicate for social and instructional purposes within the school setting.

General Course Information and Notes

GENERAL NOTES

Florida's Benchmarks for Excellent Student Thinking (B.E.S.T.) Standards
This course includes Florida's B.E.S.T. ELA Expectations (EE) and Mathematical Thinking and Reasoning Standards (MTRs) for students. Florida educators should intentionally embed these standards within the content and their instruction as applicable. For guidance on the implementation of the EEs and MTRs, please visit cpalms.org/Standards/BEST_Standards.aspx and select the appropriate B.E.S.T. Standards package.

English Language Development ELD Standards Special Notes Section:
Teachers are required to provide listening, speaking, reading and writing instruction that allows English language learners (ELL) to communicate for social and instructional purposes within the school setting. For the given level of English language proficiency and with visual, graphic, or interactive support, students will interact with grade level words, expressions, sentences and discourse to process or produce language necessary for academic success. The ELD standard should specify a relevant content area concept or topic of study chosen by curriculum developers and teachers which maximizes an ELL's need for communication and social skills. To access an ELL supporting document which delineates performance definitions and descriptors, please click on the following link: cpalms.org/uploads/docs/standards/eld/SI.pdf

GENERAL INFORMATION

Course Number: 1505500

Course Path: Section: Grades PreK to 12 Education Courses > **Grade Group:** Grades 9 to 12 and Adult Education Courses > **Subject:** Physical Education > **SubSubject:** Team > **Abbreviated Title:** VOLLEYBALL 1

Number of Credits: Half credit (.5)

Course Length: Semester (S)

Course Type: Core Academic Course

Course Level: 2

Course Status: Draft - Course Pending Approval

Grade Level(s): 9,10,11,12

Graduation Requirement: Physical Education

Educator Certifications

Physical Education (Grades 6-12)
Physical Education (Elementary and Secondary Grades K-12)

Volleyball 2 (#1505510) 2022 - And Beyond

Course Standards

Name	Description
PE.912.C.2.9:	Explain the precautions to be taken when exercising in extreme weather and/or environmental conditions. **Clarifications:** Some examples of precautions are hydration and appropriate attire.
PE.912.C.2.21:	Diagram, explain and justify the use of advanced offensive, defensive and transition strategies and tactics.
PE.912.C.2.23:	Apply appropriate technology and analyze data to evaluate, monitor and/or improve performance.
PE.912.C.2.25:	Analyze and evaluate the risks, safety procedures, rules and equipment associated with specific course activities.
PE.912.C.2.26:	Evaluate skill patterns of self and/or partner by detecting and correcting mechanical errors.
PE.912.C.2.28:	Interpret and apply the rules associated with specific course activities.
PE.912.L.3.3:	Identify a variety of activities that promote effective stress management.
PE.912.L.3.4:	Identify the in-school opportunities for participation in a variety of physical activities.
PE.912.L.3.5:	Identify the community opportunities for participation in a variety of physical activities.
PE.912.M.1.5:	Apply strategies for self improvement based on individual strengths and needs.
PE.912.M.1.10:	Apply sport specific skills in simulation and in real-life applications. **Clarifications:** An example of a simulation is a practice setting or lead up activity. An example of a real-life application is a game or performance setting.
PE.912.M.1.25:	Apply appropriate speed and generation of force when distance running, sprinting, throwing, jumping, striking or kicking.
PE.912.M.1.26:	Analyze and apply offensive, defensive and transition strategies and tactics to reflect a higher order of thinking. **Clarifications:** An example is placing a shot in an open area away from opponent.
PE.912.M.1.30:	Combine and apply movement patterns from simple to complex.
PE.912.M.1.31:	Demonstrate advanced offensive, defensive and transition strategies and tactics.
PE.912.M.1.32:	Apply sport specific skills in a variety of game settings.
PE.912.M.1.33:	Practice complex motor activities in order to improve performance.
PE.912.M.1.34:	Demonstrate use of the mechanical principles as they apply to specific course activities. **Clarifications:** Some examples are balance, force and leverage.
PE.912.M.1.35:	Select proper equipment and apply all appropriate safety procedures necessary for participation.
PE.912.R.5.3:	Demonstrate sportsmanship during game situations. **Clarifications:** Some examples are controlling emotions, resolving conflicts, respecting opponents and officials, and accepting both victory and defeat.
PE.912.R.5.4:	Maintain appropriate personal, social and ethical behavior while participating in a variety of physical activities. **Clarifications:** Some examples are respecting teammates, opponents and officials, and accepting both victory and defeat.
PE.912.R.5.5:	Demonstrate appropriate etiquette, care of equipment, respect for facilities and safe behaviors while participating in a variety of physical activities.
PE.912.R.6.3:	Analyze the roles of games, sports and/or physical activities in other cultures.
MA.K12.MTR.1.1:	Mathematicians who participate in effortful learning both individually and with others: • Analyze the problem in a way that makes sense given the task. • Ask questions that will help with solving the task. • Build perseverance by modifying methods as needed while solving a challenging task. • Stay engaged and maintain a positive mindset when working to solve tasks. • Help and support each other when attempting a new method or approach. **Clarifications:** Teachers who encourage students to participate actively in effortful learning both individually and with others: • Cultivate a community of growth mindset learners. • Foster perseverance in students by choosing tasks that are challenging. • Develop students' ability to analyze and problem solve. • Recognize students' effort when solving challenging problems.
MA.K12.MTR.2.1:	Demonstrate understanding by representing problems in multiple ways. Mathematicians who demonstrate understanding by representing problems in multiple ways: • Build understanding through modeling and using manipulatives. • Represent solutions to problems in multiple ways using objects, drawings, tables, graphs and equations. • Progress from modeling problems with objects and drawings to using algorithms and equations. • Express connections between concepts and representations. • Choose a representation based on the given context or purpose. **Clarifications:** Teachers who encourage students to demonstrate understanding by representing problems in multiple ways:

- Help students make connections between concepts and representations.
- Provide opportunities for students to use manipulatives when investigating concepts.
- Guide students from concrete to pictorial to abstract representations as understanding progresses.
- Show students that various representations can have different purposes and can be useful in different situations.

MA.K12.MTR.3.1:

Complete tasks with mathematical fluency.
Mathematicians who complete tasks with mathematical fluency:

- Select efficient and appropriate methods for solving problems within the given context.
- Maintain flexibility and accuracy while performing procedures and mental calculations.
- Complete tasks accurately and with confidence.
- Adapt procedures to apply them to a new context.
- Use feedback to improve efficiency when performing calculations.

Clarifications:
Teachers who encourage students to complete tasks with mathematical fluency:

- Provide students with the flexibility to solve problems by selecting a procedure that allows them to solve efficiently and accurately.
- Offer multiple opportunities for students to practice efficient and generalizable methods.
- Provide opportunities for students to reflect on the method they used and determine if a more efficient method could have been used.

MA.K12.MTR.4.1:

Engage in discussions that reflect on the mathematical thinking of self and others.
Mathematicians who engage in discussions that reflect on the mathematical thinking of self and others:

- Communicate mathematical ideas, vocabulary and methods effectively.
- Analyze the mathematical thinking of others.
- Compare the efficiency of a method to those expressed by others.
- Recognize errors and suggest how to correctly solve the task.
- Justify results by explaining methods and processes.
- Construct possible arguments based on evidence.

Clarifications:
Teachers who encourage students to engage in discussions that reflect on the mathematical thinking of self and others:

- Establish a culture in which students ask questions of the teacher and their peers, and error is an opportunity for learning.
- Create opportunities for students to discuss their thinking with peers.
- Select, sequence and present student work to advance and deepen understanding of correct and increasingly efficient methods.
- Develop students' ability to justify methods and compare their responses to the responses of their peers.

MA.K12.MTR.5.1:

Use patterns and structure to help understand and connect mathematical concepts.
Mathematicians who use patterns and structure to help understand and connect mathematical concepts:

- Focus on relevant details within a problem.
- Create plans and procedures to logically order events, steps or ideas to solve problems.
- Decompose a complex problem into manageable parts.
- Relate previously learned concepts to new concepts.
- Look for similarities among problems.
- Connect solutions of problems to more complicated large-scale situations.

Clarifications:
Teachers who encourage students to use patterns and structure to help understand and connect mathematical concepts:

- Help students recognize the patterns in the world around them and connect these patterns to mathematical concepts.
- Support students to develop generalizations based on the similarities found among problems.
- Provide opportunities for students to create plans and procedures to solve problems.
- Develop students' ability to construct relationships between their current understanding and more sophisticated ways of thinking.

MA.K12.MTR.6.1:

Assess the reasonableness of solutions.
Mathematicians who assess the reasonableness of solutions:

- Estimate to discover possible solutions.
- Use benchmark quantities to determine if a solution makes sense.
- Check calculations when solving problems.
- Verify possible solutions by explaining the methods used.
- Evaluate results based on the given context.

Clarifications:
Teachers who encourage students to assess the reasonableness of solutions:

- Have students estimate or predict solutions prior to solving.
- Prompt students to continually ask, "Does this solution make sense? How do you know?"
- Reinforce that students check their work as they progress within and after a task.
- Strengthen students' ability to verify solutions through justifications.

MA.K12.MTR.7.1:

Apply mathematics to real-world contexts.
Mathematicians who apply mathematics to real-world contexts:

- Connect mathematical concepts to everyday experiences.
- Use models and methods to understand, represent and solve problems.
- Perform investigations to gather data or determine if a method is appropriate. • Redesign models and methods to improve accuracy or efficiency.

Clarifications:
Teachers who encourage students to apply mathematics to real-world contexts:

- Provide opportunities for students to create models, both concrete and abstract, and perform investigations.

	• Challenge students to question the accuracy of their models and methods. • Support students as they validate conclusions by comparing them to the given situation. • Indicate how various concepts can be applied to other disciplines.
ELA.K12.EE.1.1:	Cite evidence to explain and justify reasoning. **Clarifications:** K-1 Students include textual evidence in their oral communication with guidance and support from adults. The evidence can consist of details from the text without naming the text. During 1st grade, students learn how to incorporate the evidence in their writing. 2-3 Students include relevant textual evidence in their written and oral communication. Students should name the text when they refer to it. In 3rd grade, students should use a combination of direct and indirect citations. 4-5 Students continue with previous skills and reference comments made by speakers and peers. Students cite texts that they've directly quoted, paraphrased, or used for information. When writing, students will use the form of citation dictated by the instructor or the style guide referenced by the instructor. 6-8 Students continue with previous skills and use a style guide to create a proper citation. 9-12 Students continue with previous skills and should be aware of existing style guides and the ways in which they differ.
ELA.K12.EE.2.1:	Read and comprehend grade-level complex texts proficiently. **Clarifications:** See Text Complexity for grade-level complexity bands and a text complexity rubric.
ELA.K12.EE.3.1:	Make inferences to support comprehension. **Clarifications:** Students will make inferences before the words infer or inference are introduced. Kindergarten students will answer questions like "Why is the girl smiling?" or make predictions about what will happen based on the title page. Students will use the terms and apply them in 2nd grade and beyond.
ELA.K12.EE.4.1:	Use appropriate collaborative techniques and active listening skills when engaging in discussions in a variety of situations. **Clarifications:** In kindergarten, students learn to listen to one another respectfully. In grades 1-2, students build upon these skills by justifying what they are thinking. For example: "I think _____ because _____." The collaborative conversations are becoming academic conversations. In grades 3-12, students engage in academic conversations discussing claims and justifying their reasoning, refining and applying skills. Students build on ideas, propel the conversation, and support claims and counterclaims with evidence.
ELA.K12.EE.5.1:	Use the accepted rules governing a specific format to create quality work. **Clarifications:** Students will incorporate skills learned into work products to produce quality work. For students to incorporate these skills appropriately, they must receive instruction. A 3rd grade student creating a poster board display must have instruction in how to effectively present information to do quality work.
ELA.K12.EE.6.1:	Use appropriate voice and tone when speaking or writing. **Clarifications:** In kindergarten and 1st grade, students learn the difference between formal and informal language. For example, the way we talk to our friends differs from the way we speak to adults. In 2nd grade and beyond, students practice appropriate social and academic language to discuss texts.
ELD.K12.ELL.SI.1:	English language learners communicate for social and instructional purposes within the school setting.

General Course Information and Notes

GENERAL NOTES

Florida's Benchmarks for Excellent Student Thinking (B.E.S.T.) Standards
This course includes Florida's B.E.S.T. ELA Expectations (EE) and Mathematical Thinking and Reasoning Standards (MTRs) for students. Florida educators should intentionally embed these standards within the content and their instruction as applicable. For guidance on the implementation of the EEs and MTRs, please visit cpalms.org/Standards/BEST_Standards.aspx and select the appropriate B.E.S.T. Standards package.

English Language Development ELD Standards Special Notes Section:
Teachers are required to provide listening, speaking, reading and writing instruction that allows English language learners (ELL) to communicate for social and instructional purposes within the school setting. For the given level of English language proficiency and with visual, graphic, or interactive support, students will interact with grade level words, expressions, sentences and discourse to process or produce language necessary for academic success. The ELD standard should specify a relevant content area concept or topic of study chosen by curriculum developers and teachers which maximizes an ELL's need for communication and social skills. To access an ELL supporting document which delineates performance definitions and descriptors, please click on the following link: cpalms.org/uploads/docs/standards/eld/SI.pdf

GENERAL INFORMATION

Course Number: 1505510

Course Path: Section: Grades PreK to 12 Education Courses > **Grade Group:** Grades 9 to 12 and Adult Education Courses > **Subject:** Physical Education > **SubSubject:** Team >

Abbreviated Title: VOLLEYBALL 2
Number of Credits: Half credit (.5)
Course Length: Semester (S)
Course Type: Core Academic Course
Course Level: 2
Course Status: Draft - Course Pending Approval
Grade Level(s): 9,10,11,12
Graduation Requirement: Physical Education

Educator Certifications

Physical Education (Grades 6-12)
Physical Education (Elementary and Secondary Grades K-12)

Volleyball 3 (#1505520) 2022 - And Beyond

Course Standards

Name	Description
PE.912.C.2.9:	Explain the precautions to be taken when exercising in extreme weather and/or environmental conditions. **Clarifications:** Some examples of precautions are hydration and appropriate attire.
PE.912.C.2.21:	Diagram, explain and justify the use of advanced offensive, defensive and transition strategies and tactics.
PE.912.C.2.23:	Apply appropriate technology and analyze data to evaluate, monitor and/or improve performance.
PE.912.C.2.25:	Analyze and evaluate the risks, safety procedures, rules and equipment associated with specific course activities.
PE.912.C.2.26:	Evaluate skill patterns of self and/or partner by detecting and correcting mechanical errors.
PE.912.C.2.28:	Interpret and apply the rules associated with specific course activities.
PE.912.L.3.3:	Identify a variety of activities that promote effective stress management.
PE.912.L.3.4:	Identify the in-school opportunities for participation in a variety of physical activities.
PE.912.L.3.5:	Identify the community opportunities for participation in a variety of physical activities.
PE.912.M.1.5:	Apply strategies for self improvement based on individual strengths and needs.
PE.912.M.1.10:	Apply sport specific skills in simulation and in real-life applications. **Clarifications:** An example of a simulation is a practice setting or lead up activity. An example of a real-life application is a game or performance setting.
PE.912.M.1.23:	Demonstrate proficiency of critical elements when striking with objects, implements or body parts.
PE.912.M.1.25:	Apply appropriate speed and generation of force when distance running, sprinting, throwing, jumping, striking or kicking.
PE.912.M.1.26:	Analyze and apply offensive, defensive and transition strategies and tactics to reflect a higher order of thinking. **Clarifications:** An example is placing a shot in an open area away from opponent.
PE.912.M.1.30:	Combine and apply movement patterns from simple to complex.
PE.912.M.1.32:	Apply sport specific skills in a variety of game settings.
PE.912.M.1.33:	Practice complex motor activities in order to improve performance.
PE.912.M.1.34:	Demonstrate use of the mechanical principles as they apply to specific course activities. **Clarifications:** Some examples are balance, force and leverage.
PE.912.M.1.35:	Select proper equipment and apply all appropriate safety procedures necessary for participation.
PE.912.R.5.3:	Demonstrate sportsmanship during game situations. **Clarifications:** Some examples are controlling emotions, resolving conflicts, respecting opponents and officials, and accepting both victory and defeat.
PE.912.R.5.4:	Maintain appropriate personal, social and ethical behavior while participating in a variety of physical activities. **Clarifications:** Some examples are respecting teammates, opponents and officials, and accepting both victory and defeat.
PE.912.R.5.5:	Demonstrate appropriate etiquette, care of equipment, respect for facilities and safe behaviors while participating in a variety of physical activities.
PE.912.R.6.3:	Analyze the roles of games, sports and/or physical activities in other cultures.
MA.K12.MTR.1.1:	Mathematicians who participate in effortful learning both individually and with others: • Analyze the problem in a way that makes sense given the task. • Ask questions that will help with solving the task. • Build perseverance by modifying methods as needed while solving a challenging task. • Stay engaged and maintain a positive mindset when working to solve tasks. • Help and support each other when attempting a new method or approach. **Clarifications:** Teachers who encourage students to participate actively in effortful learning both individually and with others: • Cultivate a community of growth mindset learners. • Foster perseverance in students by choosing tasks that are challenging. • Develop students' ability to analyze and problem solve. • Recognize students' effort when solving challenging problems.
MA.K12.MTR.2.1:	Demonstrate understanding by representing problems in multiple ways. Mathematicians who demonstrate understanding by representing problems in multiple ways: • Build understanding through modeling and using manipulatives. • Represent solutions to problems in multiple ways using objects, drawings, tables, graphs and equations. • Progress from modeling problems with objects and drawings to using algorithms and equations. • Express connections between concepts and representations. • Choose a representation based on the given context or purpose. **Clarifications:** Teachers who encourage students to demonstrate understanding by representing problems in multiple ways:

- Help students make connections between concepts and representations.
- Provide opportunities for students to use manipulatives when investigating concepts.
- Guide students from concrete to pictorial to abstract representations as understanding progresses.
- Show students that various representations can have different purposes and can be useful in different situations.

MA.K12.MTR.3.1:

Complete tasks with mathematical fluency.
Mathematicians who complete tasks with mathematical fluency:

- Select efficient and appropriate methods for solving problems within the given context.
- Maintain flexibility and accuracy while performing procedures and mental calculations.
- Complete tasks accurately and with confidence.
- Adapt procedures to apply them to a new context.
- Use feedback to improve efficiency when performing calculations.

Clarifications:
Teachers who encourage students to complete tasks with mathematical fluency:

- Provide students with the flexibility to solve problems by selecting a procedure that allows them to solve efficiently and accurately.
- Offer multiple opportunities for students to practice efficient and generalizable methods.
- Provide opportunities for students to reflect on the method they used and determine if a more efficient method could have been used.

MA.K12.MTR.4.1:

Engage in discussions that reflect on the mathematical thinking of self and others.
Mathematicians who engage in discussions that reflect on the mathematical thinking of self and others:

- Communicate mathematical ideas, vocabulary and methods effectively.
- Analyze the mathematical thinking of others.
- Compare the efficiency of a method to those expressed by others.
- Recognize errors and suggest how to correctly solve the task.
- Justify results by explaining methods and processes.
- Construct possible arguments based on evidence.

Clarifications:
Teachers who encourage students to engage in discussions that reflect on the mathematical thinking of self and others:

- Establish a culture in which students ask questions of the teacher and their peers, and error is an opportunity for learning.
- Create opportunities for students to discuss their thinking with peers.
- Select, sequence and present student work to advance and deepen understanding of correct and increasingly efficient methods.
- Develop students' ability to justify methods and compare their responses to the responses of their peers.

MA.K12.MTR.5.1:

Use patterns and structure to help understand and connect mathematical concepts.
Mathematicians who use patterns and structure to help understand and connect mathematical concepts:

- Focus on relevant details within a problem.
- Create plans and procedures to logically order events, steps or ideas to solve problems.
- Decompose a complex problem into manageable parts.
- Relate previously learned concepts to new concepts.
- Look for similarities among problems.
- Connect solutions of problems to more complicated large-scale situations.

Clarifications:
Teachers who encourage students to use patterns and structure to help understand and connect mathematical concepts:

- Help students recognize the patterns in the world around them and connect these patterns to mathematical concepts.
- Support students to develop generalizations based on the similarities found among problems.
- Provide opportunities for students to create plans and procedures to solve problems.
- Develop students' ability to construct relationships between their current understanding and more sophisticated ways of thinking.

MA.K12.MTR.6.1:

Assess the reasonableness of solutions.
Mathematicians who assess the reasonableness of solutions:

- Estimate to discover possible solutions.
- Use benchmark quantities to determine if a solution makes sense.
- Check calculations when solving problems.
- Verify possible solutions by explaining the methods used.
- Evaluate results based on the given context.

Clarifications:
Teachers who encourage students to assess the reasonableness of solutions:

- Have students estimate or predict solutions prior to solving.
- Prompt students to continually ask, "Does this solution make sense? How do you know?"
- Reinforce that students check their work as they progress within and after a task.
- Strengthen students' ability to verify solutions through justifications.

MA.K12.MTR.7.1:

Apply mathematics to real-world contexts.
Mathematicians who apply mathematics to real-world contexts:

- Connect mathematical concepts to everyday experiences.
- Use models and methods to understand, represent and solve problems.
- Perform investigations to gather data or determine if a method is appropriate. • Redesign models and methods to improve accuracy or efficiency.

Clarifications:
Teachers who encourage students to apply mathematics to real-world contexts:

- Provide opportunities for students to create models, both concrete and abstract, and perform investigations.

	• Challenge students to question the accuracy of their models and methods. • Support students as they validate conclusions by comparing them to the given situation. • Indicate how various concepts can be applied to other disciplines.
ELA.K12.EE.1.1:	Cite evidence to explain and justify reasoning. **Clarifications:** K-1 Students include textual evidence in their oral communication with guidance and support from adults. The evidence can consist of details from the text without naming the text. During 1st grade, students learn how to incorporate the evidence in their writing. 2-3 Students include relevant textual evidence in their written and oral communication. Students should name the text when they refer to it. In 3rd grade, students should use a combination of direct and indirect citations. 4-5 Students continue with previous skills and reference comments made by speakers and peers. Students cite texts that they've directly quoted, paraphrased, or used for information. When writing, students will use the form of citation dictated by the instructor or the style guide referenced by the instructor. 6-8 Students continue with previous skills and use a style guide to create a proper citation. 9-12 Students continue with previous skills and should be aware of existing style guides and the ways in which they differ.
ELA.K12.EE.2.1:	Read and comprehend grade-level complex texts proficiently. **Clarifications:** See Text Complexity for grade-level complexity bands and a text complexity rubric.
ELA.K12.EE.3.1:	Make inferences to support comprehension. **Clarifications:** Students will make inferences before the words infer or inference are introduced. Kindergarten students will answer questions like "Why is the girl smiling?" or make predictions about what will happen based on the title page. Students will use the terms and apply them in 2nd grade and beyond.
ELA.K12.EE.4.1:	Use appropriate collaborative techniques and active listening skills when engaging in discussions in a variety of situations. **Clarifications:** In kindergarten, students learn to listen to one another respectfully. In grades 1-2, students build upon these skills by justifying what they are thinking. For example: "I think _____ because _____." The collaborative conversations are becoming academic conversations. In grades 3-12, students engage in academic conversations discussing claims and justifying their reasoning, refining and applying skills. Students build on ideas, propel the conversation, and support claims and counterclaims with evidence.
ELA.K12.EE.5.1:	Use the accepted rules governing a specific format to create quality work. **Clarifications:** Students will incorporate skills learned into work products to produce quality work. For students to incorporate these skills appropriately, they must receive instruction. A 3rd grade student creating a poster board display must have instruction in how to effectively present information to do quality work.
ELA.K12.EE.6.1:	Use appropriate voice and tone when speaking or writing. **Clarifications:** In kindergarten and 1st grade, students learn the difference between formal and informal language. For example, the way we talk to our friends differs from the way we speak to adults. In 2nd grade and beyond, students practice appropriate social and academic language to discuss texts.
ELD.K12.ELL.SI.1:	English language learners communicate for social and instructional purposes within the school setting.

General Course Information and Notes

GENERAL NOTES

Florida's Benchmarks for Excellent Student Thinking (B.E.S.T.) Standards
This course includes Florida's B.E.S.T. ELA Expectations (EE) and Mathematical Thinking and Reasoning Standards (MTRs) for students. Florida educators should intentionally embed these standards within the content and their instruction as applicable. For guidance on the implementation of the EEs and MTRs, please visit cpalms.org/Standards/BEST_Standards.aspx and select the appropriate B.E.S.T. Standards package.

English Language Development ELD Standards Special Notes Section:
Teachers are required to provide listening, speaking, reading and writing instruction that allows English language learners (ELL) to communicate for social and instructional purposes within the school setting. For the given level of English language proficiency and with visual, graphic, or interactive support, students will interact with grade level words, expressions, sentences and discourse to process or produce language necessary for academic success. The ELD standard should specify a relevant content area concept or topic of study chosen by curriculum developers and teachers which maximizes an ELL's need for communication and social skills. To access an ELL supporting document which delineates performance definitions and descriptors, please click on the following link: cpalms.org/uploads/docs/standards/eld/SI.pdf

GENERAL INFORMATION

Course Number: 1505520

Course Path: Section: Grades PreK to 12 Education Courses > **Grade Group:** Grades 9 to 12 and Adult Education Courses > **Subject:** Physical Education > **SubSubject:** Team >

Abbreviated Title: VOLLEYBALL 3
Number of Credits: Half credit (.5)
Course Length: Semester (S)
Course Type: Core Academic Course
Course Level: 2
Course Status: Draft - Course Pending Approval
Grade Level(s): 9,10,11,12
Graduation Requirement: Physical Education

Educator Certifications

Physical Education (Grades 6-12)
Physical Education (Elementary and Secondary Grades K-12)

Wrestling 1 (#1505550) 2022 - And Beyond

Course Standards

Name	Description
PE.912.C.2.24:	Analyze the mechanical principles as they apply to specific course activities. **Clarifications:** Some examples are balance, force and leverage.
PE.912.C.2.28:	Interpret and apply the rules associated with specific course activities.
PE.912.L.3.2:	Participate in a variety of activities that promote the health-related components of fitness. **Clarifications:** The health-related components of fitness are cardiorespiratory endurance, muscular strength, muscular endurance, flexibility and body composition.
PE.912.M.1.5:	Apply strategies for self improvement based on individual strengths and needs.
PE.912.M.1.15:	Select and apply sport/activity specific warm-up and cool-down techniques.
PE.912.M.1.19:	Use correct body alignment, strength, flexibility and coordination in the performance of technical movements.
PE.912.M.1.31:	Demonstrate advanced offensive, defensive and transition strategies and tactics.
PE.912.M.1.32:	Apply sport specific skills in a variety of game settings.
PE.912.M.1.34:	Demonstrate use of the mechanical principles as they apply to specific course activities. **Clarifications:** Some examples are balance, force and leverage.
PE.912.M.1.35:	Select proper equipment and apply all appropriate safety procedures necessary for participation.
PE.912.R.5.3:	Demonstrate sportsmanship during game situations. **Clarifications:** Some examples are controlling emotions, resolving conflicts, respecting opponents and officials, and accepting both victory and defeat.
PE.912.R.5.4:	Maintain appropriate personal, social and ethical behavior while participating in a variety of physical activities. **Clarifications:** Some examples are respecting teammates, opponents and officials, and accepting both victory and defeat.
PE.912.R.5.5:	Demonstrate appropriate etiquette, care of equipment, respect for facilities and safe behaviors while participating in a variety of physical activities.
PE.912.R.6.3:	Analyze the roles of games, sports and/or physical activities in other cultures.
MA.K12.MTR.1.1:	Mathematicians who participate in effortful learning both individually and with others: • Analyze the problem in a way that makes sense given the task. • Ask questions that will help with solving the task. • Build perseverance by modifying methods as needed while solving a challenging task. • Stay engaged and maintain a positive mindset when working to solve tasks. • Help and support each other when attempting a new method or approach. **Clarifications:** Teachers who encourage students to participate actively in effortful learning both individually and with others: • Cultivate a community of growth mindset learners. • Foster perseverance in students by choosing tasks that are challenging. • Develop students' ability to analyze and problem solve. • Recognize students' effort when solving challenging problems.
MA.K12.MTR.2.1:	Demonstrate understanding by representing problems in multiple ways. Mathematicians who demonstrate understanding by representing problems in multiple ways: • Build understanding through modeling and using manipulatives. • Represent solutions to problems in multiple ways using objects, drawings, tables, graphs and equations. • Progress from modeling problems with objects and drawings to using algorithms and equations. • Express connections between concepts and representations. • Choose a representation based on the given context or purpose. **Clarifications:** Teachers who encourage students to demonstrate understanding by representing problems in multiple ways: • Help students make connections between concepts and representations. • Provide opportunities for students to use manipulatives when investigating concepts. • Guide students from concrete to pictorial to abstract representations as understanding progresses. • Show students that various representations can have different purposes and can be useful in different situations.
	Complete tasks with mathematical fluency. Mathematicians who complete tasks with mathematical fluency: • Select efficient and appropriate methods for solving problems within the given context. • Maintain flexibility and accuracy while performing procedures and mental calculations. • Complete tasks accurately and with confidence.

MA.K12.MTR.3.1:	• Adapt procedures to apply them to a new context. • Use feedback to improve efficiency when performing calculations. **Clarifications:** Teachers who encourage students to complete tasks with mathematical fluency: • Provide students with the flexibility to solve problems by selecting a procedure that allows them to solve efficiently and accurately. • Offer multiple opportunities for students to practice efficient and generalizable methods. • Provide opportunities for students to reflect on the method they used and determine if a more efficient method could have been used.
MA.K12.MTR.4.1:	Engage in discussions that reflect on the mathematical thinking of self and others. Mathematicians who engage in discussions that reflect on the mathematical thinking of self and others: • Communicate mathematical ideas, vocabulary and methods effectively. • Analyze the mathematical thinking of others. • Compare the efficiency of a method to those expressed by others. • Recognize errors and suggest how to correctly solve the task. • Justify results by explaining methods and processes. • Construct possible arguments based on evidence. **Clarifications:** Teachers who encourage students to engage in discussions that reflect on the mathematical thinking of self and others: • Establish a culture in which students ask questions of the teacher and their peers, and error is an opportunity for learning. • Create opportunities for students to discuss their thinking with peers. • Select, sequence and present student work to advance and deepen understanding of correct and increasingly efficient methods. • Develop students' ability to justify methods and compare their responses to the responses of their peers.
MA.K12.MTR.5.1:	Use patterns and structure to help understand and connect mathematical concepts. Mathematicians who use patterns and structure to help understand and connect mathematical concepts: • Focus on relevant details within a problem. • Create plans and procedures to logically order events, steps or ideas to solve problems. • Decompose a complex problem into manageable parts. • Relate previously learned concepts to new concepts. • Look for similarities among problems. • Connect solutions of problems to more complicated large-scale situations. **Clarifications:** Teachers who encourage students to use patterns and structure to help understand and connect mathematical concepts: • Help students recognize the patterns in the world around them and connect these patterns to mathematical concepts. • Support students to develop generalizations based on the similarities found among problems. • Provide opportunities for students to create plans and procedures to solve problems. • Develop students' ability to construct relationships between their current understanding and more sophisticated ways of thinking.
MA.K12.MTR.6.1:	Assess the reasonableness of solutions. Mathematicians who assess the reasonableness of solutions: • Estimate to discover possible solutions. • Use benchmark quantities to determine if a solution makes sense. • Check calculations when solving problems. • Verify possible solutions by explaining the methods used. • Evaluate results based on the given context. **Clarifications:** Teachers who encourage students to assess the reasonableness of solutions: • Have students estimate or predict solutions prior to solving. • Prompt students to continually ask, "Does this solution make sense? How do you know?" • Reinforce that students check their work as they progress within and after a task. • Strengthen students' ability to verify solutions through justifications.
MA.K12.MTR.7.1:	Apply mathematics to real-world contexts. Mathematicians who apply mathematics to real-world contexts: • Connect mathematical concepts to everyday experiences. • Use models and methods to understand, represent and solve problems. • Perform investigations to gather data or determine if a method is appropriate. • Redesign models and methods to improve accuracy or efficiency. **Clarifications:** Teachers who encourage students to apply mathematics to real-world contexts: • Provide opportunities for students to create models, both concrete and abstract, and perform investigations. • Challenge students to question the accuracy of their models and methods. • Support students as they validate conclusions by comparing them to the given situation. • Indicate how various concepts can be applied to other disciplines.
ELA.K12.EE.1.1:	Cite evidence to explain and justify reasoning. **Clarifications:** K-1 Students include textual evidence in their oral communication with guidance and support from adults. The evidence can consist of details from the text without naming the text. During 1st grade, students learn how to incorporate the evidence in their writing. 2-3 Students include relevant textual evidence in their written and oral communication. Students should name the text when they refer to it. In 3rd grade, students should use a combination of direct and indirect citations. 4-5 Students continue with previous skills and reference comments made by speakers and peers. Students cite texts that they've directly

	quoted, paraphrased, or used for information. When writing, students will use the form of citation dictated by the instructor or the style guide referenced by the instructor. 6-8 Students continue with previous skills and use a style guide to create a proper citation. 9-12 Students continue with previous skills and should be aware of existing style guides and the ways in which they differ.
ELA.K12.EE.2.1:	Read and comprehend grade-level complex texts proficiently. **Clarifications:** See Text Complexity for grade-level complexity bands and a text complexity rubric.
ELA.K12.EE.3.1:	Make inferences to support comprehension. **Clarifications:** Students will make inferences before the words infer or inference are introduced. Kindergarten students will answer questions like "Why is the girl smiling?" or make predictions about what will happen based on the title page. Students will use the terms and apply them in 2nd grade and beyond.
ELA.K12.EE.4.1:	Use appropriate collaborative techniques and active listening skills when engaging in discussions in a variety of situations. **Clarifications:** In kindergarten, students learn to listen to one another respectfully. In grades 1-2, students build upon these skills by justifying what they are thinking. For example: "I think _____ because _____." The collaborative conversations are becoming academic conversations. In grades 3-12, students engage in academic conversations discussing claims and justifying their reasoning, refining and applying skills. Students build on ideas, propel the conversation, and support claims and counterclaims with evidence.
ELA.K12.EE.5.1:	Use the accepted rules governing a specific format to create quality work. **Clarifications:** Students will incorporate skills learned into work products to produce quality work. For students to incorporate these skills appropriately, they must receive instruction. A 3rd grade student creating a poster board display must have instruction in how to effectively present information to do quality work.
ELA.K12.EE.6.1:	Use appropriate voice and tone when speaking or writing. **Clarifications:** In kindergarten and 1st grade, students learn the difference between formal and informal language. For example, the way we talk to our friends differs from the way we speak to adults. In 2nd grade and beyond, students practice appropriate social and academic language to discuss texts.
ELD.K12.ELL.SI.1:	English language learners communicate for social and instructional purposes within the school setting.

General Course Information and Notes

GENERAL NOTES

Florida's Benchmarks for Excellent Student Thinking (B.E.S.T.) Standards
This course includes Florida's B.E.S.T. ELA Expectations (EE) and Mathematical Thinking and Reasoning Standards (MTRs) for students. Florida educators should intentionally embed these standards within the content and their instruction as applicable. For guidance on the implementation of the EEs and MTRs, please visit cpalms.org/Standards/BEST_Standards.aspx and select the appropriate B.E.S.T. Standards package.

English Language Development ELD Standards Special Notes Section:
Teachers are required to provide listening, speaking, reading and writing instruction that allows English language learners (ELL) to communicate for social and instructional purposes within the school setting. For the given level of English language proficiency and with visual, graphic, or interactive support, students will interact with grade level words, expressions, sentences and discourse to process or produce language necessary for academic success. The ELD standard should specify a relevant content area concept or topic of study chosen by curriculum developers and teachers which maximizes an ELL's need for communication and social skills. To access an ELL supporting document which delineates performance definitions and descriptors, please click on the following link: cpalms.org/uploads/docs/standards/eld/SI.pdf

GENERAL INFORMATION

Course Number: 1505550

Course Path: Section: Grades PreK to 12 Education Courses > **Grade Group:** Grades 9 to 12 and Adult Education Courses > **Subject:** Physical Education > **SubSubject:** Individual and Dual >

Abbreviated Title: WRESTLING 1

Number of Credits: Half credit (.5)

Course Length: Semester (S)

Course Type: Core Academic Course

Course Level: 2

Course Status: Draft - Course Pending Approval

Grade Level(s): 9,10,11,12

Graduation Requirement: Physical Education

Educator Certifications

Physical Education (Grades 6-12)
Physical Education (Elementary and Secondary Grades K-12)

Wrestling 2 (#1505560) 2022 - And Beyond

Course Standards

Name	Description
PE.912.C.2.21:	Diagram, explain and justify the use of advanced offensive, defensive and transition strategies and tactics.
PE.912.C.2.23:	Apply appropriate technology and analyze data to evaluate, monitor and/or improve performance.
PE.912.C.2.24:	Analyze the mechanical principles as they apply to specific course activities. **Clarifications:** Some examples are balance, force and leverage.
PE.912.C.2.26:	Evaluate skill patterns of self and/or partner by detecting and correcting mechanical errors.
PE.912.C.2.28:	Interpret and apply the rules associated with specific course activities.
PE.912.L.3.2:	Participate in a variety of activities that promote the health-related components of fitness. **Clarifications:** The health-related components of fitness are cardiorespiratory endurance, muscular strength, muscular endurance, flexibility and body composition.
PE.912.M.1.5:	Apply strategies for self improvement based on individual strengths and needs.
PE.912.M.1.13:	Perform a student-designed cardiorespiratory enhancing workout.
PE.912.M.1.19:	Use correct body alignment, strength, flexibility and coordination in the performance of technical movements.
PE.912.M.1.26:	Analyze and apply offensive, defensive and transition strategies and tactics to reflect a higher order of thinking. **Clarifications:** An example is placing a shot in an open area away from opponent.
PE.912.M.1.32:	Apply sport specific skills in a variety of game settings.
PE.912.M.1.34:	Demonstrate use of the mechanical principles as they apply to specific course activities. **Clarifications:** Some examples are balance, force and leverage.
PE.912.M.1.35:	Select proper equipment and apply all appropriate safety procedures necessary for participation.
PE.912.R.5.3:	Demonstrate sportsmanship during game situations. **Clarifications:** Some examples are controlling emotions, resolving conflicts, respecting opponents and officials, and accepting both victory and defeat.
PE.912.R.5.4:	Maintain appropriate personal, social and ethical behavior while participating in a variety of physical activities. **Clarifications:** Some examples are respecting teammates, opponents and officials, and accepting both victory and defeat.
PE.912.R.5.5:	Demonstrate appropriate etiquette, care of equipment, respect for facilities and safe behaviors while participating in a variety of physical activities.
PE.912.R.6.3:	Analyze the roles of games, sports and/or physical activities in other cultures.
MA.K12.MTR.1.1:	Mathematicians who participate in effortful learning both individually and with others: • Analyze the problem in a way that makes sense given the task. • Ask questions that will help with solving the task. • Build perseverance by modifying methods as needed while solving a challenging task. • Stay engaged and maintain a positive mindset when working to solve tasks. • Help and support each other when attempting a new method or approach. **Clarifications:** Teachers who encourage students to participate actively in effortful learning both individually and with others: • Cultivate a community of growth mindset learners. • Foster perseverance in students by choosing tasks that are challenging. • Develop students' ability to analyze and problem solve. • Recognize students' effort when solving challenging problems.
MA.K12.MTR.2.1:	Demonstrate understanding by representing problems in multiple ways. Mathematicians who demonstrate understanding by representing problems in multiple ways: • Build understanding through modeling and using manipulatives. • Represent solutions to problems in multiple ways using objects, drawings, tables, graphs and equations. • Progress from modeling problems with objects and drawings to using algorithms and equations. • Express connections between concepts and representations. • Choose a representation based on the given context or purpose. **Clarifications:** Teachers who encourage students to demonstrate understanding by representing problems in multiple ways: • Help students make connections between concepts and representations. • Provide opportunities for students to use manipulatives when investigating concepts. • Guide students from concrete to pictorial to abstract representations as understanding progresses. • Show students that various representations can have different purposes and can be useful in different situations.
	Complete tasks with mathematical fluency.

MA.K12.MTR.3.1:

Mathematicians who complete tasks with mathematical fluency:

- Select efficient and appropriate methods for solving problems within the given context.
- Maintain flexibility and accuracy while performing procedures and mental calculations.
- Complete tasks accurately and with confidence.
- Adapt procedures to apply them to a new context.
- Use feedback to improve efficiency when performing calculations.

Clarifications:
Teachers who encourage students to complete tasks with mathematical fluency:

- Provide students with the flexibility to solve problems by selecting a procedure that allows them to solve efficiently and accurately.
- Offer multiple opportunities for students to practice efficient and generalizable methods.
- Provide opportunities for students to reflect on the method they used and determine if a more efficient method could have been used.

MA.K12.MTR.4.1:

Engage in discussions that reflect on the mathematical thinking of self and others.
Mathematicians who engage in discussions that reflect on the mathematical thinking of self and others:

- Communicate mathematical ideas, vocabulary and methods effectively.
- Analyze the mathematical thinking of others.
- Compare the efficiency of a method to those expressed by others.
- Recognize errors and suggest how to correctly solve the task.
- Justify results by explaining methods and processes.
- Construct possible arguments based on evidence.

Clarifications:
Teachers who encourage students to engage in discussions that reflect on the mathematical thinking of self and others:

- Establish a culture in which students ask questions of the teacher and their peers, and error is an opportunity for learning.
- Create opportunities for students to discuss their thinking with peers.
- Select, sequence and present student work to advance and deepen understanding of correct and increasingly efficient methods.
- Develop students' ability to justify methods and compare their responses to the responses of their peers.

MA.K12.MTR.5.1:

Use patterns and structure to help understand and connect mathematical concepts.
Mathematicians who use patterns and structure to help understand and connect mathematical concepts:

- Focus on relevant details within a problem.
- Create plans and procedures to logically order events, steps or ideas to solve problems.
- Decompose a complex problem into manageable parts.
- Relate previously learned concepts to new concepts.
- Look for similarities among problems.
- Connect solutions of problems to more complicated large-scale situations.

Clarifications:
Teachers who encourage students to use patterns and structure to help understand and connect mathematical concepts:

- Help students recognize the patterns in the world around them and connect these patterns to mathematical concepts.
- Support students to develop generalizations based on the similarities found among problems.
- Provide opportunities for students to create plans and procedures to solve problems.
- Develop students' ability to construct relationships between their current understanding and more sophisticated ways of thinking.

MA.K12.MTR.6.1:

Assess the reasonableness of solutions.
Mathematicians who assess the reasonableness of solutions:

- Estimate to discover possible solutions.
- Use benchmark quantities to determine if a solution makes sense.
- Check calculations when solving problems.
- Verify possible solutions by explaining the methods used.
- Evaluate results based on the given context.

Clarifications:
Teachers who encourage students to assess the reasonableness of solutions:

- Have students estimate or predict solutions prior to solving.
- Prompt students to continually ask, "Does this solution make sense? How do you know?"
- Reinforce that students check their work as they progress within and after a task.
- Strengthen students' ability to verify solutions through justifications.

MA.K12.MTR.7.1:

Apply mathematics to real-world contexts.
Mathematicians who apply mathematics to real-world contexts:

- Connect mathematical concepts to everyday experiences.
- Use models and methods to understand, represent and solve problems.
- Perform investigations to gather data or determine if a method is appropriate. • Redesign models and methods to improve accuracy or efficiency.

Clarifications:
Teachers who encourage students to apply mathematics to real-world contexts:

- Provide opportunities for students to create models, both concrete and abstract, and perform investigations.
- Challenge students to question the accuracy of their models and methods.
- Support students as they validate conclusions by comparing them to the given situation.
- Indicate how various concepts can be applied to other disciplines.

Cite evidence to explain and justify reasoning.

Clarifications:

ELA.K12.EE.1.1:	K-1 Students include textual evidence in their oral communication with guidance and support from adults. The evidence can consist of details from the text without naming the text. During 1st grade, students learn how to incorporate the evidence in their writing. 2-3 Students include relevant textual evidence in their written and oral communication. Students should name the text when they refer to it. In 3rd grade, students should use a combination of direct and indirect citations. 4-5 Students continue with previous skills and reference comments made by speakers and peers. Students cite texts that they've directly quoted, paraphrased, or used for information. When writing, students will use the form of citation dictated by the instructor or the style guide referenced by the instructor. 6-8 Students continue with previous skills and use a style guide to create a proper citation. 9-12 Students continue with previous skills and should be aware of existing style guides and the ways in which they differ.
ELA.K12.EE.2.1:	Read and comprehend grade-level complex texts proficiently. **Clarifications:** See Text Complexity for grade-level complexity bands and a text complexity rubric.
ELA.K12.EE.3.1:	Make inferences to support comprehension. **Clarifications:** Students will make inferences before the words infer or inference are introduced. Kindergarten students will answer questions like "Why is the girl smiling?" or make predictions about what will happen based on the title page. Students will use the terms and apply them in 2nd grade and beyond.
ELA.K12.EE.4.1:	Use appropriate collaborative techniques and active listening skills when engaging in discussions in a variety of situations. **Clarifications:** In kindergarten, students learn to listen to one another respectfully. In grades 1-2, students build upon these skills by justifying what they are thinking. For example: "I think _____ because _____." The collaborative conversations are becoming academic conversations. In grades 3-12, students engage in academic conversations discussing claims and justifying their reasoning, refining and applying skills. Students build on ideas, propel the conversation, and support claims and counterclaims with evidence.
ELA.K12.EE.5.1:	Use the accepted rules governing a specific format to create quality work. **Clarifications:** Students will incorporate skills learned into work products to produce quality work. For students to incorporate these skills appropriately, they must receive instruction. A 3rd grade student creating a poster board display must have instruction in how to effectively present information to do quality work.
ELA.K12.EE.6.1:	Use appropriate voice and tone when speaking or writing. **Clarifications:** In kindergarten and 1st grade, students learn the difference between formal and informal language. For example, the way we talk to our friends differs from the way we speak to adults. In 2nd grade and beyond, students practice appropriate social and academic language to discuss texts.
ELD.K12.ELL.SI.1:	English language learners communicate for social and instructional purposes within the school setting.

General Course Information and Notes

GENERAL NOTES

Florida's Benchmarks for Excellent Student Thinking (B.E.S.T.) Standards
This course includes Florida's B.E.S.T. ELA Expectations (EE) and Mathematical Thinking and Reasoning Standards (MTRs) for students. Florida educators should intentionally embed these standards within the content and their instruction as applicable. For guidance on the implementation of the EEs and MTRs, please visit cpalms.org/Standards/BEST_Standards.aspx and select the appropriate B.E.S.T. Standards package.

English Language Development ELD Standards Special Notes Section:
Teachers are required to provide listening, speaking, reading and writing instruction that allows English language learners (ELL) to communicate for social and instructional purposes within the school setting. For the given level of English language proficiency and with visual, graphic, or interactive support, students will interact with grade level words, expressions, sentences and discourse to process or produce language necessary for academic success. The ELD standard should specify a relevant content area concept or topic of study chosen by curriculum developers and teachers which maximizes an ELL's need for communication and social skills. To access an ELL supporting document which delineates performance definitions and descriptors, please click on the following link: cpalms.org/uploads/docs/standards/eld/SI.pdf

GENERAL INFORMATION

Course Number: 1505560

Course Path: Section: Grades PreK to 12 Education Courses > **Grade Group:** Grades 9 to 12 and Adult Education Courses > **Subject:** Physical Education > **SubSubject:** Individual and Dual >

Abbreviated Title: WRESTLING 2

Number of Credits: Half credit (.5)

Course Length: Semester (S)

Course Type: Core Academic Course

Course Level: 2

Course Status: Draft - Course Pending Approval

Grade Level(s): 9,10,11,12

Graduation Requirement: Physical Education

Educator Certifications

Physical Education (Grades 6-12)
Physical Education (Elementary and Secondary Grades K-12)

HOPE-Physical Education Variation (#1506320) 2022 - And Beyond

Course Standards

Name	Description
PE.912.C.2.6:	Compare and contrast the health-related benefits of various physical activities.
PE.912.C.2.7:	Evaluate the effectiveness of specific warm-up and cool-down activities.
PE.912.C.2.8:	Differentiate between the three different types of heat illnesses associated with fluid loss. **Clarifications:** The three types of heat illnesses are heat cramps, heat exhaustion and heat stroke.
PE.912.C.2.9:	Explain the precautions to be taken when exercising in extreme weather and/or environmental conditions. **Clarifications:** Some examples of precautions are hydration and appropriate attire.
PE.912.C.2.10:	Analyze long-term benefits of regularly participating in physical activity.
PE.912.C.2.11:	Explain how each of the health-related components of fitness are improved through the application of training principles. **Clarifications:** The health-related components of fitness are cardiorespiratory endurance, muscular strength, muscular endurance, flexibility and body composition.
PE.912.C.2.12:	Compare and contrast aerobic versus anaerobic activities.
PE.912.C.2.13:	Document food intake, calories consumed and energy expended through physical activity and analyze the results.
PE.912.C.2.14:	Compare and contrast the skill-related components of fitness used in various physical activities. **Clarifications:** The skill-related components of fitness are speed, coordination, balance, power, agility and reaction time.
PE.912.C.2.15:	Calculate individual target heart-rate zone and analyze how to adjust intensity level to stay within the desired range.
PE.912.C.2.16:	Explain the methods of monitoring levels of intensity during aerobic activity. **Clarifications:** Some examples are a talk test, rate of perceived exertion and checking one's heart rate/pulse.
PE.912.C.2.17:	Assess physiological effects of exercise during and after physical activity. **Clarifications:** Some examples are breathing, resting heart rate and blood pressure.
PE.912.C.2.18:	Differentiate between fact and fallacy as it relates to consumer physical fitness products and programs. **Clarifications:** Some examples are weight-loss pills, food labels and exercise equipment.
PE.912.C.2.22:	Explain the skill-related components of fitness and how they enhance performance levels. **Clarifications:** The skill-related components of fitness are speed, coordination, balance, power, agility and reaction time.
PE.912.C.2.23:	Apply appropriate technology and analyze data to evaluate, monitor and/or improve performance.
PE.912.C.2.25:	Analyze and evaluate the risks, safety procedures, rules and equipment associated with specific course activities.
PE.912.C.2.27:	Compare and contrast how movement skills from one physical activity can be transferred and used in other physical activities. **Clarifications:** Some examples are volleyball and tennis serve, surfing and skate boarding.
PE.912.L.3.1:	Participate in a variety of physical activities to meet the recommended number of minutes of moderate to vigorous physical activity beyond physical education on five or more days of the week.
PE.912.L.3.2:	Participate in a variety of activities that promote the health-related components of fitness. **Clarifications:** The health-related components of fitness are cardiorespiratory endurance, muscular strength, muscular endurance, flexibility and body composition.
PE.912.L.3.3:	Identify a variety of activities that promote effective stress management.
PE.912.L.3.4:	Identify the in-school opportunities for participation in a variety of physical activities.
PE.912.L.3.5:	Identify the community opportunities for participation in a variety of physical activities.
PE.912.L.3.6:	Identify risks and safety factors that may affect physical activity throughout life.
PE.912.L.4.1:	Design a personal fitness program. **Clarifications:** Some examples of things to consider when designing a personal fitness program are timelines and current fitness level.
PE.912.L.4.2:	Identify ways to self-assess and modify a personal fitness program.
PE.912.L.4.3:	Identify strategies for setting goals when developing a personal fitness program.
PE.912.L.4.4:	Use available technology to assess, design and evaluate a personal fitness program.
PE.912.L.4.5:	Apply the principles of training to personal fitness goals. **Clarifications:** Some examples of training principles are overload, specificity and progression.

PE.912.L.4.6:	Identify health-related problems associated with low levels of cardiorespiratory endurance, muscular strength and endurance, flexibility and body composition.
PE.912.L.4.7:	Evaluate how to make changes in an individual wellness plan as lifestyle changes occur.
PE.912.M.1.12:	Select and perform complex movements using a variety of equipment which lead to improved or maintained muscular strength and endurance. **Clarifications:** An example is performing plyometrics.
PE.912.M.1.13:	Perform a student-designed cardiorespiratory enhancing workout.
PE.912.M.1.14:	Utilize technology to assess, enhance and maintain health and skill-related fitness levels. **Clarifications:** Some examples of technology are Excel spreadsheets or web based programs to chart or log activities, heart rate monitors, videotapes or digital cameras.
PE.912.M.1.15:	Select and apply sport/activity specific warm-up and cool-down techniques.
PE.912.M.1.16:	Apply the principles of training and conditioning to accommodate individual needs and strengths. **Clarifications:** Some examples of training principles are overload, specificity and progression.
PE.912.M.1.19:	Use correct body alignment, strength, flexibility and coordination in the performance of technical movements.
PE.912.M.1.33:	Practice complex motor activities in order to improve performance.
PE.912.M.1.34:	Demonstrate use of the mechanical principles as they apply to specific course activities. **Clarifications:** Some examples are balance, force and leverage.
PE.912.M.1.35:	Select proper equipment and apply all appropriate safety procedures necessary for participation.
PE.912.R.5.2:	Develop strategies for including persons of diverse backgrounds and abilities while participating in a variety of physical activities.
PE.912.R.5.3:	Demonstrate sportsmanship during game situations. **Clarifications:** Some examples are controlling emotions, resolving conflicts, respecting opponents and officials, and accepting both victory and defeat.
PE.912.R.5.4:	Maintain appropriate personal, social and ethical behavior while participating in a variety of physical activities. **Clarifications:** Some examples are respecting teammates, opponents and officials, and accepting both victory and defeat.
PE.912.R.5.5:	Demonstrate appropriate etiquette, care of equipment, respect for facilities and safe behaviors while participating in a variety of physical activities.
PE.912.R.6.1:	Discuss opportunities for participation in a variety of physical activities outside of the school setting that contribute to personal enjoyment and the attainment or maintenance of a healthy lifestyle.
PE.912.R.6.2:	Analyze physical activities from which benefits can be derived. **Clarifications:** Some examples of potential benefits are physical, mental, emotional and social.
PE.912.R.6.3:	Analyze the roles of games, sports and/or physical activities in other cultures.
HE.912.C.1.2:	Interpret the significance of interrelationships in mental/emotional, physical, and social health. **Clarifications:** Substance abuse, eating disorders, sexual behaviors, healthy/unhealthy relationships, self-esteem, stress/anger management, and regular exercise.
HE.912.C.1.4:	Propose strategies to reduce or prevent injuries and health problems. **Clarifications:** Mandatory passenger-restraint/helmet laws, refusal skills, mandatory immunizations, healthy relationship skills, and improved inspection of food sources.
HE.912.C.1.5:	Analyze strategies for prevention, detection, and treatment of communicable and chronic diseases. **Clarifications:** Health prevention, detection, and treatment of: breast and testicular cancer, suicide, obesity, and industrial-related chronic disease.
HE.912.C.1.7:	Analyze how heredity and family history can impact personal health. **Clarifications:** Drug use, family obesity, heart disease, mental health, and non-communicable illness or disease.
HE.912.C.1.8:	Assess the degree of susceptibility to injury, illness, or death if engaging in unhealthy/risky behaviors. **Clarifications:** Risks associated with alcohol abuse, including poison, date rape, and death; cancer and chronic lung disease related to tobacco use; overdose from drug use; child abuse or neglect; and dating violence.
HE.912.C.2.1:	Analyze how the family influences the health of individuals. **Clarifications:** Nutritional management of meals, composition of and relationships within families, and health-insurance status.
HE.912.C.2.2:	Compare how peers influence healthy and unhealthy behaviors. **Clarifications:** Binge drinking and social groups, sexual coercion [pressure, force, or manipulation] by a dating partner, students' recommendations for school vending machines, healthy lifestyle, review trends in current and emerging diseases, and use of helmets and seatbelts.
HE.912.C.2.3:	Assess how the school and community can affect personal health practice and behaviors. **Clarifications:** Healthier foods, required health education, health screenings, and enforcement of "no tolerance" policies related to all forms of violence, and AED availability and training.
	Evaluate how public health policies and government regulations can influence health promotion and disease prevention.

HE.912.C.2.4:	**Clarifications:** Seat-belt enforcement, underage alcohol sales, reporting communicable diseases, child care, and AED availability.
HE.912.C.2.5:	Evaluate the effect of media on personal and family health. **Clarifications:** Compares brand-name/store-brand items in home, analyzes television viewing habits, identifies effective PSAs, consumer skills, advertisements of health-related community resources, participation in risky behaviors, and deconstructs media to identify promotion of unhealthy stereotypes, and normalization of violence.
HE.912.C.2.6:	Evaluate the impact of technology on personal, family, and community health. **Clarifications:** Automated external defibrillator in the community, pedestrian crosswalks with audible directions, type of information requested from local 211/hotlines or websites, consumer websites, Internet safety, and disease prevention and control.
HE.912.C.2.7:	Analyze how culture supports and challenges health beliefs, practices, and behaviors. **Clarifications:** Various cultures' dietary patterns, rites of passage, courtship practices, family roles, personal relationships, ethics, and parenting.
HE.912.C.2.8:	Analyze how the perceptions of norms influence healthy and unhealthy behaviors. **Clarifications:** Driving over the speed limit, teen parenting, binge drinking, relationships, parenting, health information, environmental practices, and media messages.
HE.912.C.2.9:	Evaluate the influence of personal values, attitudes, and beliefs about individual health practices and behaviors. **Clarifications:** Social conformity, self-discipline, and impulse vs. delayed gratification.
HE.912.P.7.1:	Analyze the role of individual responsibility in enhancing health. **Clarifications:** Food choices, media messages, future impact of lifestyle choices, individual responsibility for health protection, and stress management.
HE.912.P.7.2:	Evaluate healthy practices and behaviors that will maintain or improve health and reduce health risks. **Clarifications:** Lifestyle choices: drug use/abuse, healthy diet, controlling modes of transmission of infectious agents, riding with impaired drivers, seeking mental-health services when needed, sexual behavior, and engaging in healthy relationships.
HE.912.P.8.1:	Demonstrate how to influence and support others in making positive health choices. **Clarifications:** Avoidance of underage drinking, prevention of driving under the influence, suicide prevention, promotion of healthy dating/personal relationships, responsible parenting, disease prevention, and promotion of first-aid training.
HE.912.P.8.3:	Work cooperatively as an advocate for improving personal, family, and community health. **Clarifications:** Support local availability of healthy food options; environmentally friendly shopping; victim, drug or teen court advocacy; advocate for peer-led abuse-prevention education programs, community resource information; and home/school safety.
MA.K12.MTR.1.1:	Mathematicians who participate in effortful learning both individually and with others: • Analyze the problem in a way that makes sense given the task. • Ask questions that will help with solving the task. • Build perseverance by modifying methods as needed while solving a challenging task. • Stay engaged and maintain a positive mindset when working to solve tasks. • Help and support each other when attempting a new method or approach. **Clarifications:** Teachers who encourage students to participate actively in effortful learning both individually and with others: • Cultivate a community of growth mindset learners. • Foster perseverance in students by choosing tasks that are challenging. • Develop students' ability to analyze and problem solve. • Recognize students' effort when solving challenging problems.
MA.K12.MTR.2.1:	Demonstrate understanding by representing problems in multiple ways. Mathematicians who demonstrate understanding by representing problems in multiple ways: • Build understanding through modeling and using manipulatives. • Represent solutions to problems in multiple ways using objects, drawings, tables, graphs and equations. • Progress from modeling problems with objects and drawings to using algorithms and equations. • Express connections between concepts and representations. • Choose a representation based on the given context or purpose. **Clarifications:** Teachers who encourage students to demonstrate understanding by representing problems in multiple ways: • Help students make connections between concepts and representations. • Provide opportunities for students to use manipulatives when investigating concepts. • Guide students from concrete to pictorial to abstract representations as understanding progresses. • Show students that various representations can have different purposes and can be useful in different situations.
	Complete tasks with mathematical fluency. Mathematicians who complete tasks with mathematical fluency: • Select efficient and appropriate methods for solving problems within the given context. • Maintain flexibility and accuracy while performing procedures and mental calculations.

MA.K12.MTR.3.1:	• Complete tasks accurately and with confidence. • Adapt procedures to apply them to a new context. • Use feedback to improve efficiency when performing calculations. **Clarifications:** Teachers who encourage students to complete tasks with mathematical fluency: • Provide students with the flexibility to solve problems by selecting a procedure that allows them to solve efficiently and accurately. • Offer multiple opportunities for students to practice efficient and generalizable methods. • Provide opportunities for students to reflect on the method they used and determine if a more efficient method could have been used.
MA.K12.MTR.4.1:	Engage in discussions that reflect on the mathematical thinking of self and others. Mathematicians who engage in discussions that reflect on the mathematical thinking of self and others: • Communicate mathematical ideas, vocabulary and methods effectively. • Analyze the mathematical thinking of others. • Compare the efficiency of a method to those expressed by others. • Recognize errors and suggest how to correctly solve the task. • Justify results by explaining methods and processes. • Construct possible arguments based on evidence. **Clarifications:** Teachers who encourage students to engage in discussions that reflect on the mathematical thinking of self and others: • Establish a culture in which students ask questions of the teacher and their peers, and error is an opportunity for learning. • Create opportunities for students to discuss their thinking with peers. • Select, sequence and present student work to advance and deepen understanding of correct and increasingly efficient methods. • Develop students' ability to justify methods and compare their responses to the responses of their peers.
MA.K12.MTR.5.1:	Use patterns and structure to help understand and connect mathematical concepts. Mathematicians who use patterns and structure to help understand and connect mathematical concepts: • Focus on relevant details within a problem. • Create plans and procedures to logically order events, steps or ideas to solve problems. • Decompose a complex problem into manageable parts. • Relate previously learned concepts to new concepts. • Look for similarities among problems. • Connect solutions of problems to more complicated large-scale situations. **Clarifications:** Teachers who encourage students to use patterns and structure to help understand and connect mathematical concepts: • Help students recognize the patterns in the world around them and connect these patterns to mathematical concepts. • Support students to develop generalizations based on the similarities found among problems. • Provide opportunities for students to create plans and procedures to solve problems. • Develop students' ability to construct relationships between their current understanding and more sophisticated ways of thinking.
MA.K12.MTR.6.1:	Assess the reasonableness of solutions. Mathematicians who assess the reasonableness of solutions: • Estimate to discover possible solutions. • Use benchmark quantities to determine if a solution makes sense. • Check calculations when solving problems. • Verify possible solutions by explaining the methods used. • Evaluate results based on the given context. **Clarifications:** Teachers who encourage students to assess the reasonableness of solutions: • Have students estimate or predict solutions prior to solving. • Prompt students to continually ask, "Does this solution make sense? How do you know?" • Reinforce that students check their work as they progress within and after a task. • Strengthen students' ability to verify solutions through justifications.
MA.K12.MTR.7.1:	Apply mathematics to real-world contexts. Mathematicians who apply mathematics to real-world contexts: • Connect mathematical concepts to everyday experiences. • Use models and methods to understand, represent and solve problems. • Perform investigations to gather data or determine if a method is appropriate. • Redesign models and methods to improve accuracy or efficiency. **Clarifications:** Teachers who encourage students to apply mathematics to real-world contexts: • Provide opportunities for students to create models, both concrete and abstract, and perform investigations. • Challenge students to question the accuracy of their models and methods. • Support students as they validate conclusions by comparing them to the given situation. • Indicate how various concepts can be applied to other disciplines.
	Cite evidence to explain and justify reasoning. **Clarifications:** K-1 Students include textual evidence in their oral communication with guidance and support from adults. The evidence can consist of details from the text without naming the text. During 1st grade, students learn how to incorporate the evidence in their writing. 2-3 Students include relevant textual evidence in their written and oral communication. Students should name the text when they refer to it. In 3rd grade, students should use a combination of direct and indirect citations.

ELA.K12.EE.1.1:	4-5 Students continue with previous skills and reference comments made by speakers and peers. Students cite texts that they've directly quoted, paraphrased, or used for information. When writing, students will use the form of citation dictated by the instructor or the style guide referenced by the instructor. 6-8 Students continue with previous skills and use a style guide to create a proper citation. 9-12 Students continue with previous skills and should be aware of existing style guides and the ways in which they differ.
ELA.K12.EE.2.1:	Read and comprehend grade-level complex texts proficiently. **Clarifications:** See Text Complexity for grade-level complexity bands and a text complexity rubric.
ELA.K12.EE.3.1:	Make inferences to support comprehension. **Clarifications:** Students will make inferences before the words infer or inference are introduced. Kindergarten students will answer questions like "Why is the girl smiling?" or make predictions about what will happen based on the title page. Students will use the terms and apply them in 2nd grade and beyond.
ELA.K12.EE.4.1:	Use appropriate collaborative techniques and active listening skills when engaging in discussions in a variety of situations. **Clarifications:** In kindergarten, students learn to listen to one another respectfully. In grades 1-2, students build upon these skills by justifying what they are thinking. For example: "I think _____ because _____." The collaborative conversations are becoming academic conversations. In grades 3-12, students engage in academic conversations discussing claims and justifying their reasoning, refining and applying skills. Students build on ideas, propel the conversation, and support claims and counterclaims with evidence.
ELA.K12.EE.5.1:	Use the accepted rules governing a specific format to create quality work. **Clarifications:** Students will incorporate skills learned into work products to produce quality work. For students to incorporate these skills appropriately, they must receive instruction. A 3rd grade student creating a poster board display must have instruction in how to effectively present information to do quality work.
ELA.K12.EE.6.1:	Use appropriate voice and tone when speaking or writing. **Clarifications:** In kindergarten and 1st grade, students learn the difference between formal and informal language. For example, the way we talk to our friends differs from the way we speak to adults. In 2nd grade and beyond, students practice appropriate social and academic language to discuss texts.
ELD.K12.ELL.SI.1:	English language learners communicate for social and instructional purposes within the school setting.

General Course Information and Notes

VERSION DESCRIPTION

The purpose of this course is to develop and enhance healthy behaviors that influence lifestyle choices and student health and fitness. Students will combine the learning of principles and background information in a classroom setting with physical application of the knowledge. A majority of class time should be spent in physical activity.

In addition to the physical education content represented in the benchmarks below, specific health education topics within this course include, but are not limited to:

Mental/Social Health
Physical Activity
Components of Physical Fitness
Nutrition and Wellness Planning
Diseases and Disorders
Health Advocacy

GENERAL NOTES

Florida's Benchmarks for Excellent Student Thinking (B.E.S.T.) Standards
This course includes Florida's B.E.S.T. ELA Expectations (EE) and Mathematical Thinking and Reasoning Standards (MTRs) for students. Florida educators should intentionally embed these standards within the content and their instruction as applicable. For guidance on the implementation of the EEs and MTRs, please visit cpalms.org/Standards/BEST_Standards.aspx and select the appropriate B.E.S.T. Standards package.

English Language Development ELD Standards Special Notes Section:
Teachers are required to provide listening, speaking, reading and writing instruction that allows English language learners (ELL) to communicate for social and instructional purposes within the school setting. For the given level of English language proficiency and with visual, graphic, or interactive support, students will interact with grade level words, expressions, sentences and discourse to process or produce language necessary for academic success. The ELD standard should specify a relevant content area concept or topic of study chosen by curriculum developers and teachers which maximizes an ELL's need for communication and social skills. To access an ELL supporting document which delineates performance definitions and descriptors, please click on the following link: cpalms.org/uploads/docs/standards/eld/SI.pdf

GENERAL INFORMATION

Course Number: 1506320

Course Path: Section: Grades PreK to 12 Education Courses > **Grade Group:** Grades 9 to 12 and Adult Education Courses > **Subject:** Physical Education > **SubSubject:** Wellness Education >

Abbreviated Title: HOPE-PE V

Number of Credits: One (1) credit

Course Length: Year (Y)

Course Type: Core Academic Course

Course Level: 2

Course Status: Draft - Course Pending Approval

Grade Level(s): 9,10,11,12

Graduation Requirement: Physical Education

Educator Certifications

Physical Education (Grades 6-12)
Physical Education (Elementary and Secondary Grades K-12)

M/J Fitness - Grade 6 (#1508000) 2022 - And Beyond

Course Standards

Name	Description
PE.6.C.2.1:	Identify at least two movements or activities which will lead to improvement in each of the health-related components of fitness. **Clarifications:** The health-related components of fitness are cardiorespiratory endurance, muscular strength, muscular endurance, flexibility and body composition.
PE.6.C.2.2:	List safety procedures that should be followed when engaging in activities to improve the health-related components of fitness. **Clarifications:** The health-related components of fitness are cardiorespiratory endurance, muscular strength, muscular endurance, flexibility and body composition.
PE.6.C.2.3:	Describe how each of the health-related components of fitness are improved through the application of training principles. **Clarifications:** The health-related components of fitness are cardiorespiratory endurance, muscular strength, muscular endurance, flexibility and body composition.
PE.6.C.2.4:	Describe the long-term benefits of regular physical activity. **Clarifications:** Some examples of types of long-term benefits are physical, cognitive and emotional.
PE.6.C.2.5:	Describe the training principles of overload, progression and specificity.
PE.6.C.2.6:	Classify activities as aerobic or anaerobic.
PE.6.C.2.7:	Determine personal target heart-rate zone and explain how to adjust intensity level to stay within the desired range.
PE.6.C.2.8:	List methods of monitoring intensity level during aerobic activity. **Clarifications:** Some examples of monitoring intensity levels are a talk test, rate of perceived exertion and taking one's heart rate/pulse.
PE.6.C.2.9:	Explain the effects of physical activity on heart rate during exercise, recovery phase and while the body is at rest.
PE.6.C.2.10:	Recognize the difference between fact and fallacy as it relates to consumer physical fitness products and programs. **Clarifications:** Some examples of these are weight- loss pills, food labels and exercise equipment.
PE.6.C.2.11:	Prepare a log noting the food intake, calories consumed and energy expended through physical activity and describe results.
PE.6.C.2.12:	List the components of skill-related fitness. **Clarifications:** The components of skill-related fitness are speed, coordination, balance, power, agility and reaction time.
PE.6.C.2.13:	List appropriate warm-up and cool-down techniques and the reasons for using them.
PE.6.C.2.22:	List the three different types of heat illnesses associated with fluid loss. **Clarifications:** The three types of heat illnesses are heat cramps, heat exhaustion and heat stroke.
PE.6.L.3.1:	Participate in moderate physical activity on a daily basis.
PE.6.L.3.2:	Participate in vigorous physical activity on a daily basis.
PE.6.L.3.3:	Participate in a variety of fitness, wellness, gymnastics and dance activities that promote the components of health-related fitness. **Clarifications:** The health-related components of fitness are cardiorespiratory endurance, muscular strength, muscular endurance, flexibility and body composition.
PE.6.L.3.6:	Identify a variety of fitness, wellness, gymnastics and dance activities that promote stress management.
PE.6.L.4.1:	Create, implement and assess a personal fitness program in collaboration with a teacher.
PE.6.L.4.2:	Develop goals and strategies for a personal physical fitness program.
PE.6.L.4.3:	Use available technology to assess, design and evaluate a personal physical-activity plan.
PE.6.L.4.4:	Develop a personal fitness program including a variety of physical activities.
PE.6.L.4.5:	Identify health-related problems associated with low levels of cardiorespiratory endurance, muscular strength, muscular endurance, flexibility and body composition.
PE.6.M.1.1:	Demonstrate movements designed to improve and maintain cardiorespiratory endurance, muscular strength and endurance, flexibility and proper body composition.
PE.6.M.1.2:	Perform at least three different activities that achieve target heart rate.
PE.6.M.1.3:	Demonstrate the principles of training (overload, specificity and progression) and conditioning (frequency, intensity, time and type) for specific physical activities.
PE.6.M.1.5:	Perform movements using a variety of equipment which lead to improved or maintained muscular strength and endurance.
PE.6.M.1.11:	Apply proper warm-up and cool-down techniques.
PE.6.M.1.12:	Use proper safety practices. **Clarifications:** Some examples of safety practices are the use of sun screen, hydration, selection of clothing and correct biomechanics.

PE.6.R.5.1:	List ways that peer pressure can be positive and negative.
PE.6.R.5.2:	Demonstrate acceptance and respect for persons of diverse backgrounds and abilities in physical-activity settings.
PE.6.R.5.3:	Demonstrate responsible behaviors during physical activities. **Clarifications:** Some examples of responsible behaviors are controlling emotions, resolving conflicts, respecting opponents and officials and accepting both victory and defeat.
PE.6.R.5.4:	Describe the personal, social and ethical behaviors that apply to specific physical activities.
PE.6.R.5.5:	Demonstrate appropriate etiquette, care of equipment, respect for facilities and safe behaviors while participating in a variety of physical activities.
PE.6.R.6.1:	Identify an opportunity for participation in a physical activity outside of the school setting that contributes to personal enjoyment and the attainment or maintenance of a healthy lifestyle.
PE.6.R.6.2:	Identify the potential benefits of participation in a variety of physical activities. **Clarifications:** Some examples of potential benefits of participation are physical, mental, emotional and social.
MA.K12.MTR.1.1:	Mathematicians who participate in effortful learning both individually and with others: • Analyze the problem in a way that makes sense given the task. • Ask questions that will help with solving the task. • Build perseverance by modifying methods as needed while solving a challenging task. • Stay engaged and maintain a positive mindset when working to solve tasks. • Help and support each other when attempting a new method or approach. **Clarifications:** Teachers who encourage students to participate actively in effortful learning both individually and with others: • Cultivate a community of growth mindset learners. • Foster perseverance in students by choosing tasks that are challenging. • Develop students' ability to analyze and problem solve. • Recognize students' effort when solving challenging problems.
MA.K12.MTR.2.1:	Demonstrate understanding by representing problems in multiple ways. Mathematicians who demonstrate understanding by representing problems in multiple ways: • Build understanding through modeling and using manipulatives. • Represent solutions to problems in multiple ways using objects, drawings, tables, graphs and equations. • Progress from modeling problems with objects and drawings to using algorithms and equations. • Express connections between concepts and representations. • Choose a representation based on the given context or purpose. **Clarifications:** Teachers who encourage students to demonstrate understanding by representing problems in multiple ways: • Help students make connections between concepts and representations. • Provide opportunities for students to use manipulatives when investigating concepts. • Guide students from concrete to pictorial to abstract representations as understanding progresses. • Show students that various representations can have different purposes and can be useful in different situations.
MA.K12.MTR.3.1:	Complete tasks with mathematical fluency. Mathematicians who complete tasks with mathematical fluency: • Select efficient and appropriate methods for solving problems within the given context. • Maintain flexibility and accuracy while performing procedures and mental calculations. • Complete tasks accurately and with confidence. • Adapt procedures to apply them to a new context. • Use feedback to improve efficiency when performing calculations. **Clarifications:** Teachers who encourage students to complete tasks with mathematical fluency: • Provide students with the flexibility to solve problems by selecting a procedure that allows them to solve efficiently and accurately. • Offer multiple opportunities for students to practice efficient and generalizable methods. • Provide opportunities for students to reflect on the method they used and determine if a more efficient method could have been used.
MA.K12.MTR.4.1:	Engage in discussions that reflect on the mathematical thinking of self and others. Mathematicians who engage in discussions that reflect on the mathematical thinking of self and others: • Communicate mathematical ideas, vocabulary and methods effectively. • Analyze the mathematical thinking of others. • Compare the efficiency of a method to those expressed by others. • Recognize errors and suggest how to correctly solve the task. • Justify results by explaining methods and processes. • Construct possible arguments based on evidence. **Clarifications:** Teachers who encourage students to engage in discussions that reflect on the mathematical thinking of self and others: • Establish a culture in which students ask questions of the teacher and their peers, and error is an opportunity for learning. • Create opportunities for students to discuss their thinking with peers. • Select, sequence and present student work to advance and deepen understanding of correct and increasingly efficient methods. • Develop students' ability to justify methods and compare their responses to the responses of their peers.
	Use patterns and structure to help understand and connect mathematical concepts. Mathematicians who use patterns and structure to help understand and connect mathematical concepts:

MA.K12.MTR.5.1:	• Focus on relevant details within a problem. • Create plans and procedures to logically order events, steps or ideas to solve problems. • Decompose a complex problem into manageable parts. • Relate previously learned concepts to new concepts. • Look for similarities among problems. • Connect solutions of problems to more complicated large-scale situations. **Clarifications:** Teachers who encourage students to use patterns and structure to help understand and connect mathematical concepts: • Help students recognize the patterns in the world around them and connect these patterns to mathematical concepts. • Support students to develop generalizations based on the similarities found among problems. • Provide opportunities for students to create plans and procedures to solve problems. • Develop students' ability to construct relationships between their current understanding and more sophisticated ways of thinking.
MA.K12.MTR.6.1:	Assess the reasonableness of solutions. Mathematicians who assess the reasonableness of solutions: • Estimate to discover possible solutions. • Use benchmark quantities to determine if a solution makes sense. • Check calculations when solving problems. • Verify possible solutions by explaining the methods used. • Evaluate results based on the given context. **Clarifications:** Teachers who encourage students to assess the reasonableness of solutions: • Have students estimate or predict solutions prior to solving. • Prompt students to continually ask, "Does this solution make sense? How do you know?" • Reinforce that students check their work as they progress within and after a task. • Strengthen students' ability to verify solutions through justifications.
MA.K12.MTR.7.1:	Apply mathematics to real-world contexts. Mathematicians who apply mathematics to real-world contexts: • Connect mathematical concepts to everyday experiences. • Use models and methods to understand, represent and solve problems. • Perform investigations to gather data or determine if a method is appropriate. • Redesign models and methods to improve accuracy or efficiency. **Clarifications:** Teachers who encourage students to apply mathematics to real-world contexts: • Provide opportunities for students to create models, both concrete and abstract, and perform investigations. • Challenge students to question the accuracy of their models and methods. • Support students as they validate conclusions by comparing them to the given situation. • Indicate how various concepts can be applied to other disciplines.
ELA.K12.EE.1.1:	Cite evidence to explain and justify reasoning. **Clarifications:** K-1 Students include textual evidence in their oral communication with guidance and support from adults. The evidence can consist of details from the text without naming the text. During 1st grade, students learn how to incorporate the evidence in their writing. 2-3 Students include relevant textual evidence in their written and oral communication. Students should name the text when they refer to it. In 3rd grade, students should use a combination of direct and indirect citations. 4-5 Students continue with previous skills and reference comments made by speakers and peers. Students cite texts that they've directly quoted, paraphrased, or used for information. When writing, students will use the form of citation dictated by the instructor or the style guide referenced by the instructor. 6-8 Students continue with previous skills and use a style guide to create a proper citation. 9-12 Students continue with previous skills and should be aware of existing style guides and the ways in which they differ.
ELA.K12.EE.2.1:	Read and comprehend grade-level complex texts proficiently. **Clarifications:** See Text Complexity for grade-level complexity bands and a text complexity rubric.
ELA.K12.EE.3.1:	Make inferences to support comprehension. **Clarifications:** Students will make inferences before the words infer or inference are introduced. Kindergarten students will answer questions like "Why is the girl smiling?" or make predictions about what will happen based on the title page. Students will use the terms and apply them in 2nd grade and beyond.
ELA.K12.EE.4.1:	Use appropriate collaborative techniques and active listening skills when engaging in discussions in a variety of situations. **Clarifications:** In kindergarten, students learn to listen to one another respectfully. In grades 1-2, students build upon these skills by justifying what they are thinking. For example: "I think _____ because _____." The collaborative conversations are becoming academic conversations. In grades 3-12, students engage in academic conversations discussing claims and justifying their reasoning, refining and applying skills. Students build on ideas, propel the conversation, and support claims and counterclaims with evidence.
	Use the accepted rules governing a specific format to create quality work. **Clarifications:**

ELA.K12.EE.5.1:	Students will incorporate skills learned into work products to produce quality work. For students to incorporate these skills appropriately, they must receive instruction. A 3rd grade student creating a poster board display must have instruction in how to effectively present information to do quality work.
ELA.K12.EE.6.1:	Use appropriate voice and tone when speaking or writing. **Clarifications:** In kindergarten and 1st grade, students learn the difference between formal and informal language. For example, the way we talk to our friends differs from the way we speak to adults. In 2nd grade and beyond, students practice appropriate social and academic language to discuss texts.
HE.6.B.3.1:	Examine the validity of health information, and determine the cost of health products, and services. **Clarifications:** Advertisements, Internet, infomercials, articles, flyers, diet supplements, generic vs. name brand, individual fitness plan vs. gym membership, and private lessons vs. recreational play.
HE.6.B.6.1:	Use various methods to measure personal health status. **Clarifications:** BMI, surveys, heart-rate monitors, pedometer, blood-pressure cuff, and stress-management techniques.
HE.6.P.7.1:	Explain the importance of assuming responsibility for personal-health behaviors. **Clarifications:** Medical/dental checkups, resisting peer pressure, and healthy relationships.
ELD.K12.ELL.SI.1:	English language learners communicate for social and instructional purposes within the school setting.

General Course Information and Notes

VERSION DESCRIPTION

This fitness course is designed for 6th grade students and intended to be 18 weeks in length. The purpose of this course is to provide students with the knowledge, skills, and values they need to become healthy and physically active for a lifetime. This course addresses both the health and skill-related components of physical fitness which are critical for students' success.

GENERAL NOTES

Instructional Practices

Teaching from a well-written, grade-level textbook enhances students' content area knowledge and also strengthens their ability to comprehend longer, complex reading passages on any topic for any reason. Using the following instructional practices also helps student learning:

- Reading assignments from longer text passages as well as shorter ones when text is extremely complex.
- Making close reading and rereading of texts central to lessons.
- Asking high-level, text-specific questions and requiring high-level, complex tasks and assignments.
- Requiring students to support answers with evidence from the text.
- Providing extensive text-based research and writing opportunities (claims and evidence).

Florida's Benchmarks for Excellent Student Thinking (B.E.S.T.) Standards
This course includes Florida's B.E.S.T. ELA Expectations (EE) and Mathematical Thinking and Reasoning Standards (MTRs) for students. Florida educators should intentionally embed these standards within the content and their instruction as applicable. For guidance on the implementation of the EEs and MTRs, please visit cpalms.org/Standards/BEST_Standards.aspx and select the appropriate B.E.S.T. Standards package.

English Language Development ELD Standards Special Notes Section:
Teachers are required to provide listening, speaking, reading and writing instruction that allows English language learners (ELL) to communicate for social and instructional purposes within the school setting. For the given level of English language proficiency and with visual, graphic, or interactive support, students will interact with grade level words, expressions, sentences and discourse to process or produce language necessary for academic success. The ELD standard should specify a relevant content area concept or topic of study chosen by curriculum developers and teachers which maximizes an ELL's need for communication and social skills. To access an ELL supporting document which delineates performance definitions and descriptors, please click on the following link: cpalms.org/uploads/docs/standards/eld/SI.pdf

QUALIFICATIONS

As well as any certification requirements listed on the course description, the following qualifications may also be acceptable for the course:

Any field when certification reflects a bachelor or higher degree.

GENERAL INFORMATION

Course Path: Section: Grades PreK to 12 Education

Course Number: 1508000

Courses > **Grade Group:** Grades 6 to 8 Education
Courses > **Subject:** Physical Education >
SubSubject: General >
Abbreviated Title: M/J FITNESS GRADE 6
Course Length: Semester (S)

Course Type: Elective Course
Course Status: Draft - Course Pending Approval
Grade Level(s): 6

M/J Education Gymanstics/Educational Dance - Grade 6 (#1508010) 2022 - And Beyond

Course Standards

Name	Description
PE.6.C.2.12:	List the components of skill-related fitness. **Clarifications:** The components of skill-related fitness are speed, coordination, balance, power, agility and reaction time.
PE.6.C.2.13:	List appropriate warm-up and cool-down techniques and the reasons for using them.
PE.6.C.2.14:	List terminology and etiquette in educational gymnastics or dance.
PE.6.C.2.15:	Choreograph basic dance or gymnastic sequences alone, with a partner or in a small group.
PE.6.C.2.16:	Evaluate the movement performance of others.
PE.6.C.2.17:	Describe the mechanical principles of balance, force and leverage and how they relate to the performance of skills in gymnastics or dance.
PE.6.C.2.18:	List and describe the risks and safety procedures in gymnastics and dance.
PE.6.C.2.19:	Recognize the relationship between music and dance or gymnastics skills.
PE.6.C.2.20:	Know how improvisation is used to create movements for choreography.
PE.6.C.2.21:	Identify the precautions to be taken when exercising in extreme weather and/or environmental conditions.
PE.6.L.3.3:	Participate in a variety of fitness, wellness, gymnastics and dance activities that promote the components of health-related fitness. **Clarifications:** The health-related components of fitness are cardiorespiratory endurance, muscular strength, muscular endurance, flexibility and body composition.
PE.6.L.3.4:	Identify the in-school opportunities for physical activity that promote fitness, wellness, gymnastics and dance.
PE.6.L.3.5:	Identify the community opportunities for physical activity that promote fitness, wellness, gymnastics and dance.
PE.6.L.3.6:	Identify a variety of fitness, wellness, gymnastics and dance activities that promote stress management.
PE.6.M.1.5:	Perform movements using a variety of equipment which lead to improved or maintained muscular strength and endurance.
PE.6.M.1.6:	Design and perform smooth, flowing sequences of stunts, tumbling and rhythmic patterns that combine traveling, rolling, balancing and transfer of weight.
PE.6.M.1.7:	Design and perform a routine to rhythm, with a partner or a group, while incorporating gymnastic actions and various forms of locomotion on small and/or large apparatus. **Clarifications:** Some examples of gymnastics actions are rolling, balancing and step like actions. Some examples of apparatus are wedge mats, cylinders and balance beams.
PE.6.M.1.8:	Perform complex dance sequences from a variety of dances accurately and with correct technique. **Clarifications:** Some examples of dances are folk, square, step and line.
PE.6.M.1.9:	Create and perform a rhythmic movement sequence while working with a partner or group.
PE.6.M.1.10:	Design and perform different group dance and rhythm sequences that incorporate equipment.
PE.6.M.1.11:	Apply proper warm-up and cool-down techniques.
PE.6.M.1.12:	Use proper safety practices. **Clarifications:** Some examples of safety practices are the use of sun screen, hydration, selection of clothing and correct biomechanics.
PE.6.M.1.13:	Use technology to assess, enhance and maintain motor skill performance. **Clarifications:** Some examples of technology are Excel spreadsheets or web-based programs to chart or log activities, heart rate monitors, videotapes or digital cameras.
PE.6.R.5.1:	List ways that peer pressure can be positive and negative.
PE.6.R.5.2:	Demonstrate acceptance and respect for persons of diverse backgrounds and abilities in physical-activity settings.
PE.6.R.5.3:	Demonstrate responsible behaviors during physical activities. **Clarifications:** Some examples of responsible behaviors are controlling emotions, resolving conflicts, respecting opponents and officials and accepting both victory and defeat.
PE.6.R.5.4:	Describe the personal, social and ethical behaviors that apply to specific physical activities.
PE.6.R.5.5:	Demonstrate appropriate etiquette, care of equipment, respect for facilities and safe behaviors while participating in a variety of physical activities.
PE.6.R.6.1:	Identify an opportunity for participation in a physical activity outside of the school setting that contributes to personal enjoyment and the attainment or maintenance of a healthy lifestyle.
PE.6.R.6.2:	Identify the potential benefits of participation in a variety of physical activities. **Clarifications:** Some examples of potential benefits of participation are physical, mental, emotional and social.
PE.6.R.6.3:	Participate in games, sports and/or physical activities from other cultures.

Mathematicians who participate in effortful learning both individually and with others:

- Analyze the problem in a way that makes sense given the task.
- Ask questions that will help with solving the task.
- Build perseverance by modifying methods as needed while solving a challenging task.
- Stay engaged and maintain a positive mindset when working to solve tasks.
- Help and support each other when attempting a new method or approach.

MA.K12.MTR.1.1:

Clarifications:

Teachers who encourage students to participate actively in effortful learning both individually and with others:

- Cultivate a community of growth mindset learners.
- Foster perseverance in students by choosing tasks that are challenging.
- Develop students' ability to analyze and problem solve.
- Recognize students' effort when solving challenging problems.

Demonstrate understanding by representing problems in multiple ways.

Mathematicians who demonstrate understanding by representing problems in multiple ways:

- Build understanding through modeling and using manipulatives.
- Represent solutions to problems in multiple ways using objects, drawings, tables, graphs and equations.
- Progress from modeling problems with objects and drawings to using algorithms and equations.
- Express connections between concepts and representations.
- Choose a representation based on the given context or purpose.

MA.K12.MTR.2.1:

Clarifications:

Teachers who encourage students to demonstrate understanding by representing problems in multiple ways:

- Help students make connections between concepts and representations.
- Provide opportunities for students to use manipulatives when investigating concepts.
- Guide students from concrete to pictorial to abstract representations as understanding progresses.
- Show students that various representations can have different purposes and can be useful in different situations.

Complete tasks with mathematical fluency.

Mathematicians who complete tasks with mathematical fluency:

- Select efficient and appropriate methods for solving problems within the given context.
- Maintain flexibility and accuracy while performing procedures and mental calculations.
- Complete tasks accurately and with confidence.
- Adapt procedures to apply them to a new context.
- Use feedback to improve efficiency when performing calculations.

MA.K12.MTR.3.1:

Clarifications:

Teachers who encourage students to complete tasks with mathematical fluency:

- Provide students with the flexibility to solve problems by selecting a procedure that allows them to solve efficiently and accurately.
- Offer multiple opportunities for students to practice efficient and generalizable methods.
- Provide opportunities for students to reflect on the method they used and determine if a more efficient method could have been used.

Engage in discussions that reflect on the mathematical thinking of self and others.

Mathematicians who engage in discussions that reflect on the mathematical thinking of self and others:

- Communicate mathematical ideas, vocabulary and methods effectively.
- Analyze the mathematical thinking of others.
- Compare the efficiency of a method to those expressed by others.
- Recognize errors and suggest how to correctly solve the task.
- Justify results by explaining methods and processes.
- Construct possible arguments based on evidence.

MA.K12.MTR.4.1:

Clarifications:

Teachers who encourage students to engage in discussions that reflect on the mathematical thinking of self and others:

- Establish a culture in which students ask questions of the teacher and their peers, and error is an opportunity for learning.
- Create opportunities for students to discuss their thinking with peers.
- Select, sequence and present student work to advance and deepen understanding of correct and increasingly efficient methods.
- Develop students' ability to justify methods and compare their responses to the responses of their peers.

Use patterns and structure to help understand and connect mathematical concepts.

Mathematicians who use patterns and structure to help understand and connect mathematical concepts:

- Focus on relevant details within a problem.
- Create plans and procedures to logically order events, steps or ideas to solve problems.
- Decompose a complex problem into manageable parts.
- Relate previously learned concepts to new concepts.
- Look for similarities among problems.
- Connect solutions of problems to more complicated large-scale situations.

MA.K12.MTR.5.1:

Clarifications:

Teachers who encourage students to use patterns and structure to help understand and connect mathematical concepts:

- Help students recognize the patterns in the world around them and connect these patterns to mathematical concepts.
- Support students to develop generalizations based on the similarities found among problems.
- Provide opportunities for students to create plans and procedures to solve problems.
- Develop students' ability to construct relationships between their current understanding and more sophisticated ways of thinking.

Assess the reasonableness of solutions.

MA.K12.MTR.6.1:	Mathematicians who assess the reasonableness of solutions: • Estimate to discover possible solutions. • Use benchmark quantities to determine if a solution makes sense. • Check calculations when solving problems. • Verify possible solutions by explaining the methods used. • Evaluate results based on the given context. **Clarifications:** Teachers who encourage students to assess the reasonableness of solutions: • Have students estimate or predict solutions prior to solving. • Prompt students to continually ask, "Does this solution make sense? How do you know?" • Reinforce that students check their work as they progress within and after a task. • Strengthen students' ability to verify solutions through justifications.
MA.K12.MTR.7.1:	Apply mathematics to real-world contexts. Mathematicians who apply mathematics to real-world contexts: • Connect mathematical concepts to everyday experiences. • Use models and methods to understand, represent and solve problems. • Perform investigations to gather data or determine if a method is appropriate. • Redesign models and methods to improve accuracy or efficiency. **Clarifications:** Teachers who encourage students to apply mathematics to real-world contexts: • Provide opportunities for students to create models, both concrete and abstract, and perform investigations. • Challenge students to question the accuracy of their models and methods. • Support students as they validate conclusions by comparing them to the given situation. • Indicate how various concepts can be applied to other disciplines.
ELA.K12.EE.1.1:	Cite evidence to explain and justify reasoning. **Clarifications:** K-1 Students include textual evidence in their oral communication with guidance and support from adults. The evidence can consist of details from the text without naming the text. During 1st grade, students learn how to incorporate the evidence in their writing. 2-3 Students include relevant textual evidence in their written and oral communication. Students should name the text when they refer to it. In 3rd grade, students should use a combination of direct and indirect citations. 4-5 Students continue with previous skills and reference comments made by speakers and peers. Students cite texts that they've directly quoted, paraphrased, or used for information. When writing, students will use the form of citation dictated by the instructor or the style guide referenced by the instructor. 6-8 Students continue with previous skills and use a style guide to create a proper citation. 9-12 Students continue with previous skills and should be aware of existing style guides and the ways in which they differ.
ELA.K12.EE.2.1:	Read and comprehend grade-level complex texts proficiently. **Clarifications:** See Text Complexity for grade-level complexity bands and a text complexity rubric.
ELA.K12.EE.3.1:	Make inferences to support comprehension. **Clarifications:** Students will make inferences before the words infer or inference are introduced. Kindergarten students will answer questions like "Why is the girl smiling?" or make predictions about what will happen based on the title page. Students will use the terms and apply them in 2nd grade and beyond.
ELA.K12.EE.4.1:	Use appropriate collaborative techniques and active listening skills when engaging in discussions in a variety of situations. **Clarifications:** In kindergarten, students learn to listen to one another respectfully. In grades 1-2, students build upon these skills by justifying what they are thinking. For example: "I think _____ because _____." The collaborative conversations are becoming academic conversations. In grades 3-12, students engage in academic conversations discussing claims and justifying their reasoning, refining and applying skills. Students build on ideas, propel the conversation, and support claims and counterclaims with evidence.
ELA.K12.EE.5.1:	Use the accepted rules governing a specific format to create quality work. **Clarifications:** Students will incorporate skills learned into work products to produce quality work. For students to incorporate these skills appropriately, they must receive instruction. A 3rd grade student creating a poster board display must have instruction in how to effectively present information to do quality work.
ELA.K12.EE.6.1:	Use appropriate voice and tone when speaking or writing. **Clarifications:** In kindergarten and 1st grade, students learn the difference between formal and informal language. For example, the way we talk to our friends differs from the way we speak to adults. In 2nd grade and beyond, students practice appropriate social and academic language to discuss texts.
ELD.K12.ELL.SI.1:	English language learners communicate for social and instructional purposes within the school setting.
HE.6.C.2.7:	Investigate cultural changes related to health beliefs and behaviors. **Clarifications:** School breakfast programs, fast- food menus, and nutritional guidelines for snack machines, fitness programs, and school wellness programs.

General Course Information and Notes

VERSION DESCRIPTION

This course is designed for 6th grade students and intended to be 18 weeks in length. The purpose of this course is to provide students with the knowledge, skills, and values necessary to design and perform educational gymnastics and dance sequences in a variety of settings. "Educational" gymnastics is intended to have an emphasis on body awareness, body management, maximum participation, high success rates, and open-ended responses from students. Integrating fitness throughout the content is critical to the success of the course.

GENERAL NOTES

Special Notes: Instructional Practices

Teaching from a well-written, grade-level textbook enhances students' content area knowledge and also strengthens their ability to comprehend longer, complex reading passages on any topic for any reason. Using the following instructional practices also helps student learning:

1. Reading assignments from longer text passages as well as shorter ones when text is extremely complex.
2. Making close reading and rereading of texts central to lessons.
3. Asking high-level, text-specific questions and requiring high-level, complex tasks and assignments.
4. Requiring students to support answers with evidence from the text.
5. Providing extensive text-based research and writing opportunities (claims and evidence).

Florida's Benchmarks for Excellent Student Thinking (B.E.S.T.) Standards
This course includes Florida's B.E.S.T. ELA Expectations (EE) and Mathematical Thinking and Reasoning Standards (MTRs) for students. Florida educators should intentionally embed these standards within the content and their instruction as applicable. For guidance on the implementation of the EEs and MTRs, please visit cpalms.org/Standards/BEST_Standards.aspx and select the appropriate B.E.S.T. Standards package.

English Language Development ELD Standards Special Notes Section:
Teachers are required to provide listening, speaking, reading and writing instruction that allows English language learners (ELL) to communicate for social and instructional purposes within the school setting. For the given level of English language proficiency and with visual, graphic, or interactive support, students will interact with grade level words, expressions, sentences and discourse to process or produce language necessary for academic success. The ELD standard should specify a relevant content area concept or topic of study chosen by curriculum developers and teachers which maximizes an ELL's need for communication and social skills. To access an ELL supporting document which delineates performance definitions and descriptors, please click on the following link: cpalms.org/uploads/docs/standards/eld/SI.pdf

QUALIFICATIONS

As well as any certification requirements listed on the course description, the following qualifications may also be acceptable for the course:

Any field when certification reflects a bachelor or higher degree.

GENERAL INFORMATION

Course Number: 1508010

Course Path: Section: Grades PreK to 12 Education Courses > **Grade Group:** Grades 6 to 8 Education Courses > **Subject:** Physical Education > **SubSubject:** General >
Abbreviated Title: M/J EDUC GYM/DNC 6
Course Length: Semester (S)
Course Level: 2

Course Status: Draft - Course Pending Approval

Grade Level(s): 6,7,8

M/J Team Sports - Grade 7 (#1508020) 2022 - And Beyond

Course Standards

Name	Description
PE.7.C.2.1:	Identify the basic rules for team sports. **Clarifications:** Some examples are setting up to start, violating rules and keeping accurate score.
PE.7.C.2.3:	Explain basic offensive and defensive strategies in modified games or activities and team sports.
PE.7.C.2.6:	Provide feedback on skill patterns of self and partner by detecting and correcting mechanical errors.
PE.7.C.2.7:	Identify the critical elements for successful performance of a variety of sport skills.
PE.7.C.2.8:	List specific safety procedures and equipment necessary for a variety of sport skills and physical activities.
PE.7.C.2.9:	Describe how movement skills learned in one physical activity can be transferred and used in other physical activities. **Clarifications:** An example is slow-pitch softball and volleyball underhand serve.
PE.7.L.3.1:	Participate in moderate physical activity on a daily basis.
PE.7.L.3.2:	Participate in vigorous physical activity on a daily basis.
PE.7.L.3.3:	Participate in a variety of team sports, outdoor pursuits and aquatics activities that promote health-related physical fitness. **Clarifications:** The health-related components of fitness are cardiorespiratory endurance, muscular strength, muscular endurance, flexibility and body composition.
PE.7.L.3.4:	Identify the in-school opportunities for participation in team sports, outdoor pursuits and aquatics activities.
PE.7.L.3.5:	Identify the community opportunities that promote team sports, outdoor pursuits and aquatics activities.
PE.7.L.3.6:	Identify a variety of team sports, outdoor pursuits and aquatics activities that promote stress management.
PE.7.M.1.1:	Participate in modified versions of team sports demonstrating mature patterns while using a variety of manipulative skills. **Clarifications:** Some examples of manipulative skills are throwing, catching, kicking, punting, trapping, dribbling, volleying and striking.
PE.7.M.1.2:	Use basic offensive and defensive strategies while playing modified versions of a variety of sports and activities. **Clarifications:** An example of a modified version of a sport or activity is a small sided game.
PE.7.M.1.3:	Demonstrate appropriate relationships between the body and an opponent in dynamic game situations. **Clarifications:** Some examples are staying between opponent and goal and moving between opponent and the ball.
PE.7.M.1.6:	Demonstrate the critical elements in specialized skills related to a variety of team sports or outdoor pursuits activities. **Clarifications:** Some examples are overhand throw for distance/force, forearm passing in volleyball, steering a canoe, batting and the correct stance in archery.
PE.7.M.1.7:	Utilize proper equipment and implement appropriate safety procedures for participation in a variety of sports or activities.
PE.7.M.1.8:	Apply technology to evaluate, monitor and improve individual skill performance. **Clarifications:** Some examples of technology are Excel spreadsheets or web based programs to chart or log activities, heart rate monitors, videotapes and digital cameras.
PE.7.M.1.9:	Demonstrate principles of biomechanics necessary for safe and successful performance.
PE.7.R.5.1:	Identify situations in which peer pressure could negatively impact one's own behavior choices.
PE.7.R.5.2:	Demonstrate acceptance and respect for persons of diverse backgrounds and abilities in physical-activity settings.
PE.7.R.5.3:	Demonstrate responsible behaviors during physical activities. **Clarifications:** Some examples of responsible behaviors are controlling emotions, resolving conflicts, respecting opponents and officials and accepting both victory and defeat.
PE.7.R.5.4:	List examples of appropriate personal, social and ethical behaviors that apply to specific physical activities.
PE.7.R.5.5:	Demonstrate appropriate etiquette, care of equipment, respect for facilities and safe behaviors while participating in a variety of physical activities.
PE.7.R.6.1:	Identify an opportunity for participation in a physical activity outside of the school setting that contributes to personal enjoyment and the attainment or maintenance of a healthy lifestyle.
PE.7.R.6.2:	Discuss the potential benefits of participation in a variety of physical activities. **Clarifications:** Some examples of potential benefits are physical, mental, emotional and social.
PE.7.R.6.3:	Participate in games, sports and/or physical activities from other cultures.
	Mathematicians who participate in effortful learning both individually and with others: • Analyze the problem in a way that makes sense given the task. • Ask questions that will help with solving the task. • Build perseverance by modifying methods as needed while solving a challenging task. • Stay engaged and maintain a positive mindset when working to solve tasks.

MA.K12.MTR.1.1:	• Help and support each other when attempting a new method or approach. **Clarifications:** Teachers who encourage students to participate actively in effortful learning both individually and with others: • Cultivate a community of growth mindset learners. • Foster perseverance in students by choosing tasks that are challenging. • Develop students' ability to analyze and problem solve. • Recognize students' effort when solving challenging problems.
MA.K12.MTR.2.1:	Demonstrate understanding by representing problems in multiple ways. Mathematicians who demonstrate understanding by representing problems in multiple ways: • Build understanding through modeling and using manipulatives. • Represent solutions to problems in multiple ways using objects, drawings, tables, graphs and equations. • Progress from modeling problems with objects and drawings to using algorithms and equations. • Express connections between concepts and representations. • Choose a representation based on the given context or purpose. **Clarifications:** Teachers who encourage students to demonstrate understanding by representing problems in multiple ways: • Help students make connections between concepts and representations. • Provide opportunities for students to use manipulatives when investigating concepts. • Guide students from concrete to pictorial to abstract representations as understanding progresses. • Show students that various representations can have different purposes and can be useful in different situations.
MA.K12.MTR.3.1:	Complete tasks with mathematical fluency. Mathematicians who complete tasks with mathematical fluency: • Select efficient and appropriate methods for solving problems within the given context. • Maintain flexibility and accuracy while performing procedures and mental calculations. • Complete tasks accurately and with confidence. • Adapt procedures to apply them to a new context. • Use feedback to improve efficiency when performing calculations. **Clarifications:** Teachers who encourage students to complete tasks with mathematical fluency: • Provide students with the flexibility to solve problems by selecting a procedure that allows them to solve efficiently and accurately. • Offer multiple opportunities for students to practice efficient and generalizable methods. • Provide opportunities for students to reflect on the method they used and determine if a more efficient method could have been used.
MA.K12.MTR.4.1:	Engage in discussions that reflect on the mathematical thinking of self and others. Mathematicians who engage in discussions that reflect on the mathematical thinking of self and others: • Communicate mathematical ideas, vocabulary and methods effectively. • Analyze the mathematical thinking of others. • Compare the efficiency of a method to those expressed by others. • Recognize errors and suggest how to correctly solve the task. • Justify results by explaining methods and processes. • Construct possible arguments based on evidence. **Clarifications:** Teachers who encourage students to engage in discussions that reflect on the mathematical thinking of self and others: • Establish a culture in which students ask questions of the teacher and their peers, and error is an opportunity for learning. • Create opportunities for students to discuss their thinking with peers. • Select, sequence and present student work to advance and deepen understanding of correct and increasingly efficient methods. • Develop students' ability to justify methods and compare their responses to the responses of their peers.
MA.K12.MTR.5.1:	Use patterns and structure to help understand and connect mathematical concepts. Mathematicians who use patterns and structure to help understand and connect mathematical concepts: • Focus on relevant details within a problem. • Create plans and procedures to logically order events, steps or ideas to solve problems. • Decompose a complex problem into manageable parts. • Relate previously learned concepts to new concepts. • Look for similarities among problems. • Connect solutions of problems to more complicated large-scale situations. **Clarifications:** Teachers who encourage students to use patterns and structure to help understand and connect mathematical concepts: • Help students recognize the patterns in the world around them and connect these patterns to mathematical concepts. • Support students to develop generalizations based on the similarities found among problems. • Provide opportunities for students to create plans and procedures to solve problems. • Develop students' ability to construct relationships between their current understanding and more sophisticated ways of thinking.
	Assess the reasonableness of solutions. Mathematicians who assess the reasonableness of solutions: • Estimate to discover possible solutions. • Use benchmark quantities to determine if a solution makes sense. • Check calculations when solving problems.

MA.K12.MTR.6.1:	• Verify possible solutions by explaining the methods used. • Evaluate results based on the given context. **Clarifications:** Teachers who encourage students to assess the reasonableness of solutions: • Have students estimate or predict solutions prior to solving. • Prompt students to continually ask, "Does this solution make sense? How do you know?" • Reinforce that students check their work as they progress within and after a task. • Strengthen students' ability to verify solutions through justifications.
MA.K12.MTR.7.1:	Apply mathematics to real-world contexts. Mathematicians who apply mathematics to real-world contexts: • Connect mathematical concepts to everyday experiences. • Use models and methods to understand, represent and solve problems. • Perform investigations to gather data or determine if a method is appropriate. • Redesign models and methods to improve accuracy or efficiency. **Clarifications:** Teachers who encourage students to apply mathematics to real-world contexts: • Provide opportunities for students to create models, both concrete and abstract, and perform investigations. • Challenge students to question the accuracy of their models and methods. • Support students as they validate conclusions by comparing them to the given situation. • Indicate how various concepts can be applied to other disciplines.
ELA.K12.EE.1.1:	Cite evidence to explain and justify reasoning. **Clarifications:** K-1 Students include textual evidence in their oral communication with guidance and support from adults. The evidence can consist of details from the text without naming the text. During 1st grade, students learn how to incorporate the evidence in their writing. 2-3 Students include relevant textual evidence in their written and oral communication. Students should name the text when they refer to it. In 3rd grade, students should use a combination of direct and indirect citations. 4-5 Students continue with previous skills and reference comments made by speakers and peers. Students cite texts that they've directly quoted, paraphrased, or used for information. When writing, students will use the form of citation dictated by the instructor or the style guide referenced by the instructor. 6-8 Students continue with previous skills and use a style guide to create a proper citation. 9-12 Students continue with previous skills and should be aware of existing style guides and the ways in which they differ.
ELA.K12.EE.2.1:	Read and comprehend grade-level complex texts proficiently. **Clarifications:** See Text Complexity for grade-level complexity bands and a text complexity rubric.
ELA.K12.EE.3.1:	Make inferences to support comprehension. **Clarifications:** Students will make inferences before the words infer or inference are introduced. Kindergarten students will answer questions like "Why is the girl smiling?" or make predictions about what will happen based on the title page. Students will use the terms and apply them in 2nd grade and beyond.
ELA.K12.EE.4.1:	Use appropriate collaborative techniques and active listening skills when engaging in discussions in a variety of situations. **Clarifications:** In kindergarten, students learn to listen to one another respectfully. In grades 1-2, students build upon these skills by justifying what they are thinking. For example: "I think _____ because _____." The collaborative conversations are becoming academic conversations. In grades 3-12, students engage in academic conversations discussing claims and justifying their reasoning, refining and applying skills. Students build on ideas, propel the conversation, and support claims and counterclaims with evidence.
ELA.K12.EE.5.1:	Use the accepted rules governing a specific format to create quality work. **Clarifications:** Students will incorporate skills learned into work products to produce quality work. For students to incorporate these skills appropriately, they must receive instruction. A 3rd grade student creating a poster board display must have instruction in how to effectively present information to do quality work.
ELA.K12.EE.6.1:	Use appropriate voice and tone when speaking or writing. **Clarifications:** In kindergarten and 1st grade, students learn the difference between formal and informal language. For example, the way we talk to our friends differs from the way we speak to adults. In 2nd grade and beyond, students practice appropriate social and academic language to discuss texts.
ELD.K12.ELL.SI.1:	English language learners communicate for social and instructional purposes within the school setting.
HE.7.C.2.6:	Evaluate the influence of technology in locating valid health information. **Clarifications:** Specific health sites to acquire valid health information: CDC, NIH, NIDA, and local health organizations; and Internet and cell phone apps.

General Course Information and Notes

VERSION DESCRIPTION

This course is designed for 7th grade students and is intended to be 18 weeks in length. The purpose of this course is to develop the physical skills necessary to be competent in many forms of movement, knowledge of team sports concepts such as offensive and defensive strategies and tactics, and appropriate social behaviors within a team or group setting. The integration of fitness concepts throughout the content is critical to the success of this course.

GENERAL NOTES

Instructional Practices

Teaching from a well-written, grade-level textbook enhances students' content area knowledge and also strengthens their ability to comprehend longer, complex reading passages on any topic for any reason. Using the following instructional practices also helps student learning:

- Reading assignments from longer text passages as well as shorter ones when text is extremely complex.
- Making close reading and rereading of texts central to lessons.
- Asking high-level, text-specific questions and requiring high-level, complex tasks and assignments.
- Requiring students to support answers with evidence from the text.
- Providing extensive text-based research and writing opportunities (claims and evidence).

Florida's Benchmarks for Excellent Student Thinking (B.E.S.T.) Standards
This course includes Florida's B.E.S.T. ELA Expectations (EE) and Mathematical Thinking and Reasoning Standards (MTRs) for students. Florida educators should intentionally embed these standards within the content and their instruction as applicable. For guidance on the implementation of the EEs and MTRs, please visit cpalms.org/Standards/BEST_Standards.aspx and select the appropriate B.E.S.T. Standards package.

English Language Development ELD Standards Special Notes Section:
Teachers are required to provide listening, speaking, reading and writing instruction that allows English language learners (ELL) to communicate for social and instructional purposes within the school setting. For the given level of English language proficiency and with visual, graphic, or interactive support, students will interact with grade level words, expressions, sentences and discourse to process or produce language necessary for academic success. The ELD standard should specify a relevant content area concept or topic of study chosen by curriculum developers and teachers which maximizes an ELL's need for communication and social skills. To access an ELL supporting document which delineates performance definitions and descriptors, please click on the following link: cpalms.org/uploads/docs/standards/eld/SI.pdf

QUALIFICATIONS

As well as any certification requirements listed on the course description, the following qualifications may also be acceptable for the course:

Any field when certification reflects a bachelor or higher degree.

GENERAL INFORMATION

Course Number: 1508020

Course Path: Section: Grades PreK to 12 Education Courses > **Grade Group:** Grades 6 to 8 Education Courses > **Subject:** Physical Education > **SubSubject:** General >
Abbreviated Title: M/J TEAM SPORTS GRD7
Course Length: Semester (S)
Course Level: 2

Course Status: Draft - Course Pending Approval

M/J Outdoor Pursuits/Aquatics - Grade 7 (#1508030) 2022 - And Beyond

Course Standards

Name	Description
PE.7.C.2.2:	Identify the basic rules for outdoor pursuits/aquatics. **Clarifications:** Some examples are setting up to start, violating rules and keeping accurate score.
PE.7.C.2.4:	Explain basic offensive and defensive strategies in modified games or activities and outdoor pursuits/aquatics.
PE.7.C.2.5:	Identify and explain different types of safety equipment and practices relating to water activities.
PE.7.C.2.6:	Provide feedback on skill patterns of self and partner by detecting and correcting mechanical errors.
PE.7.C.2.7:	Identify the critical elements for successful performance of a variety of sport skills.
PE.7.C.2.8:	List specific safety procedures and equipment necessary for a variety of sport skills and physical activities.
PE.7.C.2.9:	Describe how movement skills learned in one physical activity can be transferred and used in other physical activities. **Clarifications:** An example is slow-pitch softball and volleyball underhand serve.
PE.7.L.3.1:	Participate in moderate physical activity on a daily basis.
PE.7.L.3.2:	Participate in vigorous physical activity on a daily basis.
PE.7.L.3.3:	Participate in a variety of team sports, outdoor pursuits and aquatics activities that promote health-related physical fitness. **Clarifications:** The health-related components of fitness are cardiorespiratory endurance, muscular strength, muscular endurance, flexibility and body composition.
PE.7.L.3.4:	Identify the in-school opportunities for participation in team sports, outdoor pursuits and aquatics activities.
PE.7.L.3.5:	Identify the community opportunities that promote team sports, outdoor pursuits and aquatics activities.
PE.7.L.3.6:	Identify a variety of team sports, outdoor pursuits and aquatics activities that promote stress management.
PE.7.M.1.2:	Use basic offensive and defensive strategies while playing modified versions of a variety of sports and activities. **Clarifications:** An example of a modified version of a sport or activity is a small sided game.
PE.7.M.1.3:	Demonstrate appropriate relationships between the body and an opponent in dynamic game situations. **Clarifications:** Some examples are staying between opponent and goal and moving between opponent and the ball.
PE.7.M.1.4:	Demonstrate introductory outdoor pursuits skills. **Clarifications:** Some examples of outdoor pursuits are archery, backpacking, orienteering, hiking, canoeing, fishing and ropes courses.
PE.7.M.1.5:	Perform aquatics activities to improve or maintain health-related fitness. **Clarifications:** Some examples of aquatic activities are water aerobics, water polo and survival swimming.
PE.7.M.1.6:	Demonstrate the critical elements in specialized skills related to a variety of team sports or outdoor pursuits activities. **Clarifications:** Some examples are overhand throw for distance/force, forearm passing in volleyball, steering a canoe, batting and the correct stance in archery.
PE.7.M.1.7:	Utilize proper equipment and implement appropriate safety procedures for participation in a variety of sports or activities.
PE.7.M.1.8:	Apply technology to evaluate, monitor and improve individual skill performance. **Clarifications:** Some examples of technology are Excel spreadsheets or web based programs to chart or log activities, heart rate monitors, videotapes and digital cameras.
PE.7.M.1.9:	Demonstrate principles of biomechanics necessary for safe and successful performance.
PE.7.R.5.1:	Identify situations in which peer pressure could negatively impact one's own behavior choices.
PE.7.R.5.2:	Demonstrate acceptance and respect for persons of diverse backgrounds and abilities in physical-activity settings.
PE.7.R.5.3:	Demonstrate responsible behaviors during physical activities. **Clarifications:** Some examples of responsible behaviors are controlling emotions, resolving conflicts, respecting opponents and officials and accepting both victory and defeat.
PE.7.R.5.4:	List examples of appropriate personal, social and ethical behaviors that apply to specific physical activities.
PE.7.R.5.5:	Demonstrate appropriate etiquette, care of equipment, respect for facilities and safe behaviors while participating in a variety of physical activities.
PE.7.R.6.1:	Identify an opportunity for participation in a physical activity outside of the school setting that contributes to personal enjoyment and the attainment or maintenance of a healthy lifestyle.
PE.7.R.6.2:	Discuss the potential benefits of participation in a variety of physical activities. **Clarifications:**

	Some examples of potential benefits are physical, mental, emotional and social.
PE.7.R.6.3:	Participate in games, sports and/or physical activities from other cultures.
MA.K12.MTR.1.1:	Mathematicians who participate in effortful learning both individually and with others: • Analyze the problem in a way that makes sense given the task. • Ask questions that will help with solving the task. • Build perseverance by modifying methods as needed while solving a challenging task. • Stay engaged and maintain a positive mindset when working to solve tasks. • Help and support each other when attempting a new method or approach. **Clarifications:** Teachers who encourage students to participate actively in effortful learning both individually and with others: • Cultivate a community of growth mindset learners. • Foster perseverance in students by choosing tasks that are challenging. • Develop students' ability to analyze and problem solve. • Recognize students' effort when solving challenging problems.
MA.K12.MTR.2.1:	Demonstrate understanding by representing problems in multiple ways. Mathematicians who demonstrate understanding by representing problems in multiple ways: • Build understanding through modeling and using manipulatives. • Represent solutions to problems in multiple ways using objects, drawings, tables, graphs and equations. • Progress from modeling problems with objects and drawings to using algorithms and equations. • Express connections between concepts and representations. • Choose a representation based on the given context or purpose. **Clarifications:** Teachers who encourage students to demonstrate understanding by representing problems in multiple ways: • Help students make connections between concepts and representations. • Provide opportunities for students to use manipulatives when investigating concepts. • Guide students from concrete to pictorial to abstract representations as understanding progresses. • Show students that various representations can have different purposes and can be useful in different situations.
MA.K12.MTR.3.1:	Complete tasks with mathematical fluency. Mathematicians who complete tasks with mathematical fluency: • Select efficient and appropriate methods for solving problems within the given context. • Maintain flexibility and accuracy while performing procedures and mental calculations. • Complete tasks accurately and with confidence. • Adapt procedures to apply them to a new context. • Use feedback to improve efficiency when performing calculations. **Clarifications:** Teachers who encourage students to complete tasks with mathematical fluency: • Provide students with the flexibility to solve problems by selecting a procedure that allows them to solve efficiently and accurately. • Offer multiple opportunities for students to practice efficient and generalizable methods. • Provide opportunities for students to reflect on the method they used and determine if a more efficient method could have been used.
MA.K12.MTR.4.1:	Engage in discussions that reflect on the mathematical thinking of self and others. Mathematicians who engage in discussions that reflect on the mathematical thinking of self and others: • Communicate mathematical ideas, vocabulary and methods effectively. • Analyze the mathematical thinking of others. • Compare the efficiency of a method to those expressed by others. • Recognize errors and suggest how to correctly solve the task. • Justify results by explaining methods and processes. • Construct possible arguments based on evidence. **Clarifications:** Teachers who encourage students to engage in discussions that reflect on the mathematical thinking of self and others: • Establish a culture in which students ask questions of the teacher and their peers, and error is an opportunity for learning. • Create opportunities for students to discuss their thinking with peers. • Select, sequence and present student work to advance and deepen understanding of correct and increasingly efficient methods. • Develop students' ability to justify methods and compare their responses to the responses of their peers.
MA.K12.MTR.5.1:	Use patterns and structure to help understand and connect mathematical concepts. Mathematicians who use patterns and structure to help understand and connect mathematical concepts: • Focus on relevant details within a problem. • Create plans and procedures to logically order events, steps or ideas to solve problems. • Decompose a complex problem into manageable parts. • Relate previously learned concepts to new concepts. • Look for similarities among problems. • Connect solutions of problems to more complicated large-scale situations. **Clarifications:** Teachers who encourage students to use patterns and structure to help understand and connect mathematical concepts: • Help students recognize the patterns in the world around them and connect these patterns to mathematical concepts. • Support students to develop generalizations based on the similarities found among problems. • Provide opportunities for students to create plans and procedures to solve problems.

	• Develop students' ability to construct relationships between their current understanding and more sophisticated ways of thinking.
MA.K12.MTR.6.1:	Assess the reasonableness of solutions. Mathematicians who assess the reasonableness of solutions: • Estimate to discover possible solutions. • Use benchmark quantities to determine if a solution makes sense. • Check calculations when solving problems. • Verify possible solutions by explaining the methods used. • Evaluate results based on the given context. **Clarifications:** Teachers who encourage students to assess the reasonableness of solutions: • Have students estimate or predict solutions prior to solving. • Prompt students to continually ask, "Does this solution make sense? How do you know?" • Reinforce that students check their work as they progress within and after a task. • Strengthen students' ability to verify solutions through justifications.
MA.K12.MTR.7.1:	Apply mathematics to real-world contexts. Mathematicians who apply mathematics to real-world contexts: • Connect mathematical concepts to everyday experiences. • Use models and methods to understand, represent and solve problems. • Perform investigations to gather data or determine if a method is appropriate. • Redesign models and methods to improve accuracy or efficiency. **Clarifications:** Teachers who encourage students to apply mathematics to real-world contexts: • Provide opportunities for students to create models, both concrete and abstract, and perform investigations. • Challenge students to question the accuracy of their models and methods. • Support students as they validate conclusions by comparing them to the given situation. • Indicate how various concepts can be applied to other disciplines.
ELA.K12.EE.1.1:	Cite evidence to explain and justify reasoning. **Clarifications:** K-1 Students include textual evidence in their oral communication with guidance and support from adults. The evidence can consist of details from the text without naming the text. During 1st grade, students learn how to incorporate the evidence in their writing. 2-3 Students include relevant textual evidence in their written and oral communication. Students should name the text when they refer to it. In 3rd grade, students should use a combination of direct and indirect citations. 4-5 Students continue with previous skills and reference comments made by speakers and peers. Students cite texts that they've directly quoted, paraphrased, or used for information. When writing, students will use the form of citation dictated by the instructor or the style guide referenced by the instructor. 6-8 Students continue with previous skills and use a style guide to create a proper citation. 9-12 Students continue with previous skills and should be aware of existing style guides and the ways in which they differ.
ELA.K12.EE.2.1:	Read and comprehend grade-level complex texts proficiently. **Clarifications:** See Text Complexity for grade-level complexity bands and a text complexity rubric.
ELA.K12.EE.3.1:	Make inferences to support comprehension. **Clarifications:** Students will make inferences before the words infer or inference are introduced. Kindergarten students will answer questions like "Why is the girl smiling?" or make predictions about what will happen based on the title page. Students will use the terms and apply them in 2nd grade and beyond.
ELA.K12.EE.4.1:	Use appropriate collaborative techniques and active listening skills when engaging in discussions in a variety of situations. **Clarifications:** In kindergarten, students learn to listen to one another respectfully. In grades 1-2, students build upon these skills by justifying what they are thinking. For example: "I think _____ because _____." The collaborative conversations are becoming academic conversations. In grades 3-12, students engage in academic conversations discussing claims and justifying their reasoning, refining and applying skills. Students build on ideas, propel the conversation, and support claims and counterclaims with evidence.
ELA.K12.EE.5.1:	Use the accepted rules governing a specific format to create quality work. **Clarifications:** Students will incorporate skills learned into work products to produce quality work. For students to incorporate these skills appropriately, they must receive instruction. A 3rd grade student creating a poster board display must have instruction in how to effectively present information to do quality work.
ELA.K12.EE.6.1:	Use appropriate voice and tone when speaking or writing. **Clarifications:** In kindergarten and 1st grade, students learn the difference between formal and informal language. For example, the way we talk to our friends differs from the way we speak to adults. In 2nd grade and beyond, students practice appropriate social and academic language to discuss texts.
ELD.K12.ELL.SI.1:	English language learners communicate for social and instructional purposes within the school setting.
HE.7.C.1.8:	Explain the likelihood of injury or illness if engaging in unhealthy/risky behaviors. **Clarifications:** Abuse of over-the-counter medications, sexually transmitted diseases and sexually transmitted infections from sexual relationships, injury, or death

	from unsupervised handling of firearms, and physical/emotional injury, or impact from abusive dating partner.

General Course Information and Notes

VERSION DESCRIPTION

This course is designed for 7th grade students and is intended to be 18 weeks in length. The purpose of this course is to provide the skills, knowledge, and motivation necessary for participation in non-traditional forms of physical activity. The integration of fitness concepts throughout the content is critical to student success in this course and in the development of a physically active lifestyle.

GENERAL NOTES

Instructional Practices

Teaching from a well-written, grade-level textbook enhances students' content area knowledge and also strengthens their ability to comprehend longer, complex reading passages on any topic for any reason. Using the following instructional practices also helps student learning:

- Reading assignments from longer text passages as well as shorter ones when text is extremely complex.
- Making close reading and rereading of texts central to lessons.
- Asking high-level, text-specific questions and requiring high-level, complex tasks and assignments.
- Requiring students to support answers with evidence from the text.
- Providing extensive text-based research and writing opportunities (claims and evidence).

Florida's Benchmarks for Excellent Student Thinking (B.E.S.T.) Standards
This course includes Florida's B.E.S.T. ELA Expectations (EE) and Mathematical Thinking and Reasoning Standards (MTRs) for students. Florida educators should intentionally embed these standards within the content and their instruction as applicable. For guidance on the implementation of the EEs and MTRs, please visit cpalms.org/Standards/BEST_Standards.aspx and select the appropriate B.E.S.T. Standards package.

English Language Development ELD Standards Special Notes Section:
Teachers are required to provide listening, speaking, reading and writing instruction that allows English language learners (ELL) to communicate for social and instructional purposes within the school setting. For the given level of English language proficiency and with visual, graphic, or interactive support, students will interact with grade level words, expressions, sentences and discourse to process or produce language necessary for academic success. The ELD standard should specify a relevant content area concept or topic of study chosen by curriculum developers and teachers which maximizes an ELL's need for communication and social skills. To access an ELL supporting document which delineates performance definitions and descriptors, please click on the following link: cpalms.org/uploads/docs/standards/eld/SI.pdf

QUALIFICATIONS

As well as any certification requirements listed on the course description, the following qualifications may also be acceptable for the course:

Any field when certification reflects a bachelor or higher degree.

GENERAL INFORMATION

Course Number: 1508030

Course Path: Section: Grades PreK to 12 Education Courses > **Grade Group:** Grades 6 to 8 Education Courses > **Subject:** Physical Education > **SubSubject:** General >
Abbreviated Title: M/J OUTDR PRSTS GRD7
Course Length: Semester (S)
Course Level: 2

Course Status: Draft - Course Pending Approval

M/J Extreme/Alternative Sports - Grade 8 (#1508040) 2022

- And Beyond

Course Standards

Name	Description
PE.8.C.2.2:	Identify basic rules for alternative/extreme sports activities. **Clarifications:** Some examples are setting up to start, violating rules and keeping accurate score.
PE.8.C.2.3:	Explain basic offensive and defensive strategies in individual/dual sports.
PE.8.C.2.5:	Provide feedback on skill patterns of self and partner by detecting and correcting mechanical errors.
PE.8.C.2.6:	Identify the critical elements for successful performance in a variety of sport skills or physical activities.
PE.8.C.2.7:	List specific safety procedures and equipment necessary for a variety of sport skills and physical activities.
PE.8.C.2.8:	Describe how movement skills and strategies learned in one physical activity can be transferred and used in other physical activities. **Clarifications:** Some examples are volleyball and tennis serve and surfing and skate boarding.
PE.8.L.3.1:	Participate in moderate physical activity on a daily basis.
PE.8.L.3.2:	Participate in vigorous physical activity on a daily basis.
PE.8.L.3.3:	Participate in a variety of individual/dual and alternative/extreme sport activities that promote health-related components of fitness. **Clarifications:** The health-related components of fitness are cardiorespiratory endurance, muscular strength, muscular endurance, flexibility and body composition.
PE.8.L.3.4:	Identify the in-school opportunities for participation in individual/dual and alternative/extreme sports.
PE.8.L.3.5:	Identify the community opportunities for participation in individual/dual and alternative/extreme sports.
PE.8.L.3.6:	Identify a variety of individual/dual and alternative/extreme sport activities that promote stress management.
PE.8.L.4.3:	Use available technology to assess, design and evaluate a personal physical fitness program.
PE.8.M.1.1:	Demonstrate competency in motor skills for a variety of individual/dual and extreme/alternative sports.
PE.8.M.1.2:	Demonstrate critical elements when striking with an object or implement.
PE.8.M.1.3:	Demonstrate body management for successful participation in a variety of modified games and activities. **Clarifications:** Some examples of body management are balance and agility.
PE.8.M.1.4:	Apply principles of biomechanics necessary for safe and successful performance.
PE.8.M.1.5:	Demonstrate appropriate speed and generation of force when distance running, sprinting, throwing, jumping, striking or kicking.
PE.8.M.1.6:	Demonstrate offensive, defensive and transition strategies and tactics.
PE.8.M.1.7:	Apply skill-related components of balance, reaction time, agility, coordination, power and speed to enhance performance levels.
PE.8.M.1.8:	Apply technology to evaluate, monitor and improve individual motor skills. **Clarifications:** Some examples of technology are Excel spreadsheets or web based programs to chart or log activities, heart rate monitors, videotapes and digital cameras.
PE.8.M.1.9:	Select and utilize appropriate safety equipment.
PE.8.R.5.1:	List ways to act independently of peer pressure during physical activities.
PE.8.R.5.2:	Develop strategies for including persons of diverse backgrounds and abilities while participating in a variety of physical activities.
PE.8.R.5.3:	Demonstrate sportsmanship during game situations. **Clarifications:** Some examples are controlling emotions, resolving conflicts, respecting opponents and officials and accepting both victory and defeat.
PE.8.R.5.4:	Maintain appropriate personal, social and ethical behavior while participating in a variety of physical activities. **Clarifications:** Some examples are respecting teammates, opponents and officials and accepting both victory and defeat.
PE.8.R.5.5:	Demonstrate appropriate etiquette, care of equipment, respect for facilities and safe behaviors while participating in a variety of physical activities.
PE.8.R.6.1:	Discuss opportunities for participation in a variety of physical activities outside of the school setting that contribute to personal enjoyment and the attainment or maintenance of a healthy lifestyle.
PE.8.R.6.2:	Describe the potential benefits of participation in a variety of physical activities. **Clarifications:** Some examples of potential benefits are physical, mental, emotional and social.
PE.8.R.6.3:	Compare and contrast games, sports and/or physical activities from other cultures.
	Mathematicians who participate in effortful learning both individually and with others: • Analyze the problem in a way that makes sense given the task. • Ask questions that will help with solving the task. • Build perseverance by modifying methods as needed while solving a challenging task.

- Stay engaged and maintain a positive mindset when working to solve tasks.
- Help and support each other when attempting a new method or approach.

MA.K12.MTR.1.1:

Clarifications:
Teachers who encourage students to participate actively in effortful learning both individually and with others:
- Cultivate a community of growth mindset learners.
- Foster perseverance in students by choosing tasks that are challenging.
- Develop students' ability to analyze and problem solve.
- Recognize students' effort when solving challenging problems.

Demonstrate understanding by representing problems in multiple ways.
Mathematicians who demonstrate understanding by representing problems in multiple ways:

- Build understanding through modeling and using manipulatives.
- Represent solutions to problems in multiple ways using objects, drawings, tables, graphs and equations.
- Progress from modeling problems with objects and drawings to using algorithms and equations.
- Express connections between concepts and representations.
- Choose a representation based on the given context or purpose.

MA.K12.MTR.2.1:

Clarifications:
Teachers who encourage students to demonstrate understanding by representing problems in multiple ways:
- Help students make connections between concepts and representations.
- Provide opportunities for students to use manipulatives when investigating concepts.
- Guide students from concrete to pictorial to abstract representations as understanding progresses.
- Show students that various representations can have different purposes and can be useful in different situations.

Complete tasks with mathematical fluency.
Mathematicians who complete tasks with mathematical fluency:

- Select efficient and appropriate methods for solving problems within the given context.
- Maintain flexibility and accuracy while performing procedures and mental calculations.
- Complete tasks accurately and with confidence.
- Adapt procedures to apply them to a new context.
- Use feedback to improve efficiency when performing calculations.

MA.K12.MTR.3.1:

Clarifications:
Teachers who encourage students to complete tasks with mathematical fluency:
- Provide students with the flexibility to solve problems by selecting a procedure that allows them to solve efficiently and accurately.
- Offer multiple opportunities for students to practice efficient and generalizable methods.
- Provide opportunities for students to reflect on the method they used and determine if a more efficient method could have been used.

Engage in discussions that reflect on the mathematical thinking of self and others.
Mathematicians who engage in discussions that reflect on the mathematical thinking of self and others:

- Communicate mathematical ideas, vocabulary and methods effectively.
- Analyze the mathematical thinking of others.
- Compare the efficiency of a method to those expressed by others.
- Recognize errors and suggest how to correctly solve the task.
- Justify results by explaining methods and processes.
- Construct possible arguments based on evidence.

MA.K12.MTR.4.1:

Clarifications:
Teachers who encourage students to engage in discussions that reflect on the mathematical thinking of self and others:
- Establish a culture in which students ask questions of the teacher and their peers, and error is an opportunity for learning.
- Create opportunities for students to discuss their thinking with peers.
- Select, sequence and present student work to advance and deepen understanding of correct and increasingly efficient methods.
- Develop students' ability to justify methods and compare their responses to the responses of their peers.

Use patterns and structure to help understand and connect mathematical concepts.
Mathematicians who use patterns and structure to help understand and connect mathematical concepts:

- Focus on relevant details within a problem.
- Create plans and procedures to logically order events, steps or ideas to solve problems.
- Decompose a complex problem into manageable parts.
- Relate previously learned concepts to new concepts.
- Look for similarities among problems.
- Connect solutions of problems to more complicated large-scale situations.

MA.K12.MTR.5.1:

Clarifications:
Teachers who encourage students to use patterns and structure to help understand and connect mathematical concepts:
- Help students recognize the patterns in the world around them and connect these patterns to mathematical concepts.
- Support students to develop generalizations based on the similarities found among problems.
- Provide opportunities for students to create plans and procedures to solve problems.
- Develop students' ability to construct relationships between their current understanding and more sophisticated ways of thinking.

Assess the reasonableness of solutions.
Mathematicians who assess the reasonableness of solutions:

- Estimate to discover possible solutions.
- Use benchmark quantities to determine if a solution makes sense.

MA.K12.MTR.6.1:	• Check calculations when solving problems. • Verify possible solutions by explaining the methods used. • Evaluate results based on the given context. **Clarifications:** Teachers who encourage students to assess the reasonableness of solutions: • Have students estimate or predict solutions prior to solving. • Prompt students to continually ask, "Does this solution make sense? How do you know?" • Reinforce that students check their work as they progress within and after a task. • Strengthen students' ability to verify solutions through justifications.
MA.K12.MTR.7.1:	Apply mathematics to real-world contexts. Mathematicians who apply mathematics to real-world contexts: • Connect mathematical concepts to everyday experiences. • Use models and methods to understand, represent and solve problems. • Perform investigations to gather data or determine if a method is appropriate. • Redesign models and methods to improve accuracy or efficiency. **Clarifications:** Teachers who encourage students to apply mathematics to real-world contexts: • Provide opportunities for students to create models, both concrete and abstract, and perform investigations. • Challenge students to question the accuracy of their models and methods. • Support students as they validate conclusions by comparing them to the given situation. • Indicate how various concepts can be applied to other disciplines.
ELA.K12.EE.1.1:	Cite evidence to explain and justify reasoning. **Clarifications:** K-1 Students include textual evidence in their oral communication with guidance and support from adults. The evidence can consist of details from the text without naming the text. During 1st grade, students learn how to incorporate the evidence in their writing. 2-3 Students include relevant textual evidence in their written and oral communication. Students should name the text when they refer to it. In 3rd grade, students should use a combination of direct and indirect citations. 4-5 Students continue with previous skills and reference comments made by speakers and peers. Students cite texts that they've directly quoted, paraphrased, or used for information. When writing, students will use the form of citation dictated by the instructor or the style guide referenced by the instructor. 6-8 Students continue with previous skills and use a style guide to create a proper citation. 9-12 Students continue with previous skills and should be aware of existing style guides and the ways in which they differ.
ELA.K12.EE.2.1:	Read and comprehend grade-level complex texts proficiently. **Clarifications:** See Text Complexity for grade-level complexity bands and a text complexity rubric.
ELA.K12.EE.3.1:	Make inferences to support comprehension. **Clarifications:** Students will make inferences before the words infer or inference are introduced. Kindergarten students will answer questions like "Why is the girl smiling?" or make predictions about what will happen based on the title page. Students will use the terms and apply them in 2nd grade and beyond.
ELA.K12.EE.4.1:	Use appropriate collaborative techniques and active listening skills when engaging in discussions in a variety of situations. **Clarifications:** In kindergarten, students learn to listen to one another respectfully. In grades 1-2, students build upon these skills by justifying what they are thinking. For example: "I think _____ because _____." The collaborative conversations are becoming academic conversations. In grades 3-12, students engage in academic conversations discussing claims and justifying their reasoning, refining and applying skills. Students build on ideas, propel the conversation, and support claims and counterclaims with evidence.
ELA.K12.EE.5.1:	Use the accepted rules governing a specific format to create quality work. **Clarifications:** Students will incorporate skills learned into work products to produce quality work. For students to incorporate these skills appropriately, they must receive instruction. A 3rd grade student creating a poster board display must have instruction in how to effectively present information to do quality work.
ELA.K12.EE.6.1:	Use appropriate voice and tone when speaking or writing. **Clarifications:** In kindergarten and 1st grade, students learn the difference between formal and informal language. For example, the way we talk to our friends differs from the way we speak to adults. In 2nd grade and beyond, students practice appropriate social and academic language to discuss texts.
ELD.K12.ELL.SI.1:	English language learners communicate for social and instructional purposes within the school setting.
HE.8.B.5.5:	Evaluate the outcomes of a health-related decision. **Clarifications:** Addiction from alcohol consumption, brain damage from inhalant use, pregnancy from sexual activity, and weight management from proper nutrition.

General Course Information and Notes

VERSION DESCRIPTION

This course is designed for 8th grade students and is intended to be 18 weeks in length. The purpose of this course is to provide the skills, knowledge, and motivation necessary for participation in non-traditional forms of physical activity. The integration of fitness concepts throughout the content is critical to student success in this course and in the development of a healthy and physically active lifestyle.

GENERAL NOTES

Instructional Practices

Teaching from a well-written, grade-level textbook enhances students' content area knowledge and also strengthens their ability to comprehend longer, complex reading passages on any topic for any reason. Using the following instructional practices also helps student learning:

1. Reading assignments from longer text passages as well as shorter ones when text is extremely complex.
2. Making close reading and rereading of texts central to lessons.
3. Asking high-level, text-specific questions and requiring high-level, complex tasks and assignments.
4. Requiring students to support answers with evidence from the text.
5. Providing extensive text-based research and writing opportunities (claims and evidence).

Florida's Benchmarks for Excellent Student Thinking (B.E.S.T.) Standards
This course includes Florida's B.E.S.T. ELA Expectations (EE) and Mathematical Thinking and Reasoning Standards (MTRs) for students. Florida educators should intentionally embed these standards within the content and their instruction as applicable. For guidance on the implementation of the EEs and MTRs, please visit cpalms.org/Standards/BEST_Standards.aspx and select the appropriate B.E.S.T. Standards package.

English Language Development ELD Standards Special Notes Section:
Teachers are required to provide listening, speaking, reading and writing instruction that allows English language learners (ELL) to communicate for social and instructional purposes within the school setting. For the given level of English language proficiency and with visual, graphic, or interactive support, students will interact with grade level words, expressions, sentences and discourse to process or produce language necessary for academic success. The ELD standard should specify a relevant content area concept or topic of study chosen by curriculum developers and teachers which maximizes an ELL's need for communication and social skills. To access an ELL supporting document which delineates performance definitions and descriptors, please click on the following link: cpalms.org/uploads/docs/standards/eld/SI.pdf

QUALIFICATIONS

As well as any certification requirements listed on the course description, the following qualifications may also be acceptable for the course:

Any field when certification reflects a bachelor or higher degree.

GENERAL INFORMATION

Course Number: 1508040

Course Path: Section: Grades PreK to 12 Education Courses > **Grade Group:** Grades 6 to 8 Education Courses > **Subject:** Physical Education > **SubSubject:** General >
Abbreviated Title: M/J EXTRME SPRTS GD8
Course Length: Semester (S)
Course Level: 2

Course Status: Draft - Course Pending Approval

M/J Individual/Dual Sports - Grade 8 (#1508050) 2022 - And Beyond

Course Standards

Name	Description
PE.8.C.2.1:	Identify basic rules for individual/dual sports. **Clarifications:** Some examples are setting up to start, violating rules and keeping accurate score.
PE.8.C.2.3:	Explain basic offensive and defensive strategies in individual/dual sports.
PE.8.C.2.5:	Provide feedback on skill patterns of self and partner by detecting and correcting mechanical errors.
PE.8.C.2.6:	Identify the critical elements for successful performance in a variety of sport skills or physical activities.
PE.8.C.2.7:	List specific safety procedures and equipment necessary for a variety of sport skills and physical activities.
PE.8.C.2.8:	Describe how movement skills and strategies learned in one physical activity can be transferred and used in other physical activities. **Clarifications:** Some examples are volleyball and tennis serve and surfing and skate boarding.
PE.8.L.3.1:	Participate in moderate physical activity on a daily basis.
PE.8.L.3.2:	Participate in vigorous physical activity on a daily basis.
PE.8.L.3.3:	Participate in a variety of individual/dual and alternative/extreme sport activities that promote health-related components of fitness. **Clarifications:** The health-related components of fitness are cardiorespiratory endurance, muscular strength, muscular endurance, flexibility and body composition.
PE.8.L.3.4:	Identify the in-school opportunities for participation in individual/dual and alternative/extreme sports.
PE.8.L.3.5:	Identify the community opportunities for participation in individual/dual and alternative/extreme sports.
PE.8.L.3.6:	Identify a variety of individual/dual and alternative/extreme sport activities that promote stress management.
PE.8.L.4.3:	Use available technology to assess, design and evaluate a personal physical fitness program.
PE.8.M.1.1:	Demonstrate competency in motor skills for a variety of individual/dual and extreme/alternative sports.
PE.8.M.1.2:	Demonstrate critical elements when striking with an object or implement.
PE.8.M.1.3:	Demonstrate body management for successful participation in a variety of modified games and activities. **Clarifications:** Some examples of body management are balance and agility.
PE.8.M.1.4:	Apply principles of biomechanics necessary for safe and successful performance.
PE.8.M.1.5:	Demonstrate appropriate speed and generation of force when distance running, sprinting, throwing, jumping, striking or kicking.
PE.8.M.1.6:	Demonstrate offensive, defensive and transition strategies and tactics.
PE.8.M.1.7:	Apply skill-related components of balance, reaction time, agility, coordination, power and speed to enhance performance levels.
PE.8.M.1.8:	Apply technology to evaluate, monitor and improve individual motor skills. **Clarifications:** Some examples of technology are Excel spreadsheets or web based programs to chart or log activities, heart rate monitors, videotapes and digital cameras.
PE.8.M.1.9:	Select and utilize appropriate safety equipment.
PE.8.R.5.1:	List ways to act independently of peer pressure during physical activities.
PE.8.R.5.2:	Develop strategies for including persons of diverse backgrounds and abilities while participating in a variety of physical activities.
PE.8.R.5.3:	Demonstrate sportsmanship during game situations. **Clarifications:** Some examples are controlling emotions, resolving conflicts, respecting opponents and officials and accepting both victory and defeat.
PE.8.R.5.4:	Maintain appropriate personal, social and ethical behavior while participating in a variety of physical activities. **Clarifications:** Some examples are respecting teammates, opponents and officials and accepting both victory and defeat.
PE.8.R.5.5:	Demonstrate appropriate etiquette, care of equipment, respect for facilities and safe behaviors while participating in a variety of physical activities.
PE.8.R.6.1:	Discuss opportunities for participation in a variety of physical activities outside of the school setting that contribute to personal enjoyment and the attainment or maintenance of a healthy lifestyle.
PE.8.R.6.2:	Describe the potential benefits of participation in a variety of physical activities. **Clarifications:** Some examples of potential benefits are physical, mental, emotional and social.
PE.8.R.6.3:	Compare and contrast games, sports and/or physical activities from other cultures.
	Mathematicians who participate in effortful learning both individually and with others: • Analyze the problem in a way that makes sense given the task. • Ask questions that will help with solving the task. • Build perseverance by modifying methods as needed while solving a challenging task.

- Stay engaged and maintain a positive mindset when working to solve tasks.
- Help and support each other when attempting a new method or approach.

MA.K12.MTR.1.1:

Clarifications:
Teachers who encourage students to participate actively in effortful learning both individually and with others:
- Cultivate a community of growth mindset learners.
- Foster perseverance in students by choosing tasks that are challenging.
- Develop students' ability to analyze and problem solve.
- Recognize students' effort when solving challenging problems.

Demonstrate understanding by representing problems in multiple ways.
Mathematicians who demonstrate understanding by representing problems in multiple ways:

- Build understanding through modeling and using manipulatives.
- Represent solutions to problems in multiple ways using objects, drawings, tables, graphs and equations.
- Progress from modeling problems with objects and drawings to using algorithms and equations.
- Express connections between concepts and representations.
- Choose a representation based on the given context or purpose.

MA.K12.MTR.2.1:

Clarifications:
Teachers who encourage students to demonstrate understanding by representing problems in multiple ways:
- Help students make connections between concepts and representations.
- Provide opportunities for students to use manipulatives when investigating concepts.
- Guide students from concrete to pictorial to abstract representations as understanding progresses.
- Show students that various representations can have different purposes and can be useful in different situations.

Complete tasks with mathematical fluency.
Mathematicians who complete tasks with mathematical fluency:

- Select efficient and appropriate methods for solving problems within the given context.
- Maintain flexibility and accuracy while performing procedures and mental calculations.
- Complete tasks accurately and with confidence.
- Adapt procedures to apply them to a new context.
- Use feedback to improve efficiency when performing calculations.

MA.K12.MTR.3.1:

Clarifications:
Teachers who encourage students to complete tasks with mathematical fluency:
- Provide students with the flexibility to solve problems by selecting a procedure that allows them to solve efficiently and accurately.
- Offer multiple opportunities for students to practice efficient and generalizable methods.
- Provide opportunities for students to reflect on the method they used and determine if a more efficient method could have been used.

Engage in discussions that reflect on the mathematical thinking of self and others.
Mathematicians who engage in discussions that reflect on the mathematical thinking of self and others:

- Communicate mathematical ideas, vocabulary and methods effectively.
- Analyze the mathematical thinking of others.
- Compare the efficiency of a method to those expressed by others.
- Recognize errors and suggest how to correctly solve the task.
- Justify results by explaining methods and processes.
- Construct possible arguments based on evidence.

MA.K12.MTR.4.1:

Clarifications:
Teachers who encourage students to engage in discussions that reflect on the mathematical thinking of self and others:
- Establish a culture in which students ask questions of the teacher and their peers, and error is an opportunity for learning.
- Create opportunities for students to discuss their thinking with peers.
- Select, sequence and present student work to advance and deepen understanding of correct and increasingly efficient methods.
- Develop students' ability to justify methods and compare their responses to the responses of their peers.

Use patterns and structure to help understand and connect mathematical concepts.
Mathematicians who use patterns and structure to help understand and connect mathematical concepts:

- Focus on relevant details within a problem.
- Create plans and procedures to logically order events, steps or ideas to solve problems.
- Decompose a complex problem into manageable parts.
- Relate previously learned concepts to new concepts.
- Look for similarities among problems.
- Connect solutions of problems to more complicated large-scale situations.

MA.K12.MTR.5.1:

Clarifications:
Teachers who encourage students to use patterns and structure to help understand and connect mathematical concepts:
- Help students recognize the patterns in the world around them and connect these patterns to mathematical concepts.
- Support students to develop generalizations based on the similarities found among problems.
- Provide opportunities for students to create plans and procedures to solve problems.
- Develop students' ability to construct relationships between their current understanding and more sophisticated ways of thinking.

Assess the reasonableness of solutions.
Mathematicians who assess the reasonableness of solutions:

- Estimate to discover possible solutions.
- Use benchmark quantities to determine if a solution makes sense.

MA.K12.MTR.6.1:	• Check calculations when solving problems. • Verify possible solutions by explaining the methods used. • Evaluate results based on the given context. **Clarifications:** Teachers who encourage students to assess the reasonableness of solutions: • Have students estimate or predict solutions prior to solving. • Prompt students to continually ask, "Does this solution make sense? How do you know?" • Reinforce that students check their work as they progress within and after a task. • Strengthen students' ability to verify solutions through justifications.
MA.K12.MTR.7.1:	Apply mathematics to real-world contexts. Mathematicians who apply mathematics to real-world contexts: • Connect mathematical concepts to everyday experiences. • Use models and methods to understand, represent and solve problems. • Perform investigations to gather data or determine if a method is appropriate. • Redesign models and methods to improve accuracy or efficiency. **Clarifications:** Teachers who encourage students to apply mathematics to real-world contexts: • Provide opportunities for students to create models, both concrete and abstract, and perform investigations. • Challenge students to question the accuracy of their models and methods. • Support students as they validate conclusions by comparing them to the given situation. • Indicate how various concepts can be applied to other disciplines.
ELA.K12.EE.1.1:	Cite evidence to explain and justify reasoning. **Clarifications:** K-1 Students include textual evidence in their oral communication with guidance and support from adults. The evidence can consist of details from the text without naming the text. During 1st grade, students learn how to incorporate the evidence in their writing. 2-3 Students include relevant textual evidence in their written and oral communication. Students should name the text when they refer to it. In 3rd grade, students should use a combination of direct and indirect citations. 4-5 Students continue with previous skills and reference comments made by speakers and peers. Students cite texts that they've directly quoted, paraphrased, or used for information. When writing, students will use the form of citation dictated by the instructor or the style guide referenced by the instructor. 6-8 Students continue with previous skills and use a style guide to create a proper citation. 9-12 Students continue with previous skills and should be aware of existing style guides and the ways in which they differ.
ELA.K12.EE.2.1:	Read and comprehend grade-level complex texts proficiently. **Clarifications:** See Text Complexity for grade-level complexity bands and a text complexity rubric.
ELA.K12.EE.3.1:	Make inferences to support comprehension. **Clarifications:** Students will make inferences before the words infer or inference are introduced. Kindergarten students will answer questions like "Why is the girl smiling?" or make predictions about what will happen based on the title page. Students will use the terms and apply them in 2nd grade and beyond.
ELA.K12.EE.4.1:	Use appropriate collaborative techniques and active listening skills when engaging in discussions in a variety of situations. **Clarifications:** In kindergarten, students learn to listen to one another respectfully. In grades 1-2, students build upon these skills by justifying what they are thinking. For example: "I think _____ because _____." The collaborative conversations are becoming academic conversations. In grades 3-12, students engage in academic conversations discussing claims and justifying their reasoning, refining and applying skills. Students build on ideas, propel the conversation, and support claims and counterclaims with evidence.
ELA.K12.EE.5.1:	Use the accepted rules governing a specific format to create quality work. **Clarifications:** Students will incorporate skills learned into work products to produce quality work. For students to incorporate these skills appropriately, they must receive instruction. A 3rd grade student creating a poster board display must have instruction in how to effectively present information to do quality work.
ELA.K12.EE.6.1:	Use appropriate voice and tone when speaking or writing. **Clarifications:** In kindergarten and 1st grade, students learn the difference between formal and informal language. For example, the way we talk to our friends differs from the way we speak to adults. In 2nd grade and beyond, students practice appropriate social and academic language to discuss texts.
ELD.K12.ELL.SI.1:	English language learners communicate for social and instructional purposes within the school setting.
HE.8.C.2.9:	Analyze the influence of personal values, attitudes, and beliefs about individual health practices and behaviors. **Clarifications:** Social conformity, desires, and impulses.

General Course Information and Notes

GENERAL NOTES

Florida's Benchmarks for Excellent Student Thinking (B.E.S.T.) Standards
This course includes Florida's B.E.S.T. ELA Expectations (EE) and Mathematical Thinking and Reasoning Standards (MTRs) for students. Florida educators should intentionally embed these standards within the content and their instruction as applicable. For guidance on the implementation of the EEs and MTRs, please visit cpalms.org/Standards/BEST_Standards.aspx and select the appropriate B.E.S.T. Standards package.

English Language Development ELD Standards Special Notes Section:
Teachers are required to provide listening, speaking, reading and writing instruction that allows English language learners (ELL) to communicate for social and instructional purposes within the school setting. For the given level of English language proficiency and with visual, graphic, or interactive support, students will interact with grade level words, expressions, sentences and discourse to process or produce language necessary for academic success. The ELD standard should specify a relevant content area concept or topic of study chosen by curriculum developers and teachers which maximizes an ELL's need for communication and social skills. To access an ELL supporting document which delineates performance definitions and descriptors, please click on the following link: cpalms.org/uploads/docs/standards/eld/SI.pdf

QUALIFICATIONS

As well as any certification requirements listed on the course description, the following qualifications may also be acceptable for the course:

Any field when certification reflects a bachelor or higher degree.

GENERAL INFORMATION

Course Number: 1508050

Course Path: Section: Grades PreK to 12 Education Courses > **Grade Group:** Grades 6 to 8 Education Courses > **Subject:** Physical Education > **SubSubject:** General >
Abbreviated Title: M/J IND/DUAL SPT GD8
Course Length: Semester (S)
Course Level: 2

Course Status: Draft - Course Pending Approval

M/J Comprehensive Physical Education Grade 6/7 (#1508060) 2022 - And Beyond

Course Standards

Name	Description
PE.6.C.2.3:	Describe how each of the health-related components of fitness are improved through the application of training principles. **Clarifications:** The health-related components of fitness are cardiorespiratory endurance, muscular strength, muscular endurance, flexibility and body composition.
PE.6.C.2.4:	Describe the long-term benefits of regular physical activity. **Clarifications:** Some examples of types of long-term benefits are physical, cognitive and emotional.
PE.6.C.2.7:	Determine personal target heart-rate zone and explain how to adjust intensity level to stay within the desired range.
PE.6.C.2.11:	Prepare a log noting the food intake, calories consumed and energy expended through physical activity and describe results.
PE.6.C.2.12:	List the components of skill-related fitness. **Clarifications:** The components of skill-related fitness are speed, coordination, balance, power, agility and reaction time.
PE.6.C.2.13:	List appropriate warm-up and cool-down techniques and the reasons for using them.
PE.6.C.2.21:	Identify the precautions to be taken when exercising in extreme weather and/or environmental conditions.
PE.6.C.2.22:	List the three different types of heat illnesses associated with fluid loss. **Clarifications:** The three types of heat illnesses are heat cramps, heat exhaustion and heat stroke.
PE.6.L.3.1:	Participate in moderate physical activity on a daily basis.
PE.6.L.3.2:	Participate in vigorous physical activity on a daily basis.
PE.6.L.3.3:	Participate in a variety of fitness, wellness, gymnastics and dance activities that promote the components of health-related fitness. **Clarifications:** The health-related components of fitness are cardiorespiratory endurance, muscular strength, muscular endurance, flexibility and body composition.
PE.6.L.3.4:	Identify the in-school opportunities for physical activity that promote fitness, wellness, gymnastics and dance.
PE.6.L.3.5:	Identify the community opportunities for physical activity that promote fitness, wellness, gymnastics and dance.
PE.6.L.3.6:	Identify a variety of fitness, wellness, gymnastics and dance activities that promote stress management.
PE.6.L.4.1:	Create, implement and assess a personal fitness program in collaboration with a teacher.
PE.6.L.4.2:	Develop goals and strategies for a personal physical fitness program.
PE.6.L.4.3:	Use available technology to assess, design and evaluate a personal physical-activity plan.
PE.6.L.4.4:	Develop a personal fitness program including a variety of physical activities.
PE.6.M.1.1:	Demonstrate movements designed to improve and maintain cardiorespiratory endurance, muscular strength and endurance, flexibility and proper body composition.
PE.6.M.1.2:	Perform at least three different activities that achieve target heart rate.
PE.6.M.1.3:	Demonstrate the principles of training (overload, specificity and progression) and conditioning (frequency, intensity, time and type) for specific physical activities.
PE.6.M.1.4:	Perform at least three activities having value for cardiorespiratory fitness.
PE.6.M.1.5:	Perform movements using a variety of equipment which lead to improved or maintained muscular strength and endurance.
PE.6.M.1.6:	Design and perform smooth, flowing sequences of stunts, tumbling and rhythmic patterns that combine traveling, rolling, balancing and transfer of weight.
PE.6.M.1.7:	Design and perform a routine to rhythm, with a partner or a group, while incorporating gymnastic actions and various forms of locomotion on small and/or large apparatus. **Clarifications:** Some examples of gymnastics actions are rolling, balancing and step like actions. Some examples of apparatus are wedge mats, cylinders and balance beams.
PE.6.M.1.9:	Create and perform a rhythmic movement sequence while working with a partner or group.
PE.6.M.1.11:	Apply proper warm-up and cool-down techniques.
PE.6.M.1.12:	Use proper safety practices. **Clarifications:** Some examples of safety practices are the use of sun screen, hydration, selection of clothing and correct biomechanics.
PE.6.M.1.13:	Use technology to assess, enhance and maintain motor skill performance. **Clarifications:** Some examples of technology are Excel spreadsheets or web-based programs to chart or log activities, heart rate monitors, videotapes or digital cameras.
PE.6.R.6.1:	Identify an opportunity for participation in a physical activity outside of the school setting that contributes to personal enjoyment and the attainment or maintenance of a healthy lifestyle.

PE.6.R.6.2:	Identify the potential benefits of participation in a variety of physical activities. **Clarifications:** Some examples of potential benefits of participation are physical, mental, emotional and social.
PE.6.R.6.3:	Participate in games, sports and/or physical activities from other cultures.
PE.7.C.2.1:	Identify the basic rules for team sports. **Clarifications:** Some examples are setting up to start, violating rules and keeping accurate score.
PE.7.C.2.3:	Explain basic offensive and defensive strategies in modified games or activities and team sports.
PE.7.C.2.6:	Provide feedback on skill patterns of self and partner by detecting and correcting mechanical errors.
PE.7.C.2.8:	List specific safety procedures and equipment necessary for a variety of sport skills and physical activities.
PE.7.C.2.9:	Describe how movement skills learned in one physical activity can be transferred and used in other physical activities. **Clarifications:** An example is slow-pitch softball and volleyball underhand serve.
PE.7.M.1.1:	Participate in modified versions of team sports demonstrating mature patterns while using a variety of manipulative skills. **Clarifications:** Some examples of manipulative skills are throwing, catching, kicking, punting, trapping, dribbling, volleying and striking.
PE.7.M.1.2:	Use basic offensive and defensive strategies while playing modified versions of a variety of sports and activities. **Clarifications:** An example of a modified version of a sport or activity is a small sided game.
PE.7.M.1.4:	Demonstrate introductory outdoor pursuits skills. **Clarifications:** Some examples of outdoor pursuits are archery, backpacking, orienteering, hiking, canoeing, fishing and ropes courses.
PE.7.M.1.7:	Utilize proper equipment and implement appropriate safety procedures for participation in a variety of sports or activities.
PE.7.M.1.8:	Apply technology to evaluate, monitor and improve individual skill performance. **Clarifications:** Some examples of technology are Excel spreadsheets or web based programs to chart or log activities, heart rate monitors, videotapes and digital cameras.
PE.7.R.5.1:	Identify situations in which peer pressure could negatively impact one's own behavior choices.
PE.7.R.5.2:	Demonstrate acceptance and respect for persons of diverse backgrounds and abilities in physical-activity settings.
PE.7.R.5.3:	Demonstrate responsible behaviors during physical activities. **Clarifications:** Some examples of responsible behaviors are controlling emotions, resolving conflicts, respecting opponents and officials and accepting both victory and defeat.
MA.K12.MTR.1.1:	Mathematicians who participate in effortful learning both individually and with others: • Analyze the problem in a way that makes sense given the task. • Ask questions that will help with solving the task. • Build perseverance by modifying methods as needed while solving a challenging task. • Stay engaged and maintain a positive mindset when working to solve tasks. • Help and support each other when attempting a new method or approach. **Clarifications:** Teachers who encourage students to participate actively in effortful learning both individually and with others: • Cultivate a community of growth mindset learners. • Foster perseverance in students by choosing tasks that are challenging. • Develop students' ability to analyze and problem solve. • Recognize students' effort when solving challenging problems.
MA.K12.MTR.2.1:	Demonstrate understanding by representing problems in multiple ways. Mathematicians who demonstrate understanding by representing problems in multiple ways: • Build understanding through modeling and using manipulatives. • Represent solutions to problems in multiple ways using objects, drawings, tables, graphs and equations. • Progress from modeling problems with objects and drawings to using algorithms and equations. • Express connections between concepts and representations. • Choose a representation based on the given context or purpose. **Clarifications:** Teachers who encourage students to demonstrate understanding by representing problems in multiple ways: • Help students make connections between concepts and representations. • Provide opportunities for students to use manipulatives when investigating concepts. • Guide students from concrete to pictorial to abstract representations as understanding progresses. • Show students that various representations can have different purposes and can be useful in different situations.
MA.K12.MTR.3.1:	Complete tasks with mathematical fluency. Mathematicians who complete tasks with mathematical fluency: • Select efficient and appropriate methods for solving problems within the given context. • Maintain flexibility and accuracy while performing procedures and mental calculations. • Complete tasks accurately and with confidence. • Adapt procedures to apply them to a new context. • Use feedback to improve efficiency when performing calculations.

	Clarifications: Teachers who encourage students to complete tasks with mathematical fluency: • Provide students with the flexibility to solve problems by selecting a procedure that allows them to solve efficiently and accurately. • Offer multiple opportunities for students to practice efficient and generalizable methods. • Provide opportunities for students to reflect on the method they used and determine if a more efficient method could have been used.
MA.K12.MTR.4.1:	Engage in discussions that reflect on the mathematical thinking of self and others. Mathematicians who engage in discussions that reflect on the mathematical thinking of self and others: • Communicate mathematical ideas, vocabulary and methods effectively. • Analyze the mathematical thinking of others. • Compare the efficiency of a method to those expressed by others. • Recognize errors and suggest how to correctly solve the task. • Justify results by explaining methods and processes. • Construct possible arguments based on evidence. **Clarifications:** Teachers who encourage students to engage in discussions that reflect on the mathematical thinking of self and others: • Establish a culture in which students ask questions of the teacher and their peers, and error is an opportunity for learning. • Create opportunities for students to discuss their thinking with peers. • Select, sequence and present student work to advance and deepen understanding of correct and increasingly efficient methods. • Develop students' ability to justify methods and compare their responses to the responses of their peers.
MA.K12.MTR.5.1:	Use patterns and structure to help understand and connect mathematical concepts. Mathematicians who use patterns and structure to help understand and connect mathematical concepts: • Focus on relevant details within a problem. • Create plans and procedures to logically order events, steps or ideas to solve problems. • Decompose a complex problem into manageable parts. • Relate previously learned concepts to new concepts. • Look for similarities among problems. • Connect solutions of problems to more complicated large-scale situations. **Clarifications:** Teachers who encourage students to use patterns and structure to help understand and connect mathematical concepts: • Help students recognize the patterns in the world around them and connect these patterns to mathematical concepts. • Support students to develop generalizations based on the similarities found among problems. • Provide opportunities for students to create plans and procedures to solve problems. • Develop students' ability to construct relationships between their current understanding and more sophisticated ways of thinking.
MA.K12.MTR.6.1:	Assess the reasonableness of solutions. Mathematicians who assess the reasonableness of solutions: • Estimate to discover possible solutions. • Use benchmark quantities to determine if a solution makes sense. • Check calculations when solving problems. • Verify possible solutions by explaining the methods used. • Evaluate results based on the given context. **Clarifications:** Teachers who encourage students to assess the reasonableness of solutions: • Have students estimate or predict solutions prior to solving. • Prompt students to continually ask, "Does this solution make sense? How do you know?" • Reinforce that students check their work as they progress within and after a task. • Strengthen students' ability to verify solutions through justifications.
MA.K12.MTR.7.1:	Apply mathematics to real-world contexts. Mathematicians who apply mathematics to real-world contexts: • Connect mathematical concepts to everyday experiences. • Use models and methods to understand, represent and solve problems. • Perform investigations to gather data or determine if a method is appropriate. • Redesign models and methods to improve accuracy or efficiency. **Clarifications:** Teachers who encourage students to apply mathematics to real-world contexts: • Provide opportunities for students to create models, both concrete and abstract, and perform investigations. • Challenge students to question the accuracy of their models and methods. • Support students as they validate conclusions by comparing them to the given situation. • Indicate how various concepts can be applied to other disciplines.
ELA.K12.EE.1.1:	Cite evidence to explain and justify reasoning. **Clarifications:** K-1 Students include textual evidence in their oral communication with guidance and support from adults. The evidence can consist of details from the text without naming the text. During 1st grade, students learn how to incorporate the evidence in their writing. 2-3 Students include relevant textual evidence in their written and oral communication. Students should name the text when they refer to it. In 3rd grade, students should use a combination of direct and indirect citations. 4-5 Students continue with previous skills and reference comments made by speakers and peers. Students cite texts that they've directly quoted, paraphrased, or used for information. When writing, students will use the form of citation dictated by the instructor or the style guide referenced by the instructor.

	6-8 Students continue with previous skills and use a style guide to create a proper citation. 9-12 Students continue with previous skills and should be aware of existing style guides and the ways in which they differ.
ELA.K12.EE.2.1:	Read and comprehend grade-level complex texts proficiently. **Clarifications:** See Text Complexity for grade-level complexity bands and a text complexity rubric.
ELA.K12.EE.3.1:	Make inferences to support comprehension. **Clarifications:** Students will make inferences before the words infer or inference are introduced. Kindergarten students will answer questions like "Why is the girl smiling?" or make predictions about what will happen based on the title page. Students will use the terms and apply them in 2nd grade and beyond.
ELA.K12.EE.4.1:	Use appropriate collaborative techniques and active listening skills when engaging in discussions in a variety of situations. **Clarifications:** In kindergarten, students learn to listen to one another respectfully. In grades 1-2, students build upon these skills by justifying what they are thinking. For example: "I think _____ because _____." The collaborative conversations are becoming academic conversations. In grades 3-12, students engage in academic conversations discussing claims and justifying their reasoning, refining and applying skills. Students build on ideas, propel the conversation, and support claims and counterclaims with evidence.
ELA.K12.EE.5.1:	Use the accepted rules governing a specific format to create quality work. **Clarifications:** Students will incorporate skills learned into work products to produce quality work. For students to incorporate these skills appropriately, they must receive instruction. A 3rd grade student creating a poster board display must have instruction in how to effectively present information to do quality work.
ELA.K12.EE.6.1:	Use appropriate voice and tone when speaking or writing. **Clarifications:** In kindergarten and 1st grade, students learn the difference between formal and informal language. For example, the way we talk to our friends differs from the way we speak to adults. In 2nd grade and beyond, students practice appropriate social and academic language to discuss texts.
HE.7.B.6.3:	Explain strategies and skills needed to assess progress and maintenance of a personal health goal. **Clarifications:** Journaling, daily checklists, calorie counting, use of pedometers, participation in support groups, and rewarding milestones.
HE.7.P.8.2:	Articulate a position on a health-related issue and support it with accurate health information. **Clarifications:** Bullying prevention, Internet safety, and nutritional choices.
ELD.K12.ELL.SI.1:	English language learners communicate for social and instructional purposes within the school setting.

General Course Information and Notes

VERSION DESCRIPTION

This course is designed for 6th and 7th grade students and intended to be 18 weeks in length. The purpose of this course is to provide a foundation of knowledge, skills, and values necessary for the development of a physically active lifestyle. The course content provides exposure to a variety of movement opportunities and experiences which includes, but is not limited to: Fitness Activities, Educational Gymnastics and Dance, and Team Sports. The integration of fitness concepts throughout the content is critical to student success in this course and in the development of a healthy and physically active lifestyle.

GENERAL NOTES

Special Notes:
Instructional Practices

Teaching from a well-written, grade-level textbook enhances students' content area knowledge and also strengthens their ability to comprehend longer, complex reading passages on any topic for any reason. Using the following instructional practices also helps student learning:

1. Reading assignments from longer text passages as well as shorter ones when text is extremely complex.
2. Making close reading and rereading of texts central to lessons.
3. Asking high-level, text-specific questions and requiring high-level, complex tasks and assignments.
4. Requiring students to support answers with evidence from the text.
5. Providing extensive text-based research and writing opportunities (claims and evidence).

Florida's Benchmarks for Excellent Student Thinking (B.E.S.T.) Standards
This course includes Florida's B.E.S.T. ELA Expectations (EE) and Mathematical Thinking and Reasoning Standards (MTRs) for students. Florida educators should intentionally embed these standards within the content and their instruction as applicable. For guidance on the implementation of the EEs and MTRs, please visit cpalms.org/Standards/BEST_Standards.aspx and select the appropriate B.E.S.T. Standards package.

English Language Development ELD Standards Special Notes Section:
Teachers are required to provide listening, speaking, reading and writing instruction that allows English language learners (ELL) to communicate for social and instructional purposes within the school setting. For the given level of English language proficiency and with visual, graphic, or interactive support, students will interact with grade level words, expressions, sentences and discourse to process or produce language necessary for academic success. The ELD standard should specify a relevant content area concept or topic of study chosen by curriculum developers and teachers which maximizes an ELL's need for communication and social skills. To access an ELL supporting document which delineates performance definitions and descriptors, please click on the following link: cpalms.org/uploads/docs/standards/eld/SI.pdf

QUALIFICATIONS

As well as any certification requirements listed on the course description, the following qualifications may also be acceptable for the course:

Any field when certification reflects a bachelor or higher degree.

GENERAL INFORMATION

Course Number: 1508060

Course Path: Section: Grades PreK to 12 Education Courses > **Grade Group:** Grades 6 to 8 Education Courses > **Subject:** Physical Education > **SubSubject:** General >
Abbreviated Title: M/J COMPRE PE GR6/7
Course Length: Semester (S)
Course Level: 2

Course Status: Draft - Course Pending Approval

M/J Comprehensive Physical Education Grade 7/8 (#1508070) 2022 - And Beyond

Course Standards

Name	Description
PE.7.C.2.6:	Provide feedback on skill patterns of self and partner by detecting and correcting mechanical errors.
PE.7.C.2.9:	Describe how movement skills learned in one physical activity can be transferred and used in other physical activities. **Clarifications:** An example is slow-pitch softball and volleyball underhand serve.
PE.7.L.3.1:	Participate in moderate physical activity on a daily basis.
PE.7.L.3.2:	Participate in vigorous physical activity on a daily basis.
PE.7.M.1.1:	Participate in modified versions of team sports demonstrating mature patterns while using a variety of manipulative skills. **Clarifications:** Some examples of manipulative skills are throwing, catching, kicking, punting, trapping, dribbling, volleying and striking.
PE.7.M.1.2:	Use basic offensive and defensive strategies while playing modified versions of a variety of sports and activities. **Clarifications:** An example of a modified version of a sport or activity is a small sided game.
PE.7.M.1.3:	Demonstrate appropriate relationships between the body and an opponent in dynamic game situations. **Clarifications:** Some examples are staying between opponent and goal and moving between opponent and the ball.
PE.7.M.1.6:	Demonstrate the critical elements in specialized skills related to a variety of team sports or outdoor pursuits activities. **Clarifications:** Some examples are overhand throw for distance/force, forearm passing in volleyball, steering a canoe, batting and the correct stance in archery.
PE.7.M.1.8:	Apply technology to evaluate, monitor and improve individual skill performance. **Clarifications:** Some examples of technology are Excel spreadsheets or web based programs to chart or log activities, heart rate monitors, videotapes and digital cameras.
PE.7.M.1.9:	Demonstrate principles of biomechanics necessary for safe and successful performance.
PE.7.R.5.1:	Identify situations in which peer pressure could negatively impact one's own behavior choices.
PE.7.R.5.2:	Demonstrate acceptance and respect for persons of diverse backgrounds and abilities in physical-activity settings.
PE.7.R.5.3:	Demonstrate responsible behaviors during physical activities. **Clarifications:** Some examples of responsible behaviors are controlling emotions, resolving conflicts, respecting opponents and officials and accepting both victory and defeat.
PE.7.R.5.4:	List examples of appropriate personal, social and ethical behaviors that apply to specific physical activities.
PE.7.R.6.2:	Discuss the potential benefits of participation in a variety of physical activities. **Clarifications:** Some examples of potential benefits are physical, mental, emotional and social.
PE.7.R.6.3:	Participate in games, sports and/or physical activities from other cultures.
PE.8.C.2.3:	Explain basic offensive and defensive strategies in individual/dual sports.
PE.8.C.2.4:	Explain basic offensive and defensive strategies in alternative/extreme sports activities.
PE.8.C.2.5:	Provide feedback on skill patterns of self and partner by detecting and correcting mechanical errors.
PE.8.C.2.6:	Identify the critical elements for successful performance in a variety of sport skills or physical activities.
PE.8.C.2.7:	List specific safety procedures and equipment necessary for a variety of sport skills and physical activities.
PE.8.L.3.1:	Participate in moderate physical activity on a daily basis.
PE.8.L.3.2:	Participate in vigorous physical activity on a daily basis.
PE.8.L.3.3:	Participate in a variety of individual/dual and alternative/extreme sport activities that promote health-related components of fitness. **Clarifications:** The health-related components of fitness are cardiorespiratory endurance, muscular strength, muscular endurance, flexibility and body composition.
PE.8.L.3.4:	Identify the in-school opportunities for participation in individual/dual and alternative/extreme sports.
PE.8.L.3.5:	Identify the community opportunities for participation in individual/dual and alternative/extreme sports.
PE.8.L.3.6:	Identify a variety of individual/dual and alternative/extreme sport activities that promote stress management.
PE.8.L.4.1:	Create, implement and assess a personal fitness program in collaboration with a teacher.
PE.8.L.4.2:	Develop goals and strategies for a personal physical fitness program.
PE.8.L.4.3:	Use available technology to assess, design and evaluate a personal physical fitness program.
PE.8.L.4.4:	Develop a personal fitness program including a variety of physical activities.
PE.8.L.4.5:	Identify health-related problems associated with low levels of cardiorespiratory endurance, muscular strength and endurance, flexibility and body composition.

PE.8.M.1.2:	Demonstrate critical elements when striking with an object or implement.
PE.8.M.1.3:	Demonstrate body management for successful participation in a variety of modified games and activities. **Clarifications:** Some examples of body management are balance and agility.
PE.8.M.1.4:	Apply principles of biomechanics necessary for safe and successful performance.
PE.8.M.1.5:	Demonstrate appropriate speed and generation of force when distance running, sprinting, throwing, jumping, striking or kicking.
PE.8.M.1.6:	Demonstrate offensive, defensive and transition strategies and tactics.
PE.8.R.5.1:	List ways to act independently of peer pressure during physical activities.
PE.8.R.5.2:	Develop strategies for including persons of diverse backgrounds and abilities while participating in a variety of physical activities.
PE.8.R.5.3:	Demonstrate sportsmanship during game situations. **Clarifications:** Some examples are controlling emotions, resolving conflicts, respecting opponents and officials and accepting both victory and defeat.
PE.8.R.5.4:	Maintain appropriate personal, social and ethical behavior while participating in a variety of physical activities. **Clarifications:** Some examples are respecting teammates, opponents and officials and accepting both victory and defeat.
PE.8.R.5.5:	Demonstrate appropriate etiquette, care of equipment, respect for facilities and safe behaviors while participating in a variety of physical activities.
PE.8.R.6.1:	Discuss opportunities for participation in a variety of physical activities outside of the school setting that contribute to personal enjoyment and the attainment or maintenance of a healthy lifestyle.
PE.8.R.6.2:	Describe the potential benefits of participation in a variety of physical activities. **Clarifications:** Some examples of potential benefits are physical, mental, emotional and social.
PE.8.R.6.3:	Compare and contrast games, sports and/or physical activities from other cultures.
MA.K12.MTR.1.1:	Mathematicians who participate in effortful learning both individually and with others: • Analyze the problem in a way that makes sense given the task. • Ask questions that will help with solving the task. • Build perseverance by modifying methods as needed while solving a challenging task. • Stay engaged and maintain a positive mindset when working to solve tasks. • Help and support each other when attempting a new method or approach. **Clarifications:** Teachers who encourage students to participate actively in effortful learning both individually and with others: • Cultivate a community of growth mindset learners. • Foster perseverance in students by choosing tasks that are challenging. • Develop students' ability to analyze and problem solve. • Recognize students' effort when solving challenging problems.
MA.K12.MTR.2.1:	Demonstrate understanding by representing problems in multiple ways. Mathematicians who demonstrate understanding by representing problems in multiple ways: • Build understanding through modeling and using manipulatives. • Represent solutions to problems in multiple ways using objects, drawings, tables, graphs and equations. • Progress from modeling problems with objects and drawings to using algorithms and equations. • Express connections between concepts and representations. • Choose a representation based on the given context or purpose. **Clarifications:** Teachers who encourage students to demonstrate understanding by representing problems in multiple ways: • Help students make connections between concepts and representations. • Provide opportunities for students to use manipulatives when investigating concepts. • Guide students from concrete to pictorial to abstract representations as understanding progresses. • Show students that various representations can have different purposes and can be useful in different situations.
MA.K12.MTR.3.1:	Complete tasks with mathematical fluency. Mathematicians who complete tasks with mathematical fluency: • Select efficient and appropriate methods for solving problems within the given context. • Maintain flexibility and accuracy while performing procedures and mental calculations. • Complete tasks accurately and with confidence. • Adapt procedures to apply them to a new context. • Use feedback to improve efficiency when performing calculations. **Clarifications:** Teachers who encourage students to complete tasks with mathematical fluency: • Provide students with the flexibility to solve problems by selecting a procedure that allows them to solve efficiently and accurately. • Offer multiple opportunities for students to practice efficient and generalizable methods. • Provide opportunities for students to reflect on the method they used and determine if a more efficient method could have been used.
	Engage in discussions that reflect on the mathematical thinking of self and others. Mathematicians who engage in discussions that reflect on the mathematical thinking of self and others: • Communicate mathematical ideas, vocabulary and methods effectively. • Analyze the mathematical thinking of others. • Compare the efficiency of a method to those expressed by others. • Recognize errors and suggest how to correctly solve the task.

MA.K12.MTR.4.1:	• Justify results by explaining methods and processes. • Construct possible arguments based on evidence. **Clarifications:** Teachers who encourage students to engage in discussions that reflect on the mathematical thinking of self and others: • Establish a culture in which students ask questions of the teacher and their peers, and error is an opportunity for learning. • Create opportunities for students to discuss their thinking with peers. • Select, sequence and present student work to advance and deepen understanding of correct and increasingly efficient methods. • Develop students' ability to justify methods and compare their responses to the responses of their peers.
MA.K12.MTR.5.1:	Use patterns and structure to help understand and connect mathematical concepts. Mathematicians who use patterns and structure to help understand and connect mathematical concepts: • Focus on relevant details within a problem. • Create plans and procedures to logically order events, steps or ideas to solve problems. • Decompose a complex problem into manageable parts. • Relate previously learned concepts to new concepts. • Look for similarities among problems. • Connect solutions of problems to more complicated large-scale situations. **Clarifications:** Teachers who encourage students to use patterns and structure to help understand and connect mathematical concepts: • Help students recognize the patterns in the world around them and connect these patterns to mathematical concepts. • Support students to develop generalizations based on the similarities found among problems. • Provide opportunities for students to create plans and procedures to solve problems. • Develop students' ability to construct relationships between their current understanding and more sophisticated ways of thinking.
MA.K12.MTR.6.1:	Assess the reasonableness of solutions. Mathematicians who assess the reasonableness of solutions: • Estimate to discover possible solutions. • Use benchmark quantities to determine if a solution makes sense. • Check calculations when solving problems. • Verify possible solutions by explaining the methods used. • Evaluate results based on the given context. **Clarifications:** Teachers who encourage students to assess the reasonableness of solutions: • Have students estimate or predict solutions prior to solving. • Prompt students to continually ask, "Does this solution make sense? How do you know?" • Reinforce that students check their work as they progress within and after a task. • Strengthen students' ability to verify solutions through justifications.
MA.K12.MTR.7.1:	Apply mathematics to real-world contexts. Mathematicians who apply mathematics to real-world contexts: • Connect mathematical concepts to everyday experiences. • Use models and methods to understand, represent and solve problems. • Perform investigations to gather data or determine if a method is appropriate. • Redesign models and methods to improve accuracy or efficiency. **Clarifications:** Teachers who encourage students to apply mathematics to real-world contexts: • Provide opportunities for students to create models, both concrete and abstract, and perform investigations. • Challenge students to question the accuracy of their models and methods. • Support students as they validate conclusions by comparing them to the given situation. • Indicate how various concepts can be applied to other disciplines.
ELA.K12.EE.1.1:	Cite evidence to explain and justify reasoning. **Clarifications:** K-1 Students include textual evidence in their oral communication with guidance and support from adults. The evidence can consist of details from the text without naming the text. During 1st grade, students learn how to incorporate the evidence in their writing. 2-3 Students include relevant textual evidence in their written and oral communication. Students should name the text when they refer to it. In 3rd grade, students should use a combination of direct and indirect citations. 4-5 Students continue with previous skills and reference comments made by speakers and peers. Students cite texts that they've directly quoted, paraphrased, or used for information. When writing, students will use the form of citation dictated by the instructor or the style guide referenced by the instructor. 6-8 Students continue with previous skills and use a style guide to create a proper citation. 9-12 Students continue with previous skills and should be aware of existing style guides and the ways in which they differ.
ELA.K12.EE.2.1:	Read and comprehend grade-level complex texts proficiently. **Clarifications:** See Text Complexity for grade-level complexity bands and a text complexity rubric.
ELA.K12.EE.3.1:	Make inferences to support comprehension. **Clarifications:** Students will make inferences before the words infer or inference are introduced. Kindergarten students will answer questions like "Why is the girl smiling?" or make predictions about what will happen based on the title page. Students will use the terms and apply them in 2nd grade and beyond.

ELA.K12.EE.4.1:	Use appropriate collaborative techniques and active listening skills when engaging in discussions in a variety of situations. **Clarifications:** In kindergarten, students learn to listen to one another respectfully. In grades 1-2, students build upon these skills by justifying what they are thinking. For example: "I think _____ because _____." The collaborative conversations are becoming academic conversations. In grades 3-12, students engage in academic conversations discussing claims and justifying their reasoning, refining and applying skills. Students build on ideas, propel the conversation, and support claims and counterclaims with evidence.
ELA.K12.EE.5.1:	Use the accepted rules governing a specific format to create quality work. **Clarifications:** Students will incorporate skills learned into work products to produce quality work. For students to incorporate these skills appropriately, they must receive instruction. A 3rd grade student creating a poster board display must have instruction in how to effectively present information to do quality work.
ELA.K12.EE.6.1:	Use appropriate voice and tone when speaking or writing. **Clarifications:** In kindergarten and 1st grade, students learn the difference between formal and informal language. For example, the way we talk to our friends differs from the way we speak to adults. In 2nd grade and beyond, students practice appropriate social and academic language to discuss texts.
HE.8.B.6.4:	Describe how personal health goals can vary with changing abilities, priorities, and responsibilities. **Clarifications:** Weight reduction, cost of healthier food, availability of exercise equipment, and general health.
HE.8.C.1.5:	Identify major chronic diseases that impact human body systems. **Clarifications:** Cancer, hypertension and coronary artery disease, asthma, and diabetes.
ELD.K12.ELL.SI.1:	English language learners communicate for social and instructional purposes within the school setting.

General Course Information and Notes

VERSION DESCRIPTION

This course is designed for 7th and 8th grade students and is intended to be 18 weeks in length. The purpose of this course is to build on previously acquired knowledge, skills, and values necessary for the implementation and maintenance of a physically active lifestyle. The course content provides exposure to a variety of movement opportunities and experiences which include, but is not limited to: Outdoor Pursuits/Aquatics, Individual/Dual Sports and Alternative/Extreme Sports. The integration of fitness concepts throughout the content is critical to student success in this course and in the development of a healthy and physically active lifestyle.

GENERAL NOTES

Special Note:

Instructional Practices

Teaching from a well-written, grade-level textbook enhances students' content area knowledge and also strengthens their ability to comprehend longer, complex reading passages on any topic for any reason. Using the following instructional practices also helps student learning:

1. Reading assignments from longer text passages as well as shorter ones when text is extremely complex.
2. Making close reading and rereading of texts central to lessons.
3. Asking high-level, text-specific questions and requiring high-level, complex tasks and assignments.
4. Requiring students to support answers with evidence from the text.
5. Providing extensive text-based research and writing opportunities (claims and evidence).

Florida's Benchmarks for Excellent Student Thinking (B.E.S.T.) Standards
This course includes Florida's B.E.S.T. ELA Expectations (EE) and Mathematical Thinking and Reasoning Standards (MTRs) for students. Florida educators should intentionally embed these standards within the content and their instruction as applicable. For guidance on the implementation of the EEs and MTRs, please visit cpalms.org/Standards/BEST_Standards.aspx and select the appropriate B.E.S.T. Standards package.

English Language Development ELD Standards Special Notes Section:
Teachers are required to provide listening, speaking, reading and writing instruction that allows English language learners (ELL) to communicate for social and instructional purposes within the school setting. For the given level of English language proficiency and with visual, graphic, or interactive support, students will interact with grade level words, expressions, sentences and discourse to process or produce language necessary for academic success. The ELD standard should specify a relevant content area concept or topic of study chosen by curriculum developers and teachers which maximizes an ELL's need for communication and social skills. To access an ELL supporting document which delineates performance definitions and descriptors, please click on the following link: cpalms.org/uploads/docs/standards/eld/SI.pdf

QUALIFICATIONS

As well as any certification requirements listed on the course description, the following qualifications may also be acceptable for the course:

Any field when certification reflects a bachelor or higher degree.

GENERAL INFORMATION

Course Number: 1508070

Course Path: Section: Grades PreK to 12 Education Courses > **Grade Group:** Grades 6 to 8 Education Courses > **Subject:** Physical Education > **SubSubject:** General >
Abbreviated Title: M/J COMPRE PE GR7/8
Course Length: Semester (S)
Course Level: 2

Course Status: Draft - Course Pending Approval

M/J Wellness Education Grade 8 (#1508080) 2022 - And Beyond

Course Standards

Name	Description
PE.8.C.2.5:	Provide feedback on skill patterns of self and partner by detecting and correcting mechanical errors.
PE.8.C.2.6:	Identify the critical elements for successful performance in a variety of sport skills or physical activities.
PE.8.C.2.7:	List specific safety procedures and equipment necessary for a variety of sport skills and physical activities.
PE.8.C.2.8:	Describe how movement skills and strategies learned in one physical activity can be transferred and used in other physical activities. **Clarifications:** Some examples are volleyball and tennis serve and surfing and skate boarding.
PE.8.L.3.1:	Participate in moderate physical activity on a daily basis.
PE.8.L.3.2:	Participate in vigorous physical activity on a daily basis.
PE.8.L.3.6:	Identify a variety of individual/dual and alternative/extreme sport activities that promote stress management.
PE.8.L.4.1:	Create, implement and assess a personal fitness program in collaboration with a teacher.
PE.8.L.4.2:	Develop goals and strategies for a personal physical fitness program.
PE.8.L.4.3:	Use available technology to assess, design and evaluate a personal physical fitness program.
PE.8.L.4.4:	Develop a personal fitness program including a variety of physical activities.
PE.8.L.4.5:	Identify health-related problems associated with low levels of cardiorespiratory endurance, muscular strength and endurance, flexibility and body composition.
PE.8.L.4.6:	Define training principles appropriate for enhancing cardiorespiratory endurance, muscular strength and endurance, flexibility and body composition. **Clarifications:** Some examples of training principles are overload and specificity.
PE.8.M.1.3:	Demonstrate body management for successful participation in a variety of modified games and activities. **Clarifications:** Some examples of body management are balance and agility.
PE.8.M.1.4:	Apply principles of biomechanics necessary for safe and successful performance.
PE.8.M.1.7:	Apply skill-related components of balance, reaction time, agility, coordination, power and speed to enhance performance levels.
PE.8.M.1.8:	Apply technology to evaluate, monitor and improve individual motor skills. **Clarifications:** Some examples of technology are Excel spreadsheets or web based programs to chart or log activities, heart rate monitors, videotapes and digital cameras.
PE.8.M.1.9:	Select and utilize appropriate safety equipment.
PE.8.R.5.1:	List ways to act independently of peer pressure during physical activities.
PE.8.R.5.2:	Develop strategies for including persons of diverse backgrounds and abilities while participating in a variety of physical activities.
PE.8.R.5.4:	Maintain appropriate personal, social and ethical behavior while participating in a variety of physical activities. **Clarifications:** Some examples are respecting teammates, opponents and officials and accepting both victory and defeat.
PE.8.R.5.5:	Demonstrate appropriate etiquette, care of equipment, respect for facilities and safe behaviors while participating in a variety of physical activities.
PE.8.R.6.1:	Discuss opportunities for participation in a variety of physical activities outside of the school setting that contribute to personal enjoyment and the attainment or maintenance of a healthy lifestyle.
PE.8.R.6.2:	Describe the potential benefits of participation in a variety of physical activities. **Clarifications:** Some examples of potential benefits are physical, mental, emotional and social.
HE.8.B.4.1:	Illustrate skills necessary for effective communication with family, peers, and others to enhance health. **Clarifications:** Refusal skills, nonverbal communication, asking questions, "I" messages, assertiveness, negotiation, and making requests.
HE.8.B.4.3:	Examine the possible causes of conflict among youth in schools and communities. **Clarifications:** Relationships, territory, jealousy, and gossip/rumors.
HE.8.B.5.2:	Categorize healthy and unhealthy alternatives to health-related issues or problems. **Clarifications:** (Alcohol consumption, sleep requirements, physical activity, and time management.)
HE.8.B.5.3:	Compile the potential outcomes of each option when making a health-related decision. **Clarifications:** Consequences: injury, addiction, and legal, social, sexual, and financial.
HE.8.B.5.5:	Evaluate the outcomes of a health-related decision. **Clarifications:** Addiction from alcohol consumption, brain damage from inhalant use, pregnancy from sexual activity, and weight management from proper nutrition.
	Design an individual goal to adopt, maintain, or improve a personal health practice.

HE.8.B.6.2:	**Clarifications:** Physical activity, eating habits, cyber bullying, social relationships, and sleep habits.
HE.8.B.6.3:	Apply strategies and skills needed to attain a personal health goal. **Clarifications:** Physical activity, nutrition modification, and anger management.
HE.8.B.6.4:	Describe how personal health goals can vary with changing abilities, priorities, and responsibilities. **Clarifications:** Weight reduction, cost of healthier food, availability of exercise equipment, and general health.
HE.8.C.1.2:	Analyze the interrelationship between healthy/unhealthy behaviors and the dimensions of health: physical, mental/emotional, social, and intellectual. **Clarifications:** Sleep/studying for tests, road rage/vehicular crashes, bullying/depression, and healthy relationships/emotional health.
HE.8.C.1.4:	Investigate strategies to reduce or prevent injuries and other adolescent health problems. **Clarifications:** Recognize signs and symptoms of depression, accessing resources, abstinence to reduce sexually transmitted diseases, sexually transmitted infections, and pregnancy; places to avoid; and healthy relationship skills.
HE.8.C.1.8:	Anticipate the likelihood of injury or illness if engaging in unhealthy/risky behaviors. **Clarifications:** Death or injury from car crashes and underage drinking/distracted driving, injuries resulting from fighting and bullying, and respiratory infections from poor hygiene.
HE.8.C.2.2:	Assess how the health beliefs of peers may influence adolescent health. **Clarifications:** Drug-use myths, perception of healthy body composition, and perceived benefits of energy drinks.
HE.8.C.2.3:	Analyze how the school and community may influence adolescent health. **Clarifications:** Drug-abuse education programs, volunteering opportunities, and availability of recreational facilities/programs.
HE.8.C.2.6:	Analyze the influence of technology on personal and family health. **Clarifications:** TV advertisements for unhealthy foods, volume of headphones, websites, and social marketing for health information.
HE.8.C.2.8:	Explain how the perceptions of norms influence healthy and unhealthy behaviors. **Clarifications:** Sexual abstinence, prescription-drug use, marijuana use, and perception that certain abusive-relationship behaviors are "normal."
HE.8.C.2.9:	Analyze the influence of personal values, attitudes, and beliefs about individual health practices and behaviors. **Clarifications:** Social conformity, desires, and impulses.
HE.8.P.7.1:	Assess the importance of assuming responsibility for personal-health behaviors, including sexual behavior. **Clarifications:** Sexual abstinence, skin care, and drug abuse.
HE.8.P.7.2:	Apply healthy practices and behaviors that will maintain or improve personal health and reduce health risks. **Clarifications:** Participate in various physical activities, foster healthy relationships, set healthy goals, make healthy food choices, and practice Internet safety, resist negative peer pressure, get adequate sleep, and engage in respectful equality-based relationships.
HE.8.P.8.1:	Promote positive health choices with the influence and support of others. **Clarifications:** Promotion of oral health, sexual abstinence, no alcohol, tobacco, and other drug abuse.
HE.8.P.8.3:	Work cooperatively to advocate for healthy individuals, peers, families, and schools. **Clarifications:** Promote community initiatives; create media campaigns, peer-led prevention campaigns, and school wellness councils.
MA.K12.MTR.1.1:	Mathematicians who participate in effortful learning both individually and with others: • Analyze the problem in a way that makes sense given the task. • Ask questions that will help with solving the task. • Build perseverance by modifying methods as needed while solving a challenging task. • Stay engaged and maintain a positive mindset when working to solve tasks. • Help and support each other when attempting a new method or approach. **Clarifications:** Teachers who encourage students to participate actively in effortful learning both individually and with others: • Cultivate a community of growth mindset learners. • Foster perseverance in students by choosing tasks that are challenging. • Develop students' ability to analyze and problem solve. • Recognize students' effort when solving challenging problems.
	Demonstrate understanding by representing problems in multiple ways. Mathematicians who demonstrate understanding by representing problems in multiple ways: • Build understanding through modeling and using manipulatives. • Represent solutions to problems in multiple ways using objects, drawings, tables, graphs and equations.

- Progress from modeling problems with objects and drawings to using algorithms and equations.
- Express connections between concepts and representations.

MA.K12.MTR.2.1:

- Choose a representation based on the given context or purpose.

Clarifications:
Teachers who encourage students to demonstrate understanding by representing problems in multiple ways:

- Help students make connections between concepts and representations.
- Provide opportunities for students to use manipulatives when investigating concepts.
- Guide students from concrete to pictorial to abstract representations as understanding progresses.
- Show students that various representations can have different purposes and can be useful in different situations.

Complete tasks with mathematical fluency.
Mathematicians who complete tasks with mathematical fluency:

- Select efficient and appropriate methods for solving problems within the given context.
- Maintain flexibility and accuracy while performing procedures and mental calculations.
- Complete tasks accurately and with confidence.
- Adapt procedures to apply them to a new context.

MA.K12.MTR.3.1:

- Use feedback to improve efficiency when performing calculations.

Clarifications:
Teachers who encourage students to complete tasks with mathematical fluency:

- Provide students with the flexibility to solve problems by selecting a procedure that allows them to solve efficiently and accurately.
- Offer multiple opportunities for students to practice efficient and generalizable methods.
- Provide opportunities for students to reflect on the method they used and determine if a more efficient method could have been used.

Engage in discussions that reflect on the mathematical thinking of self and others.
Mathematicians who engage in discussions that reflect on the mathematical thinking of self and others:

- Communicate mathematical ideas, vocabulary and methods effectively.
- Analyze the mathematical thinking of others.
- Compare the efficiency of a method to those expressed by others.
- Recognize errors and suggest how to correctly solve the task.
- Justify results by explaining methods and processes.

MA.K12.MTR.4.1:

- Construct possible arguments based on evidence.

Clarifications:
Teachers who encourage students to engage in discussions that reflect on the mathematical thinking of self and others:

- Establish a culture in which students ask questions of the teacher and their peers, and error is an opportunity for learning.
- Create opportunities for students to discuss their thinking with peers.
- Select, sequence and present student work to advance and deepen understanding of correct and increasingly efficient methods.
- Develop students' ability to justify methods and compare their responses to the responses of their peers.

Use patterns and structure to help understand and connect mathematical concepts.
Mathematicians who use patterns and structure to help understand and connect mathematical concepts:

- Focus on relevant details within a problem.
- Create plans and procedures to logically order events, steps or ideas to solve problems.
- Decompose a complex problem into manageable parts.
- Relate previously learned concepts to new concepts.
- Look for similarities among problems.

MA.K12.MTR.5.1:

- Connect solutions of problems to more complicated large-scale situations.

Clarifications:
Teachers who encourage students to use patterns and structure to help understand and connect mathematical concepts:

- Help students recognize the patterns in the world around them and connect these patterns to mathematical concepts.
- Support students to develop generalizations based on the similarities found among problems.
- Provide opportunities for students to create plans and procedures to solve problems.
- Develop students' ability to construct relationships between their current understanding and more sophisticated ways of thinking.

Assess the reasonableness of solutions.
Mathematicians who assess the reasonableness of solutions:

- Estimate to discover possible solutions.
- Use benchmark quantities to determine if a solution makes sense.
- Check calculations when solving problems.
- Verify possible solutions by explaining the methods used.

MA.K12.MTR.6.1:

- Evaluate results based on the given context.

Clarifications:
Teachers who encourage students to assess the reasonableness of solutions:

- Have students estimate or predict solutions prior to solving.
- Prompt students to continually ask, "Does this solution make sense? How do you know?"
- Reinforce that students check their work as they progress within and after a task.
- Strengthen students' ability to verify solutions through justifications.

Apply mathematics to real-world contexts.
Mathematicians who apply mathematics to real-world contexts:

- Connect mathematical concepts to everyday experiences.

MA.K12.MTR.7.1:	• Use models and methods to understand, represent and solve problems. • Perform investigations to gather data or determine if a method is appropriate. • Redesign models and methods to improve accuracy or efficiency. **Clarifications:** Teachers who encourage students to apply mathematics to real-world contexts: • Provide opportunities for students to create models, both concrete and abstract, and perform investigations. • Challenge students to question the accuracy of their models and methods. • Support students as they validate conclusions by comparing them to the given situation. • Indicate how various concepts can be applied to other disciplines.
ELA.K12.EE.1.1:	Cite evidence to explain and justify reasoning. **Clarifications:** K-1 Students include textual evidence in their oral communication with guidance and support from adults. The evidence can consist of details from the text without naming the text. During 1st grade, students learn how to incorporate the evidence in their writing. 2-3 Students include relevant textual evidence in their written and oral communication. Students should name the text when they refer to it. In 3rd grade, students should use a combination of direct and indirect citations. 4-5 Students continue with previous skills and reference comments made by speakers and peers. Students cite texts that they've directly quoted, paraphrased, or used for information. When writing, students will use the form of citation dictated by the instructor or the style guide referenced by the instructor. 6-8 Students continue with previous skills and use a style guide to create a proper citation. 9-12 Students continue with previous skills and should be aware of existing style guides and the ways in which they differ.
ELA.K12.EE.2.1:	Read and comprehend grade-level complex texts proficiently. **Clarifications:** See Text Complexity for grade-level complexity bands and a text complexity rubric.
ELA.K12.EE.3.1:	Make inferences to support comprehension. **Clarifications:** Students will make inferences before the words infer or inference are introduced. Kindergarten students will answer questions like "Why is the girl smiling?" or make predictions about what will happen based on the title page. Students will use the terms and apply them in 2nd grade and beyond.
ELA.K12.EE.4.1:	Use appropriate collaborative techniques and active listening skills when engaging in discussions in a variety of situations. **Clarifications:** In kindergarten, students learn to listen to one another respectfully. In grades 1-2, students build upon these skills by justifying what they are thinking. For example: "I think _____ because _____." The collaborative conversations are becoming academic conversations. In grades 3-12, students engage in academic conversations discussing claims and justifying their reasoning, refining and applying skills. Students build on ideas, propel the conversation, and support claims and counterclaims with evidence.
ELA.K12.EE.5.1:	Use the accepted rules governing a specific format to create quality work. **Clarifications:** Students will incorporate skills learned into work products to produce quality work. For students to incorporate these skills appropriately, they must receive instruction. A 3rd grade student creating a poster board display must have instruction in how to effectively present information to do quality work.
ELA.K12.EE.6.1:	Use appropriate voice and tone when speaking or writing. **Clarifications:** In kindergarten and 1st grade, students learn the difference between formal and informal language. For example, the way we talk to our friends differs from the way we speak to adults. In 2nd grade and beyond, students practice appropriate social and academic language to discuss texts.
ELD.K12.ELL.SI.1:	English language learners communicate for social and instructional purposes within the school setting.

General Course Information and Notes

VERSION DESCRIPTION

This semester-long Wellness Education course is designed for 8th grade students, the purpose of which is to further develop the knowledge, skills and values to enhance healthy behaviors that influence lifestyle choices and student health and fitness. Students will realize the full benefit of this course when it is taught with an integral approach.

Florida's Benchmarks for Excellent Student Thinking (B.E.S.T.) Standards:

This course includes Florida's B.E.S.T. ELA Expectations (EE) and Mathematical Thinking and Reasoning Standards (MTRs) for students. Florida educators should intentionally embed these standards within the content and their instruction as applicable. For guidance on the implementation of the EEs and MTRs, please visit cpalms.org/Standards/BEST_Standards.aspx and select the appropriate B.E.S.T. Standards package.

English Language Development (ELD) Standards Special Notes Section:

Teachers are required to provide listening, speaking, reading and writing instruction that allows English language learners (ELL) to communicate for social and instructional purposes within the school setting. For the given level of English language proficiency and with visual, graphic, or interactive support, students will interact with grade level words, expressions, sentences and discourse to process or produce language necessary for academic success. The ELD standard should specify a relevant content area concept or topic of study chosen by curriculum developers and teachers which maximizes an ELL's need for communication and social skills. To access an ELL supporting document which delineates performance definitions and descriptors, please click on the following link: cpalms.org/uploads/docs/standards/eld/SI.pdf.

QUALIFICATIONS

As well as any certification requirements listed on the course description, the following qualifications may also be acceptable for the course:

Any field when certification reflects a bachelor or higher degree.

GENERAL INFORMATION

Course Number: 1508080

Course Path: Section: Grades PreK to 12 Education Courses > **Grade Group:** Grades 6 to 8 Education Courses > **Subject:** Physical Education > **SubSubject:** General >
Abbreviated Title: M/J WELLNESS ED GR 8
Course Length: Semester (S)

Course Type: Core Academic Course

Course Level: 2

Course Status: Draft - Course Pending Approval

Grade Level(s): 8

HOPE-Physical Education (Core) (#3026010) 2022 - And Beyond

Course Standards

Name	Description
PE.912.C.2.6:	Compare and contrast the health-related benefits of various physical activities.
PE.912.C.2.7:	Evaluate the effectiveness of specific warm-up and cool-down activities.
PE.912.C.2.8:	Differentiate between the three different types of heat illnesses associated with fluid loss. **Clarifications:** The three types of heat illnesses are heat cramps, heat exhaustion and heat stroke.
PE.912.C.2.9:	Explain the precautions to be taken when exercising in extreme weather and/or environmental conditions. **Clarifications:** Some examples of precautions are hydration and appropriate attire.
PE.912.C.2.10:	Analyze long-term benefits of regularly participating in physical activity.
PE.912.C.2.11:	Explain how each of the health-related components of fitness are improved through the application of training principles. **Clarifications:** The health-related components of fitness are cardiorespiratory endurance, muscular strength, muscular endurance, flexibility and body composition.
PE.912.C.2.12:	Compare and contrast aerobic versus anaerobic activities.
PE.912.C.2.13:	Document food intake, calories consumed and energy expended through physical activity and analyze the results.
PE.912.C.2.14:	Compare and contrast the skill-related components of fitness used in various physical activities. **Clarifications:** The skill-related components of fitness are speed, coordination, balance, power, agility and reaction time.
PE.912.C.2.15:	Calculate individual target heart-rate zone and analyze how to adjust intensity level to stay within the desired range.
PE.912.C.2.16:	Explain the methods of monitoring levels of intensity during aerobic activity. **Clarifications:** Some examples are a talk test, rate of perceived exertion and checking one's heart rate/pulse.
PE.912.C.2.17:	Assess physiological effects of exercise during and after physical activity. **Clarifications:** Some examples are breathing, resting heart rate and blood pressure.
PE.912.C.2.18:	Differentiate between fact and fallacy as it relates to consumer physical fitness products and programs. **Clarifications:** Some examples are weight-loss pills, food labels and exercise equipment.
PE.912.C.2.22:	Explain the skill-related components of fitness and how they enhance performance levels. **Clarifications:** The skill-related components of fitness are speed, coordination, balance, power, agility and reaction time.
PE.912.C.2.23:	Apply appropriate technology and analyze data to evaluate, monitor and/or improve performance.
PE.912.C.2.25:	Analyze and evaluate the risks, safety procedures, rules and equipment associated with specific course activities.
PE.912.C.2.27:	Compare and contrast how movement skills from one physical activity can be transferred and used in other physical activities. **Clarifications:** Some examples are volleyball and tennis serve, surfing and skate boarding.
PE.912.L.3.1:	Participate in a variety of physical activities to meet the recommended number of minutes of moderate to vigorous physical activity beyond physical education on five or more days of the week.
PE.912.L.3.2:	Participate in a variety of activities that promote the health-related components of fitness. **Clarifications:** The health-related components of fitness are cardiorespiratory endurance, muscular strength, muscular endurance, flexibility and body composition.
PE.912.L.3.3:	Identify a variety of activities that promote effective stress management.
PE.912.L.3.4:	Identify the in-school opportunities for participation in a variety of physical activities.
PE.912.L.3.5:	Identify the community opportunities for participation in a variety of physical activities.
PE.912.L.3.6:	Identify risks and safety factors that may affect physical activity throughout life.
PE.912.L.4.1:	Design a personal fitness program. **Clarifications:** Some examples of things to consider when designing a personal fitness program are timelines and current fitness level.
PE.912.L.4.2:	Identify ways to self-assess and modify a personal fitness program.
PE.912.L.4.3:	Identify strategies for setting goals when developing a personal fitness program.
PE.912.L.4.4:	Use available technology to assess, design and evaluate a personal fitness program.
PE.912.L.4.5:	Apply the principles of training to personal fitness goals. **Clarifications:** Some examples of training principles are overload, specificity and progression.

PE.912.L.4.6:	Identify health-related problems associated with low levels of cardiorespiratory endurance, muscular strength and endurance, flexibility and body composition.
PE.912.L.4.7:	Evaluate how to make changes in an individual wellness plan as lifestyle changes occur.
PE.912.M.1.12:	Select and perform complex movements using a variety of equipment which lead to improved or maintained muscular strength and endurance. **Clarifications:** An example is performing plyometrics.
PE.912.M.1.13:	Perform a student-designed cardiorespiratory enhancing workout.
PE.912.M.1.14:	Utilize technology to assess, enhance and maintain health and skill-related fitness levels. **Clarifications:** Some examples of technology are Excel spreadsheets or web based programs to chart or log activities, heart rate monitors, videotapes or digital cameras.
PE.912.M.1.15:	Select and apply sport/activity specific warm-up and cool-down techniques.
PE.912.M.1.16:	Apply the principles of training and conditioning to accommodate individual needs and strengths. **Clarifications:** Some examples of training principles are overload, specificity and progression.
PE.912.M.1.17:	Demonstrate basic cardiopulmonary resuscitation (CPR) procedures.
PE.912.M.1.19:	Use correct body alignment, strength, flexibility and coordination in the performance of technical movements.
PE.912.M.1.33:	Practice complex motor activities in order to improve performance.
PE.912.M.1.34:	Demonstrate use of the mechanical principles as they apply to specific course activities. **Clarifications:** Some examples are balance, force and leverage.
PE.912.M.1.35:	Select proper equipment and apply all appropriate safety procedures necessary for participation.
PE.912.R.5.2:	Develop strategies for including persons of diverse backgrounds and abilities while participating in a variety of physical activities.
PE.912.R.5.3:	Demonstrate sportsmanship during game situations. **Clarifications:** Some examples are controlling emotions, resolving conflicts, respecting opponents and officials, and accepting both victory and defeat.
PE.912.R.5.4:	Maintain appropriate personal, social and ethical behavior while participating in a variety of physical activities. **Clarifications:** Some examples are respecting teammates, opponents and officials, and accepting both victory and defeat.
PE.912.R.5.5:	Demonstrate appropriate etiquette, care of equipment, respect for facilities and safe behaviors while participating in a variety of physical activities.
PE.912.R.6.1:	Discuss opportunities for participation in a variety of physical activities outside of the school setting that contribute to personal enjoyment and the attainment or maintenance of a healthy lifestyle.
PE.912.R.6.2:	Analyze physical activities from which benefits can be derived. **Clarifications:** Some examples of potential benefits are physical, mental, emotional and social.
PE.912.R.6.3:	Analyze the roles of games, sports and/or physical activities in other cultures.
HE.912.B.4.2:	Assess refusal, negotiation, and collaboration skills to enhance health and avoid or reduce health risks. **Clarifications:** Validate other's opinions, use direct statement, use active statement, and offer alternatives.
HE.912.B.4.3:	Demonstrate strategies to prevent, manage, or resolve interpersonal conflicts without harming self or others. **Clarifications:** Effective verbal and nonverbal communication, compromise, and conflict-resolution.
HE.912.B.4.4:	Analyze the validity of ways to ask for and offer assistance to enhance the health of self and others. **Clarifications:** Verbal and written communication, active listening, and how to seek help for a friend.
HE.912.B.5.1:	Determine the value of applying a thoughtful decision-making process in health-related situations. **Clarifications:** Defining healthy boundaries and relationships, sexual activity, alcohol consumption, organ-donor decisions, child care, protection against infectious agents, wellness promotion, and first-aid-treatment options.
HE.912.B.5.2:	Generate alternatives to health-related issues or problems. **Clarifications:** Health benefits of menu options, refusal-skill options, pre- and post-natal care, natural and man-made conditions, and current trends in disease prevention.
HE.912.B.5.3:	Appraise the potential short-term and long-term outcomes of each alternative on self and others. **Clarifications:** Nutrition plan based on personal needs and preferences, impact of chronic health condition on individual and family, weapons on campus, and use of stress management and coping skills.
HE.912.B.5.4:	Assess whether individual or collaborative decision making is needed to make a healthy decision. **Clarifications:** Planning a post-high school career/education, purchasing the family's groceries for the week, planning the weekly menu, planning appropriate activities for siblings, community planning, Internet safety, and purchasing insurance.
HE.912.B.6.1:	Evaluate personal health practices and overall health status to include all dimensions of health. **Clarifications:** Personal strengths, physical fitness, peer relationships, environmental health, personal hygiene, non-communicable illness or disease, injury prevention, and first-aid responder's safety practices.

HE.912.B.6.2:	Formulate a plan to attain a personal health goal that addresses strengths, needs, and risks. **Clarifications:** Weight management, comprehensive physical fitness, stress management, dating relationships, risky behaviors, and a wellness-program plan.
HE.912.B.6.3:	Implement strategies and monitor progress in achieving a personal health goal. **Clarifications:** Stress management, time out, using of a squeeze ball when frustrated, talking with a friend or professional, pacing yourself, setting realistic expectations, using rewards, getting support, and wellness promotion.
HE.912.B.6.4:	Formulate an effective long-term personal health plan. **Clarifications:** Stress reduction, weight management, healthier eating habits, improved physical fitness, and individual responsibilities for protecting health.
HE.912.C.1.1:	Predict how healthy behaviors can affect health status. **Clarifications:** Making positive choices/avoiding risky behaviors: healthy food, substance abuse, and healthy relationship skills; regular medical and dental screenings; regular physical activity, and workplace safety.
HE.912.C.1.2:	Interpret the significance of interrelationships in mental/emotional, physical, and social health. **Clarifications:** Substance abuse, eating disorders, sexual behaviors, healthy/unhealthy relationships, self-esteem, stress/anger management, and regular exercise.
HE.912.C.1.4:	Propose strategies to reduce or prevent injuries and health problems. **Clarifications:** Mandatory passenger-restraint/helmet laws, refusal skills, mandatory immunizations, healthy relationship skills, and improved inspection of food sources.
HE.912.C.1.5:	Analyze strategies for prevention, detection, and treatment of communicable and chronic diseases. **Clarifications:** Health prevention, detection, and treatment of: breast and testicular cancer, suicide, obesity, and industrial-related chronic disease.
HE.912.C.1.7:	Analyze how heredity and family history can impact personal health. **Clarifications:** Drug use, family obesity, heart disease, mental health, and non-communicable illness or disease.
HE.912.C.1.8:	Assess the degree of susceptibility to injury, illness, or death if engaging in unhealthy/risky behaviors. **Clarifications:** Risks associated with alcohol abuse, including poison, date rape, and death; cancer and chronic lung disease related to tobacco use; overdose from drug use; child abuse or neglect; and dating violence.
HE.912.C.2.1:	Analyze how the family influences the health of individuals. **Clarifications:** Nutritional management of meals, composition of and relationships within families, and health-insurance status.
HE.912.C.2.2:	Compare how peers influence healthy and unhealthy behaviors. **Clarifications:** Binge drinking and social groups, sexual coercion [pressure, force, or manipulation] by a dating partner, students' recommendations for school vending machines, healthy lifestyle, review trends in current and emerging diseases, and use of helmets and seatbelts.
HE.912.C.2.3:	Assess how the school and community can affect personal health practice and behaviors. **Clarifications:** Healthier foods, required health education, health screenings, and enforcement of "no tolerance" policies related to all forms of violence, and AED availability and training.
HE.912.C.2.4:	Evaluate how public health policies and government regulations can influence health promotion and disease prevention. **Clarifications:** Seat-belt enforcement, underage alcohol sales, reporting communicable diseases, child care, and AED availability.
HE.912.C.2.5:	Evaluate the effect of media on personal and family health. **Clarifications:** Compares brand-name/store-brand items in home, analyzes television viewing habits, identifies effective PSAs, consumer skills, advertisements of health-related community resources, participation in risky behaviors, and deconstructs media to identify promotion of unhealthy stereotypes, and normalization of violence.
HE.912.C.2.6:	Evaluate the impact of technology on personal, family, and community health. **Clarifications:** Automated external defibrillator in the community, pedestrian crosswalks with audible directions, type of information requested from local 211/hotlines or websites, consumer websites, Internet safety, and disease prevention and control.
HE.912.C.2.7:	Analyze how culture supports and challenges health beliefs, practices, and behaviors. **Clarifications:** Various cultures' dietary patterns, rites of passage, courtship practices, family roles, personal relationships, ethics, and parenting.
HE.912.C.2.8:	Analyze how the perceptions of norms influence healthy and unhealthy behaviors. **Clarifications:** Driving over the speed limit, teen parenting, binge drinking, relationships, parenting, health information, environmental practices, and media messages.
HE.912.C.2.9:	Evaluate the influence of personal values, attitudes, and beliefs about individual health practices and behaviors. **Clarifications:**

	Social conformity, self-discipline, and impulse vs. delayed gratification.
HE.912.P.7.1:	Analyze the role of individual responsibility in enhancing health. **Clarifications:** Food choices, media messages, future impact of lifestyle choices, individual responsibility for health protection, and stress management.
HE.912.P.7.2:	Evaluate healthy practices and behaviors that will maintain or improve health and reduce health risks. **Clarifications:** Lifestyle choices: drug use/abuse, healthy diet, controlling modes of transmission of infectious agents, riding with impaired drivers, seeking mental-health services when needed, sexual behavior, and engaging in healthy relationships.
HE.912.P.8.1:	Demonstrate how to influence and support others in making positive health choices. **Clarifications:** Avoidance of underage drinking, prevention of driving under the influence, suicide prevention, promotion of healthy dating/personal relationships, responsible parenting, disease prevention, and promotion of first-aid training.
HE.912.P.8.3:	Work cooperatively as an advocate for improving personal, family, and community health. **Clarifications:** Support local availability of healthy food options; environmentally friendly shopping; victim, drug or teen court advocacy; advocate for peer-led abuse-prevention education programs, community resource information; and home/school safety.
MA.K12.MTR.1.1:	Mathematicians who participate in effortful learning both individually and with others: • Analyze the problem in a way that makes sense given the task. • Ask questions that will help with solving the task. • Build perseverance by modifying methods as needed while solving a challenging task. • Stay engaged and maintain a positive mindset when working to solve tasks. • Help and support each other when attempting a new method or approach. **Clarifications:** Teachers who encourage students to participate actively in effortful learning both individually and with others: • Cultivate a community of growth mindset learners. • Foster perseverance in students by choosing tasks that are challenging. • Develop students' ability to analyze and problem solve. • Recognize students' effort when solving challenging problems.
MA.K12.MTR.2.1:	Demonstrate understanding by representing problems in multiple ways. Mathematicians who demonstrate understanding by representing problems in multiple ways: • Build understanding through modeling and using manipulatives. • Represent solutions to problems in multiple ways using objects, drawings, tables, graphs and equations. • Progress from modeling problems with objects and drawings to using algorithms and equations. • Express connections between concepts and representations. • Choose a representation based on the given context or purpose. **Clarifications:** Teachers who encourage students to demonstrate understanding by representing problems in multiple ways: • Help students make connections between concepts and representations. • Provide opportunities for students to use manipulatives when investigating concepts. • Guide students from concrete to pictorial to abstract representations as understanding progresses. • Show students that various representations can have different purposes and can be useful in different situations.
MA.K12.MTR.3.1:	Complete tasks with mathematical fluency. Mathematicians who complete tasks with mathematical fluency: • Select efficient and appropriate methods for solving problems within the given context. • Maintain flexibility and accuracy while performing procedures and mental calculations. • Complete tasks accurately and with confidence. • Adapt procedures to apply them to a new context. • Use feedback to improve efficiency when performing calculations. **Clarifications:** Teachers who encourage students to complete tasks with mathematical fluency: • Provide students with the flexibility to solve problems by selecting a procedure that allows them to solve efficiently and accurately. • Offer multiple opportunities for students to practice efficient and generalizable methods. • Provide opportunities for students to reflect on the method they used and determine if a more efficient method could have been used.
MA.K12.MTR.4.1:	Engage in discussions that reflect on the mathematical thinking of self and others. Mathematicians who engage in discussions that reflect on the mathematical thinking of self and others: • Communicate mathematical ideas, vocabulary and methods effectively. • Analyze the mathematical thinking of others. • Compare the efficiency of a method to those expressed by others. • Recognize errors and suggest how to correctly solve the task. • Justify results by explaining methods and processes. • Construct possible arguments based on evidence. **Clarifications:** Teachers who encourage students to engage in discussions that reflect on the mathematical thinking of self and others: • Establish a culture in which students ask questions of the teacher and their peers, and error is an opportunity for learning. • Create opportunities for students to discuss their thinking with peers.

	• Select, sequence and present student work to advance and deepen understanding of correct and increasingly efficient methods. • Develop students' ability to justify methods and compare their responses to the responses of their peers.
MA.K12.MTR.5.1:	Use patterns and structure to help understand and connect mathematical concepts. Mathematicians who use patterns and structure to help understand and connect mathematical concepts: • Focus on relevant details within a problem. • Create plans and procedures to logically order events, steps or ideas to solve problems. • Decompose a complex problem into manageable parts. • Relate previously learned concepts to new concepts. • Look for similarities among problems. • Connect solutions of problems to more complicated large-scale situations. **Clarifications:** Teachers who encourage students to use patterns and structure to help understand and connect mathematical concepts: • Help students recognize the patterns in the world around them and connect these patterns to mathematical concepts. • Support students to develop generalizations based on the similarities found among problems. • Provide opportunities for students to create plans and procedures to solve problems. • Develop students' ability to construct relationships between their current understanding and more sophisticated ways of thinking.
MA.K12.MTR.6.1:	Assess the reasonableness of solutions. Mathematicians who assess the reasonableness of solutions: • Estimate to discover possible solutions. • Use benchmark quantities to determine if a solution makes sense. • Check calculations when solving problems. • Verify possible solutions by explaining the methods used. • Evaluate results based on the given context. **Clarifications:** Teachers who encourage students to assess the reasonableness of solutions: • Have students estimate or predict solutions prior to solving. • Prompt students to continually ask, "Does this solution make sense? How do you know?" • Reinforce that students check their work as they progress within and after a task. • Strengthen students' ability to verify solutions through justifications.
MA.K12.MTR.7.1:	Apply mathematics to real-world contexts. Mathematicians who apply mathematics to real-world contexts: • Connect mathematical concepts to everyday experiences. • Use models and methods to understand, represent and solve problems. • Perform investigations to gather data or determine if a method is appropriate. • Redesign models and methods to improve accuracy or efficiency. **Clarifications:** Teachers who encourage students to apply mathematics to real-world contexts: • Provide opportunities for students to create models, both concrete and abstract, and perform investigations. • Challenge students to question the accuracy of their models and methods. • Support students as they validate conclusions by comparing them to the given situation. • Indicate how various concepts can be applied to other disciplines.
ELA.K12.EE.1.1:	Cite evidence to explain and justify reasoning. **Clarifications:** K-1 Students include textual evidence in their oral communication with guidance and support from adults. The evidence can consist of details from the text without naming the text. During 1st grade, students learn how to incorporate the evidence in their writing. 2-3 Students include relevant textual evidence in their written and oral communication. Students should name the text when they refer to it. In 3rd grade, students should use a combination of direct and indirect citations. 4-5 Students continue with previous skills and reference comments made by speakers and peers. Students cite texts that they've directly quoted, paraphrased, or used for information. When writing, students will use the form of citation dictated by the instructor or the style guide referenced by the instructor. 6-8 Students continue with previous skills and use a style guide to create a proper citation. 9-12 Students continue with previous skills and should be aware of existing style guides and the ways in which they differ.
ELA.K12.EE.2.1:	Read and comprehend grade-level complex texts proficiently. **Clarifications:** See Text Complexity for grade-level complexity bands and a text complexity rubric.
ELA.K12.EE.3.1:	Make inferences to support comprehension. **Clarifications:** Students will make inferences before the words infer or inference are introduced. Kindergarten students will answer questions like "Why is the girl smiling?" or make predictions about what will happen based on the title page. Students will use the terms and apply them in 2nd grade and beyond.
ELA.K12.EE.4.1:	Use appropriate collaborative techniques and active listening skills when engaging in discussions in a variety of situations. **Clarifications:** In kindergarten, students learn to listen to one another respectfully. In grades 1-2, students build upon these skills by justifying what they are thinking. For example: "I think _____ because _____." The collaborative conversations are becoming academic conversations.

	In grades 3-12, students engage in academic conversations discussing claims and justifying their reasoning, refining and applying skills. Students build on ideas, propel the conversation, and support claims and counterclaims with evidence.
ELA.K12.EE.5.1:	Use the accepted rules governing a specific format to create quality work. **Clarifications:** Students will incorporate skills learned into work products to produce quality work. For students to incorporate these skills appropriately, they must receive instruction. A 3rd grade student creating a poster board display must have instruction in how to effectively present information to do quality work.
ELA.K12.EE.6.1:	Use appropriate voice and tone when speaking or writing. **Clarifications:** In kindergarten and 1st grade, students learn the difference between formal and informal language. For example, the way we talk to our friends differs from the way we speak to adults. In 2nd grade and beyond, students practice appropriate social and academic language to discuss texts.
ELD.K12.ELL.SI.1:	English language learners communicate for social and instructional purposes within the school setting.

General Course Information and Notes

VERSION DESCRIPTION

The purpose of this course is to develop and enhance healthy behaviors that influence lifestyle choices and student health and fitness. Students will realize the full benefit of this course when it is taught with an integrated approach.

In addition to the physical education content represented in the benchmarks below, specific health education topics within this course include, but are not limited to:

Mental/Social Health
Physical Activity
Components of Physical Fitness
Nutrition and Wellness Planning
Diseases and Disorders
Health Advocacy
First Aid/CPR
Alcohol, Tobacco, and Drug Prevention
Human Sexuality including Abstinence and HIV
Internet Safety

GENERAL NOTES

Florida's Benchmarks for Excellent Student Thinking (B.E.S.T.) Standards
This course includes Florida's B.E.S.T. ELA Expectations (EE) and Mathematical Thinking and Reasoning Standards (MTRs) for students. Florida educators should intentionally embed these standards within the content and their instruction as applicable. For guidance on the implementation of the EEs and MTRs, please visit cpalms.org/Standards/BEST_Standards.aspx and select the appropriate B.E.S.T. Standards package.

English Language Development ELD Standards Special Notes Section:
Teachers are required to provide listening, speaking, reading and writing instruction that allows English language learners (ELL) to communicate for social and instructional purposes within the school setting. For the given level of English language proficiency and with visual, graphic, or interactive support, students will interact with grade level words, expressions, sentences and discourse to process or produce language necessary for academic success. The ELD standard should specify a relevant content area concept or topic of study chosen by curriculum developers and teachers which maximizes an ELL's need for communication and social skills. To access an ELL supporting document which delineates performance definitions and descriptors, please click on the following link: cpalms.org/uploads/docs/standards/eld/SI.pdf

GENERAL INFORMATION

Course Number: 3026010

Course Path: Section: Grades PreK to 12 Education Courses > **Grade Group:** Grades 9 to 12 and Adult Education Courses > **Subject:** Physical Education > **SubSubject:** Combined Courses >
Abbreviated Title: HOPE

Number of Credits: One (1) credit

Course Length: Year (Y)

Course Type: Core Academic Course

Course Level: 2

Course Status: Draft - Course Pending Approval

Grade Level(s): 9,10,11,12

Graduation Requirement: Physical Education

Educator Certifications

Health Education (Secondary Grades 7-12) Plus Physical Education (Elementary and Secondary Grades K-12)

Family and Consumer Science (Grades 6-12) Plus Physical Education (Elementary and Secondary Grades K-12)
Health Education (Secondary Grades 7-12) Plus Physical Education (Grades 6-12)
Family and Consumer Science (Grades 6-12) Plus Physical Education (Grades 6-12)
Health (Elementary and Secondary Grades K-12) Plus Physical Education (Elementary and Secondary Grades K-12)
Health (Elementary and Secondary Grades K-12) Plus Physical Education (Grades 6-12)

Elementary Adaptive Physical Education IEP or 504 Plan (#5015000) 2022 - And Beyond

Course Standards

Name	Description
PE.K.C.2.1:	Recognize locomotor skills. **Clarifications:** Some examples of locomotor skills are walking, running, skipping, leaping, hopping, jumping and galloping.
PE.K.C.2.2:	Recognize physical activities have safety rules and procedures. **Clarifications:** An example would be to put equipment away when not in use in order to keep the physical activity area safe.
PE.K.C.2.4:	Recognize there are deep and shallow areas of a pool, and identify the dangers of entering a body of water without supervision. **Clarifications:** An example of a danger is entering the water when there is not an adult present.
PE.K.C.2.7:	Identify personal and general space.
PE.K.C.2.8:	Recognize movement concepts. **Clarifications:** Some examples of movement concepts are directions, pathways and levels.
PE.K.L.3.4:	Identify opportunities for involvement in physical activities after the school day.
PE.K.L.3.6:	Identify the benefits of participating in physical activity.
PE.K.L.3.7:	Verbally state the search used before crossing a roadway.
PE.K.L.4.1:	Identify the location of muscles that help the body perform specific physical activities.
PE.K.L.4.2:	Identify that the heart beats faster during more intense physical activity.
PE.K.L.4.3:	Identify activities that increase breathing and heart rate.
PE.K.L.4.5:	Identify a benefit of flexibility.
PE.K.L.4.6:	Differentiate between healthy and unhealthy food choices.
PE.K.M.1.1:	Use a variety of locomotor skills to travel in personal and general space. **Clarifications:** Some examples of locomotor skills are running, galloping and skipping.
PE.K.M.1.3:	Balance a lightweight object on a paddle/racket while moving.
PE.K.M.1.5:	Use two hands to bounce and catch a large playground ball.
PE.K.M.1.7:	Catch a variety of self-tossed objects.
PE.K.M.1.8:	Roll and throw a variety of objects using an underhand motion.
PE.K.M.1.11:	Balance on a variety of body parts.
PE.K.R.5.1:	Identify ways to cooperate with a partner during physical activity.
PE.K.R.5.2:	Use equipment safely and properly.
PE.K.R.5.3:	Identify ways to treat others with respect during physical activity.
PE.K.R.6.1:	Identify physical activities that are enjoyable.
PE.K.R.6.2:	Identify a benefit of willingly trying new movements and motor skills.
PE.K.R.6.3:	Identify the benefits of continuing to participate when not successful on the first try.
MA.K12.MTR.1.1:	Mathematicians who participate in effortful learning both individually and with others: • Analyze the problem in a way that makes sense given the task. • Ask questions that will help with solving the task. • Build perseverance by modifying methods as needed while solving a challenging task. • Stay engaged and maintain a positive mindset when working to solve tasks. • Help and support each other when attempting a new method or approach. **Clarifications:** Teachers who encourage students to participate actively in effortful learning both individually and with others: • Cultivate a community of growth mindset learners. • Foster perseverance in students by choosing tasks that are challenging. • Develop students' ability to analyze and problem solve. • Recognize students' effort when solving challenging problems.
MA.K12.MTR.2.1:	Demonstrate understanding by representing problems in multiple ways. Mathematicians who demonstrate understanding by representing problems in multiple ways: • Build understanding through modeling and using manipulatives. • Represent solutions to problems in multiple ways using objects, drawings, tables, graphs and equations. • Progress from modeling problems with objects and drawings to using algorithms and equations. • Express connections between concepts and representations. • Choose a representation based on the given context or purpose.

Clarifications:
Teachers who encourage students to demonstrate understanding by representing problems in multiple ways:

- Help students make connections between concepts and representations.
- Provide opportunities for students to use manipulatives when investigating concepts.
- Guide students from concrete to pictorial to abstract representations as understanding progresses.
- Show students that various representations can have different purposes and can be useful in different situations.

MA.K12.MTR.3.1:

Complete tasks with mathematical fluency.
Mathematicians who complete tasks with mathematical fluency:

- Select efficient and appropriate methods for solving problems within the given context.
- Maintain flexibility and accuracy while performing procedures and mental calculations.
- Complete tasks accurately and with confidence.
- Adapt procedures to apply them to a new context.
- Use feedback to improve efficiency when performing calculations.

Clarifications:
Teachers who encourage students to complete tasks with mathematical fluency:

- Provide students with the flexibility to solve problems by selecting a procedure that allows them to solve efficiently and accurately.
- Offer multiple opportunities for students to practice efficient and generalizable methods.
- Provide opportunities for students to reflect on the method they used and determine if a more efficient method could have been used.

MA.K12.MTR.4.1:

Engage in discussions that reflect on the mathematical thinking of self and others.
Mathematicians who engage in discussions that reflect on the mathematical thinking of self and others:

- Communicate mathematical ideas, vocabulary and methods effectively.
- Analyze the mathematical thinking of others.
- Compare the efficiency of a method to those expressed by others.
- Recognize errors and suggest how to correctly solve the task.
- Justify results by explaining methods and processes.
- Construct possible arguments based on evidence.

Clarifications:
Teachers who encourage students to engage in discussions that reflect on the mathematical thinking of self and others:

- Establish a culture in which students ask questions of the teacher and their peers, and error is an opportunity for learning.
- Create opportunities for students to discuss their thinking with peers.
- Select, sequence and present student work to advance and deepen understanding of correct and increasingly efficient methods.
- Develop students' ability to justify methods and compare their responses to the responses of their peers.

MA.K12.MTR.5.1:

Use patterns and structure to help understand and connect mathematical concepts.
Mathematicians who use patterns and structure to help understand and connect mathematical concepts:

- Focus on relevant details within a problem.
- Create plans and procedures to logically order events, steps or ideas to solve problems.
- Decompose a complex problem into manageable parts.
- Relate previously learned concepts to new concepts.
- Look for similarities among problems.
- Connect solutions of problems to more complicated large-scale situations.

Clarifications:
Teachers who encourage students to use patterns and structure to help understand and connect mathematical concepts:

- Help students recognize the patterns in the world around them and connect these patterns to mathematical concepts.
- Support students to develop generalizations based on the similarities found among problems.
- Provide opportunities for students to create plans and procedures to solve problems.
- Develop students' ability to construct relationships between their current understanding and more sophisticated ways of thinking.

MA.K12.MTR.6.1:

Assess the reasonableness of solutions.
Mathematicians who assess the reasonableness of solutions:

- Estimate to discover possible solutions.
- Use benchmark quantities to determine if a solution makes sense.
- Check calculations when solving problems.
- Verify possible solutions by explaining the methods used.
- Evaluate results based on the given context.

Clarifications:
Teachers who encourage students to assess the reasonableness of solutions:

- Have students estimate or predict solutions prior to solving.
- Prompt students to continually ask, "Does this solution make sense? How do you know?"
- Reinforce that students check their work as they progress within and after a task.
- Strengthen students' ability to verify solutions through justifications.

MA.K12.MTR.7.1:

Apply mathematics to real-world contexts.
Mathematicians who apply mathematics to real-world contexts:

- Connect mathematical concepts to everyday experiences.
- Use models and methods to understand, represent and solve problems.
- Perform investigations to gather data or determine if a method is appropriate. • Redesign models and methods to improve accuracy or efficiency.

Clarifications:

	Teachers who encourage students to apply mathematics to real-world contexts: • Provide opportunities for students to create models, both concrete and abstract, and perform investigations. • Challenge students to question the accuracy of their models and methods. • Support students as they validate conclusions by comparing them to the given situation. • Indicate how various concepts can be applied to other disciplines.
ELA.K12.EE.1.1:	Cite evidence to explain and justify reasoning. **Clarifications:** K-1 Students include textual evidence in their oral communication with guidance and support from adults. The evidence can consist of details from the text without naming the text. During 1st grade, students learn how to incorporate the evidence in their writing. 2-3 Students include relevant textual evidence in their written and oral communication. Students should name the text when they refer to it. In 3rd grade, students should use a combination of direct and indirect citations. 4-5 Students continue with previous skills and reference comments made by speakers and peers. Students cite texts that they've directly quoted, paraphrased, or used for information. When writing, students will use the form of citation dictated by the instructor or the style guide referenced by the instructor. 6-8 Students continue with previous skills and use a style guide to create a proper citation. 9-12 Students continue with previous skills and should be aware of existing style guides and the ways in which they differ.
ELA.K12.EE.2.1:	Read and comprehend grade-level complex texts proficiently. **Clarifications:** See Text Complexity for grade-level complexity bands and a text complexity rubric.
ELA.K12.EE.3.1:	Make inferences to support comprehension. **Clarifications:** Students will make inferences before the words infer or inference are introduced. Kindergarten students will answer questions like "Why is the girl smiling?" or make predictions about what will happen based on the title page. Students will use the terms and apply them in 2nd grade and beyond.
ELA.K12.EE.4.1:	Use appropriate collaborative techniques and active listening skills when engaging in discussions in a variety of situations. **Clarifications:** In kindergarten, students learn to listen to one another respectfully. In grades 1-2, students build upon these skills by justifying what they are thinking. For example: "I think _____ because _____." The collaborative conversations are becoming academic conversations. In grades 3-12, students engage in academic conversations discussing claims and justifying their reasoning, refining and applying skills. Students build on ideas, propel the conversation, and support claims and counterclaims with evidence.
ELA.K12.EE.5.1:	Use the accepted rules governing a specific format to create quality work. **Clarifications:** Students will incorporate skills learned into work products to produce quality work. For students to incorporate these skills appropriately, they must receive instruction. A 3rd grade student creating a poster board display must have instruction in how to effectively present information to do quality work.
ELA.K12.EE.6.1:	Use appropriate voice and tone when speaking or writing. **Clarifications:** In kindergarten and 1st grade, students learn the difference between formal and informal language. For example, the way we talk to our friends differs from the way we speak to adults. In 2nd grade and beyond, students practice appropriate social and academic language to discuss texts.
ELD.K12.ELL.SI.1:	English language learners communicate for social and instructional purposes within the school setting.

General Course Information and Notes

GENERAL NOTES

Florida's Benchmarks for Excellent Student Thinking (B.E.S.T.) Standards
This course includes Florida's B.E.S.T. ELA Expectations (EE) and Mathematical Thinking and Reasoning Standards (MTRs) for students. Florida educators should intentionally embed these standards within the content and their instruction as applicable. For guidance on the implementation of the EEs and MTRs, please visit cpalms.org/Standards/BEST_Standards.aspx and select the appropriate B.E.S.T. Standards package.

English Language Development ELD Standards Special Notes Section:
Teachers are required to provide listening, speaking, reading and writing instruction that allows English language learners (ELL) to communicate for social and instructional purposes within the school setting. For the given level of English language proficiency and with visual, graphic, or interactive support, students will interact with grade level words, expressions, sentences and discourse to process or produce language necessary for academic success. The ELD standard should specify a relevant content area concept or topic of study chosen by curriculum developers and teachers which maximizes an ELL's need for communication and social skills. To access an ELL supporting document which delineates performance definitions and descriptors, please click on the following link: cpalms.org/uploads/docs/standards/eld/SI.pdf

QUALIFICATIONS

As well as any certification requirements listed on the course description, the following qualifications may also be acceptable for the course:

Any field when certification reflects a bachelor or higher degree.

GENERAL INFORMATION

Course Number: 5015000

Course Path: Section: Grades PreK to 12 Education Courses > **Grade Group:** Grades PreK to 5 Education Courses > **Subject:** Physical Education > **SubSubject:** General >

Abbreviated Title: E ADAP PE IEP/504

Course Length: Year (Y)

Course Attributes:

- Class Size Core Required

Course Status: Draft - Course Pending Approval

Grade Level(s): K,1,2,3,4,5

Physical Education - Grade Kindergarten (#5015020) 2022 - And Beyond

Course Standards

Name	Description
PE.K.C.2.1:	Recognize locomotor skills. **Clarifications:** Some examples of locomotor skills are walking, running, skipping, leaping, hopping, jumping and galloping.
PE.K.C.2.2:	Recognize physical activities have safety rules and procedures. **Clarifications:** An example would be to put equipment away when not in use in order to keep the physical activity area safe.
PE.K.C.2.3:	Recognize technology can be utilized during physical activity. **Clarifications:** Some examples of developmentally-appropriate technology for students to recognize are stop watches, pedometers and scales.
PE.K.C.2.4:	Recognize there are deep and shallow areas of a pool, and identify the dangers of entering a body of water without supervision. **Clarifications:** An example of a danger is entering the water when there is not an adult present.
PE.K.C.2.5:	Recognize the concept of a dominant hand/foot for throwing/striking/kicking patterns. **Clarifications:** A dominant hand/foot is the one selected by the student that feels most natural for throwing/striking/kicking.
PE.K.C.2.6:	Recite cues for a variety of movement patterns and skills. **Clarifications:** Some examples of movement patterns and skills are locomotor, non-locomotor, throwing and catching.
PE.K.C.2.7:	Identify personal and general space.
PE.K.C.2.8:	Recognize movement concepts. **Clarifications:** Some examples of movement concepts are directions, pathways and levels.
PE.K.L.3.1:	Identify a moderate physical activity.
PE.K.L.3.2:	Identify a vigorous physical activity.
PE.K.L.3.3:	Identify opportunities for involvement in physical activities during the school day.
PE.K.L.3.4:	Identify opportunities for involvement in physical activities after the school day.
PE.K.L.3.5:	Describe physical-activity goal-setting.
PE.K.L.3.6:	Identify the benefits of participating in physical activity.
PE.K.L.3.7:	Verbally state the search used before crossing a roadway.
PE.K.L.4.1:	Identify the location of muscles that help the body perform specific physical activities.
PE.K.L.4.2:	Identify that the heart beats faster during more intense physical activity.
PE.K.L.4.3:	Identify activities that increase breathing and heart rate.
PE.K.L.4.4:	Identify a physiological sign of participating in physical activity.
PE.K.L.4.5:	Identify a benefit of flexibility.
PE.K.L.4.6:	Differentiate between healthy and unhealthy food choices.
PE.K.M.1.1:	Use a variety of locomotor skills to travel in personal and general space. **Clarifications:** Some examples of locomotor skills are running, galloping and skipping.
PE.K.M.1.2:	Strike objects using body parts forcefully. **Clarifications:** An example is kicking a soccer ball with your foot.
PE.K.M.1.3:	Balance a lightweight object on a paddle/racket while moving.
PE.K.M.1.4:	Strike an object forcefully using a modified, long-handled implement of various sizes, weights and compositions. **Clarifications:** Some examples of modified, developmentally- appropriate long-handled implements are bats, hockey sticks and golf clubs.
PE.K.M.1.5:	Use two hands to bounce and catch a large playground ball.
PE.K.M.1.6:	Participate in a variety of introductory water skills. **Clarifications:** Some examples of introductory water skills are water entry, putting face in water and supported with feet off the bottom.
PE.K.M.1.7:	Catch a variety of self-tossed objects.
PE.K.M.1.8:	Roll and throw a variety of objects using an underhand motion.

PE.K.M.1.9:	Throw a variety of objects forcefully using an overhand motion.
PE.K.M.1.10:	Perform a creative-movement sequence with a clear beginning balance, at least one movement and a clear ending shape.
PE.K.M.1.11:	Balance on a variety of body parts.
PE.K.M.1.12:	Perform a variety of rolling actions. **Clarifications:** Some examples of rolling actions are pencil roll and forward roll.
PE.K.M.1.13:	Move in a variety of ways in relation to others. **Clarifications:** Some examples of this are chasing, fleeing and dodging.
PE.K.R.5.1:	Identify ways to cooperate with a partner during physical activity.
PE.K.R.5.2:	Use equipment safely and properly.
PE.K.R.5.3:	Identify ways to treat others with respect during physical activity.
PE.K.R.6.1:	Identify physical activities that are enjoyable.
PE.K.R.6.2:	Identify a benefit of willingly trying new movements and motor skills.
PE.K.R.6.3:	Identify the benefits of continuing to participate when not successful on the first try.
MA.K12.MTR.1.1:	Mathematicians who participate in effortful learning both individually and with others: • Analyze the problem in a way that makes sense given the task. • Ask questions that will help with solving the task. • Build perseverance by modifying methods as needed while solving a challenging task. • Stay engaged and maintain a positive mindset when working to solve tasks. • Help and support each other when attempting a new method or approach. **Clarifications:** Teachers who encourage students to participate actively in effortful learning both individually and with others: • Cultivate a community of growth mindset learners. • Foster perseverance in students by choosing tasks that are challenging. • Develop students' ability to analyze and problem solve. • Recognize students' effort when solving challenging problems.
MA.K12.MTR.2.1:	Demonstrate understanding by representing problems in multiple ways. Mathematicians who demonstrate understanding by representing problems in multiple ways: • Build understanding through modeling and using manipulatives. • Represent solutions to problems in multiple ways using objects, drawings, tables, graphs and equations. • Progress from modeling problems with objects and drawings to using algorithms and equations. • Express connections between concepts and representations. • Choose a representation based on the given context or purpose. **Clarifications:** Teachers who encourage students to demonstrate understanding by representing problems in multiple ways: • Help students make connections between concepts and representations. • Provide opportunities for students to use manipulatives when investigating concepts. • Guide students from concrete to pictorial to abstract representations as understanding progresses. • Show students that various representations can have different purposes and can be useful in different situations.
MA.K12.MTR.3.1:	Complete tasks with mathematical fluency. Mathematicians who complete tasks with mathematical fluency: • Select efficient and appropriate methods for solving problems within the given context. • Maintain flexibility and accuracy while performing procedures and mental calculations. • Complete tasks accurately and with confidence. • Adapt procedures to apply them to a new context. • Use feedback to improve efficiency when performing calculations. **Clarifications:** Teachers who encourage students to complete tasks with mathematical fluency: • Provide students with the flexibility to solve problems by selecting a procedure that allows them to solve efficiently and accurately. • Offer multiple opportunities for students to practice efficient and generalizable methods. • Provide opportunities for students to reflect on the method they used and determine if a more efficient method could have been used.
MA.K12.MTR.4.1:	Engage in discussions that reflect on the mathematical thinking of self and others. Mathematicians who engage in discussions that reflect on the mathematical thinking of self and others: • Communicate mathematical ideas, vocabulary and methods effectively. • Analyze the mathematical thinking of others. • Compare the efficiency of a method to those expressed by others. • Recognize errors and suggest how to correctly solve the task. • Justify results by explaining methods and processes. • Construct possible arguments based on evidence. **Clarifications:** Teachers who encourage students to engage in discussions that reflect on the mathematical thinking of self and others: • Establish a culture in which students ask questions of the teacher and their peers, and error is an opportunity for learning. • Create opportunities for students to discuss their thinking with peers. • Select, sequence and present student work to advance and deepen understanding of correct and increasingly efficient methods. • Develop students' ability to justify methods and compare their responses to the responses of their peers.

MA.K12.MTR.5.1:	Use patterns and structure to help understand and connect mathematical concepts. Mathematicians who use patterns and structure to help understand and connect mathematical concepts: • Focus on relevant details within a problem. • Create plans and procedures to logically order events, steps or ideas to solve problems. • Decompose a complex problem into manageable parts. • Relate previously learned concepts to new concepts. • Look for similarities among problems. • Connect solutions of problems to more complicated large-scale situations. **Clarifications:** Teachers who encourage students to use patterns and structure to help understand and connect mathematical concepts: • Help students recognize the patterns in the world around them and connect these patterns to mathematical concepts. • Support students to develop generalizations based on the similarities found among problems. • Provide opportunities for students to create plans and procedures to solve problems. • Develop students' ability to construct relationships between their current understanding and more sophisticated ways of thinking.
MA.K12.MTR.6.1:	Assess the reasonableness of solutions. Mathematicians who assess the reasonableness of solutions: • Estimate to discover possible solutions. • Use benchmark quantities to determine if a solution makes sense. • Check calculations when solving problems. • Verify possible solutions by explaining the methods used. • Evaluate results based on the given context. **Clarifications:** Teachers who encourage students to assess the reasonableness of solutions: • Have students estimate or predict solutions prior to solving. • Prompt students to continually ask, "Does this solution make sense? How do you know?" • Reinforce that students check their work as they progress within and after a task. • Strengthen students' ability to verify solutions through justifications.
MA.K12.MTR.7.1:	Apply mathematics to real-world contexts. Mathematicians who apply mathematics to real-world contexts: • Connect mathematical concepts to everyday experiences. • Use models and methods to understand, represent and solve problems. • Perform investigations to gather data or determine if a method is appropriate. • Redesign models and methods to improve accuracy or efficiency. **Clarifications:** Teachers who encourage students to apply mathematics to real-world contexts: • Provide opportunities for students to create models, both concrete and abstract, and perform investigations. • Challenge students to question the accuracy of their models and methods. • Support students as they validate conclusions by comparing them to the given situation. • Indicate how various concepts can be applied to other disciplines.
ELA.K12.EE.1.1:	Cite evidence to explain and justify reasoning. **Clarifications:** K-1 Students include textual evidence in their oral communication with guidance and support from adults. The evidence can consist of details from the text without naming the text. During 1st grade, students learn how to incorporate the evidence in their writing. 2-3 Students include relevant textual evidence in their written and oral communication. Students should name the text when they refer to it. In 3rd grade, students should use a combination of direct and indirect citations. 4-5 Students continue with previous skills and reference comments made by speakers and peers. Students cite texts that they've directly quoted, paraphrased, or used for information. When writing, students will use the form of citation dictated by the instructor or the style guide referenced by the instructor. 6-8 Students continue with previous skills and use a style guide to create a proper citation. 9-12 Students continue with previous skills and should be aware of existing style guides and the ways in which they differ.
ELA.K12.EE.2.1:	Read and comprehend grade-level complex texts proficiently. **Clarifications:** See Text Complexity for grade-level complexity bands and a text complexity rubric.
ELA.K12.EE.3.1:	Make inferences to support comprehension. **Clarifications:** Students will make inferences before the words infer or inference are introduced. Kindergarten students will answer questions like "Why is the girl smiling?" or make predictions about what will happen based on the title page. Students will use the terms and apply them in 2nd grade and beyond.
ELA.K12.EE.4.1:	Use appropriate collaborative techniques and active listening skills when engaging in discussions in a variety of situations. **Clarifications:** In kindergarten, students learn to listen to one another respectfully. In grades 1-2, students build upon these skills by justifying what they are thinking. For example: "I think _____ because _____." The collaborative conversations are becoming academic conversations. In grades 3-12, students engage in academic conversations discussing claims and justifying their reasoning, refining and applying skills. Students build on ideas, propel the conversation, and support claims and counterclaims with evidence.

ELA.K12.EE.5.1:	Use the accepted rules governing a specific format to create quality work. **Clarifications:** Students will incorporate skills learned into work products to produce quality work. For students to incorporate these skills appropriately, they must receive instruction. A 3rd grade student creating a poster board display must have instruction in how to effectively present information to do quality work.
ELA.K12.EE.6.1:	Use appropriate voice and tone when speaking or writing. **Clarifications:** In kindergarten and 1st grade, students learn the difference between formal and informal language. For example, the way we talk to our friends differs from the way we speak to adults. In 2nd grade and beyond, students practice appropriate social and academic language to discuss texts.
HE.K.B.5.1:	Name situations when a health-related decision can be made individually or when assistance is needed. **Clarifications:** Recreational water activities. Some examples of individual decisions may be participating safely in aquatic activities, following school rules, getting dressed, choosing appropriate clothes, and practicing good hygiene.
HE.K.C.1.2:	Recognize the physical dimensions of health. **Clarifications:** Hygiene, exercise, eating habits, and cooperation.
HE.K.P.7.1:	Identify healthy practices and behaviors to maintain or improve personal health. **Clarifications:** Seek a safe environment, seek help, and practice universal precautions.
ELD.K12.ELL.SI.1:	English language learners communicate for social and instructional purposes within the school setting.

General Course Information and Notes

GENERAL NOTES

Florida's Benchmarks for Excellent Student Thinking (B.E.S.T.) Standards
This course includes Florida's B.E.S.T. ELA Expectations (EE) and Mathematical Thinking and Reasoning Standards (MTRs) for students. Florida educators should intentionally embed these standards within the content and their instruction as applicable. For guidance on the implementation of the EEs and MTRs, please visit cpalms.org/Standards/BEST_Standards.aspx and select the appropriate B.E.S.T. Standards package.

English Language Development ELD Standards Special Notes Section:
Teachers are required to provide listening, speaking, reading and writing instruction that allows English language learners (ELL) to communicate for social and instructional purposes within the school setting. For the given level of English language proficiency and with visual, graphic, or interactive support, students will interact with grade level words, expressions, sentences and discourse to process or produce language necessary for academic success. The ELD standard should specify a relevant content area concept or topic of study chosen by curriculum developers and teachers which maximizes an ELL's need for communication and social skills. To access an ELL supporting document which delineates performance definitions and descriptors, please click on the following link: cpalms.org/uploads/docs/standards/eld/SI.pdf

QUALIFICATIONS

As well as any certification requirements listed on the course description, the following qualifications may also be acceptable for the course:

Any field when certification reflects a bachelor or higher degree.

GENERAL INFORMATION

Course Number: 5015020

Course Path: Section: Grades PreK to 12 Education Courses > **Grade Group:** Grades PreK to 5 Education Courses > **Subject:** Physical Education > **SubSubject:** General >
Abbreviated Title: PHYSICAL EDUCATION K
Course Length: Year (Y)

Course Status: Draft - Course Pending Approval

Grade Level(s): K

Physical Education - Grade 1 (#5015030) 2022 - And Beyond

Course Standards

Name	Description
PE.1.C.2.1:	Identify the critical elements of locomotor skills. **Clarifications:** Some examples of critical elements of locomotor skills are step-hop for skipping and use of one foot for hopping.
PE.1.C.2.2:	Identify safety rules and procedures for teacher-selected physical activities. **Clarifications:** An example of a safety procedure is having students stand a safe distance away from a student swinging a bat during striking activities.
PE.1.C.2.3:	Identify technology that can be utilized to enhance physical activity. **Clarifications:** Some examples of developmentally-appropriate technology for students to identify are stop watches, pedometers and scales.
PE.1.C.2.4:	Identify the rules for safe water activities, and recognize the importance of having a lifeguard near water or in a swimming facility. **Clarifications:** An example of a rule for safe water activity would be the use of a life jacket.
PE.1.C.2.5:	Recognize the importance of practicing to improve performance. **Clarifications:** An example is initially getting two out of five bean bags into a hoop while performing an underhand toss, then improving to four out of five due to practicing.
PE.1.C.2.6:	Use skill cues to improve performance. **Clarifications:** Some examples of skill cues are palm up for an underhand throw and keep ball close to body when dribbling.
PE.1.C.2.7:	Identify dominant hand/foot for use with throwing/dribbling/striking/kicking skills. **Clarifications:** A dominant hand/foot is the one selected by the student that feels most natural for throwing/dribbling/striking/kicking patterns.
PE.1.C.2.8:	Identify movement concepts. **Clarifications:** Some examples of movement concepts are directions, pathways and levels.
PE.1.C.2.9:	Name examples of warm-up and cool-down exercises. **Clarifications:** An example of a warm-up exercise is an activity that gets your blood flowing. An example of a cool-down exercise is one that slows your heart rate.
PE.1.L.3.1:	Identify a moderate physical activity.
PE.1.L.3.2:	Identify a vigorous physical activity.
PE.1.L.3.3:	Identify opportunities for involvement in physical activities during the school day.
PE.1.L.3.4:	Identify opportunities for involvement in physical activities after the school day.
PE.1.L.3.5:	Set physical-activity goals.
PE.1.L.3.6:	Identify the health benefits of physical activity.
PE.1.L.3.7:	Identify edges, pedestrians, vehicles and traffic.
PE.1.L.4.1:	Identify a benefit of strengthening muscles.
PE.1.L.4.2:	Identify the components of health-related physical fitness.
PE.1.L.4.3:	Identify the changes in heart rate before, during and after physical activity.
PE.1.L.4.4:	Identify the difference in the activity of the heart during rest and while physically active.
PE.1.L.4.5:	Discuss the physiological signs of physical activity.
PE.1.L.4.6:	Identify how to properly flex and extend body parts to promote flexibility.
PE.1.L.4.7:	Identify the food groups.
PE.1.M.1.1:	Travel using various locomotor skills while changing directions, pathways and speeds.
PE.1.M.1.2:	Strike an object upward using body parts. **Clarifications:** An example is using different body parts to strike a balloon or beach ball upward.
PE.1.M.1.3:	Strike a lightweight object upward continuously using a paddle/racket.
PE.1.M.1.4:	Strike a stationary object a short distance using a modified, long-handled implement so that the object travels in the intended direction. **Clarifications:** Some examples of modified, developmentally- appropriate, long-handled implements are bats, hockey sticks and golf clubs.
PE.1.M.1.5:	Dribble an object with hands or feet while demonstrating control in general space.
PE.1.M.1.6:	Demonstrate a variety of basic water skills. **Clarifications:** Some examples of basic water skills are prone float and recover, back float with assistance and move forward and backward with assistance.

PE.1.M.1.7:	Move in different directions to catch a variety of self-tossed objects.
PE.1.M.1.8:	Demonstrate an underhand-throwing motion for accuracy using correct technique.
PE.1.M.1.9:	Demonstrate an overhand-throwing motion for distance using correct technique.
PE.1.M.1.10:	Perform a self-designed creative movement/dance sequence with a clear beginning balance, use of one movement and a different and clear ending shape.
PE.1.M.1.11:	Demonstrate a sequence of a balance, a roll and a different balance.
PE.1.M.1.12:	Demonstrate the ability to take weight onto hands. **Clarifications:** Some developmentally appropriate examples are donkey kicks and hand stands.
PE.1.M.1.13:	Chase, flee and dodge to avoid or catch others.
PE.1.M.1.14:	Use a variety of takeoff and landing patterns to jump, hop and leap safely in relation to various types of equipment. **Clarifications:** Some examples of equipment are hoops, stationary ropes and boxes.
PE.1.R.5.1:	List a benefit resulting from cooperation and sharing during physical activity.
PE.1.R.5.2:	Use physical-activity space safely and properly.
PE.1.R.5.3:	Demonstrate consideration of others while participating in physical activity.
PE.1.R.6.1:	Identify physical-activity preferences.
PE.1.R.6.2:	Identify feelings resulting from participation in physical activity.
PE.1.R.6.3:	Identify the benefits of learning new movement skills.
MA.K12.MTR.1.1:	Mathematicians who participate in effortful learning both individually and with others: • Analyze the problem in a way that makes sense given the task. • Ask questions that will help with solving the task. • Build perseverance by modifying methods as needed while solving a challenging task. • Stay engaged and maintain a positive mindset when working to solve tasks. • Help and support each other when attempting a new method or approach. **Clarifications:** Teachers who encourage students to participate actively in effortful learning both individually and with others: • Cultivate a community of growth mindset learners. • Foster perseverance in students by choosing tasks that are challenging. • Develop students' ability to analyze and problem solve. • Recognize students' effort when solving challenging problems.
MA.K12.MTR.2.1:	Demonstrate understanding by representing problems in multiple ways. Mathematicians who demonstrate understanding by representing problems in multiple ways: • Build understanding through modeling and using manipulatives. • Represent solutions to problems in multiple ways using objects, drawings, tables, graphs and equations. • Progress from modeling problems with objects and drawings to using algorithms and equations. • Express connections between concepts and representations. • Choose a representation based on the given context or purpose. **Clarifications:** Teachers who encourage students to demonstrate understanding by representing problems in multiple ways: • Help students make connections between concepts and representations. • Provide opportunities for students to use manipulatives when investigating concepts. • Guide students from concrete to pictorial to abstract representations as understanding progresses. • Show students that various representations can have different purposes and can be useful in different situations.
MA.K12.MTR.3.1:	Complete tasks with mathematical fluency. Mathematicians who complete tasks with mathematical fluency: • Select efficient and appropriate methods for solving problems within the given context. • Maintain flexibility and accuracy while performing procedures and mental calculations. • Complete tasks accurately and with confidence. • Adapt procedures to apply them to a new context. • Use feedback to improve efficiency when performing calculations. **Clarifications:** Teachers who encourage students to complete tasks with mathematical fluency: • Provide students with the flexibility to solve problems by selecting a procedure that allows them to solve efficiently and accurately. • Offer multiple opportunities for students to practice efficient and generalizable methods. • Provide opportunities for students to reflect on the method they used and determine if a more efficient method could have been used.
MA.K12.MTR.4.1:	Engage in discussions that reflect on the mathematical thinking of self and others. Mathematicians who engage in discussions that reflect on the mathematical thinking of self and others: • Communicate mathematical ideas, vocabulary and methods effectively. • Analyze the mathematical thinking of others. • Compare the efficiency of a method to those expressed by others. • Recognize errors and suggest how to correctly solve the task. • Justify results by explaining methods and processes. • Construct possible arguments based on evidence. **Clarifications:** Teachers who encourage students to engage in discussions that reflect on the mathematical thinking of self and others:

	• Establish a culture in which students ask questions of the teacher and their peers, and error is an opportunity for learning. • Create opportunities for students to discuss their thinking with peers. • Select, sequence and present student work to advance and deepen understanding of correct and increasingly efficient methods. • Develop students' ability to justify methods and compare their responses to the responses of their peers.
MA.K12.MTR.5.1:	Use patterns and structure to help understand and connect mathematical concepts. Mathematicians who use patterns and structure to help understand and connect mathematical concepts: • Focus on relevant details within a problem. • Create plans and procedures to logically order events, steps or ideas to solve problems. • Decompose a complex problem into manageable parts. • Relate previously learned concepts to new concepts. • Look for similarities among problems. • Connect solutions of problems to more complicated large-scale situations. **Clarifications:** Teachers who encourage students to use patterns and structure to help understand and connect mathematical concepts: • Help students recognize the patterns in the world around them and connect these patterns to mathematical concepts. • Support students to develop generalizations based on the similarities found among problems. • Provide opportunities for students to create plans and procedures to solve problems. • Develop students' ability to construct relationships between their current understanding and more sophisticated ways of thinking.
MA.K12.MTR.6.1:	Assess the reasonableness of solutions. Mathematicians who assess the reasonableness of solutions: • Estimate to discover possible solutions. • Use benchmark quantities to determine if a solution makes sense. • Check calculations when solving problems. • Verify possible solutions by explaining the methods used. • Evaluate results based on the given context. **Clarifications:** Teachers who encourage students to assess the reasonableness of solutions: • Have students estimate or predict solutions prior to solving. • Prompt students to continually ask, "Does this solution make sense? How do you know?" • Reinforce that students check their work as they progress within and after a task. • Strengthen students' ability to verify solutions through justifications.
MA.K12.MTR.7.1:	Apply mathematics to real-world contexts. Mathematicians who apply mathematics to real-world contexts: • Connect mathematical concepts to everyday experiences. • Use models and methods to understand, represent and solve problems. • Perform investigations to gather data or determine if a method is appropriate. • Redesign models and methods to improve accuracy or efficiency. **Clarifications:** Teachers who encourage students to apply mathematics to real-world contexts: • Provide opportunities for students to create models, both concrete and abstract, and perform investigations. • Challenge students to question the accuracy of their models and methods. • Support students as they validate conclusions by comparing them to the given situation. • Indicate how various concepts can be applied to other disciplines.
ELA.K12.EE.1.1:	Cite evidence to explain and justify reasoning. **Clarifications:** K-1 Students include textual evidence in their oral communication with guidance and support from adults. The evidence can consist of details from the text without naming the text. During 1st grade, students learn how to incorporate the evidence in their writing. 2-3 Students include relevant textual evidence in their written and oral communication. Students should name the text when they refer to it. In 3rd grade, students should use a combination of direct and indirect citations. 4-5 Students continue with previous skills and reference comments made by speakers and peers. Students cite texts that they've directly quoted, paraphrased, or used for information. When writing, students will use the form of citation dictated by the instructor or the style guide referenced by the instructor. 6-8 Students continue with previous skills and use a style guide to create a proper citation. 9-12 Students continue with previous skills and should be aware of existing style guides and the ways in which they differ.
ELA.K12.EE.2.1:	Read and comprehend grade-level complex texts proficiently. **Clarifications:** See Text Complexity for grade-level complexity bands and a text complexity rubric.
ELA.K12.EE.3.1:	Make inferences to support comprehension. **Clarifications:** Students will make inferences before the words infer or inference are introduced. Kindergarten students will answer questions like "Why is the girl smiling?" or make predictions about what will happen based on the title page. Students will use the terms and apply them in 2nd grade and beyond.
	Use appropriate collaborative techniques and active listening skills when engaging in discussions in a variety of situations. **Clarifications:** In kindergarten, students learn to listen to one another respectfully.

ELA.K12.EE.4.1:	In grades 1-2, students build upon these skills by justifying what they are thinking. For example: "I think _____ because _____." The collaborative conversations are becoming academic conversations. In grades 3-12, students engage in academic conversations discussing claims and justifying their reasoning, refining and applying skills. Students build on ideas, propel the conversation, and support claims and counterclaims with evidence.
ELA.K12.EE.5.1:	Use the accepted rules governing a specific format to create quality work. **Clarifications:** Students will incorporate skills learned into work products to produce quality work. For students to incorporate these skills appropriately, they must receive instruction. A 3rd grade student creating a poster board display must have instruction in how to effectively present information to do quality work.
ELA.K12.EE.6.1:	Use appropriate voice and tone when speaking or writing. **Clarifications:** In kindergarten and 1st grade, students learn the difference between formal and informal language. For example, the way we talk to our friends differs from the way we speak to adults. In 2nd grade and beyond, students practice appropriate social and academic language to discuss texts.
HE.1.B.5.2:	Identify healthy options to health-related issues or problems. **Clarifications:** Wearing bike helmet, using age- appropriate restraints, and reporting danger.
HE.1.C.1.3:	Describe ways to prevent common communicable diseases. **Clarifications:** Washing hands, covering mouth to cough and sneeze, get immunized, and do not share food or utensils.
HE.1.P.8.1:	Encourage others to make positive health choices. **Clarifications:** Use sunscreen, cross the street at marked areas, and select healthy foods.
ELD.K12.ELL.SI.1:	English language learners communicate for social and instructional purposes within the school setting.

General Course Information and Notes

GENERAL NOTES

Florida's Benchmarks for Excellent Student Thinking (B.E.S.T.) Standards
This course includes Florida's B.E.S.T. ELA Expectations (EE) and Mathematical Thinking and Reasoning Standards (MTRs) for students. Florida educators should intentionally embed these standards within the content and their instruction as applicable. For guidance on the implementation of the EEs and MTRs, please visit cpalms.org/Standards/BEST_Standards.aspx and select the appropriate B.E.S.T. Standards package.

English Language Development ELD Standards Special Notes Section:
Teachers are required to provide listening, speaking, reading and writing instruction that allows English language learners (ELL) to communicate for social and instructional purposes within the school setting. For the given level of English language proficiency and with visual, graphic, or interactive support, students will interact with grade level words, expressions, sentences and discourse to process or produce language necessary for academic success. The ELD standard should specify a relevant content area concept or topic of study chosen by curriculum developers and teachers which maximizes an ELL's need for communication and social skills. To access an ELL supporting document which delineates performance definitions and descriptors, please click on the following link: cpalms.org/uploads/docs/standards/eld/SI.pdf

QUALIFICATIONS

As well as any certification requirements listed on the course description, the following qualifications may also be acceptable for the course:

Any field when certification reflects a bachelor or higher degree.

GENERAL INFORMATION

Course Number: 5015030

Course Path: Section: Grades PreK to 12 Education Courses > **Grade Group:** Grades PreK to 5 Education Courses > **Subject:** Physical Education > **SubSubject:** General >
Abbreviated Title: PHYSICAL EDUCATION 1
Course Length: Year (Y)

Course Status: Draft - Course Pending Approval

Grade Level(s): 1

Physical Education - Grade 2 (#5015040) 2022 - And Beyond

Course Standards

Name	Description
PE.2.C.2.1:	Describe the critical elements of locomotor skills. **Clarifications:** An example of a critical element of jumping is beginning and ending on two feet.
PE.2.C.2.2:	Identify safety rules and procedures for selected physical activities. **Clarifications:** An example of a safety procedure is having students stand a safe distance away from a student swinging a bat during striking activities.
PE.2.C.2.3:	Utilize technology to enhance experiences in physical education. **Clarifications:** Some examples of developmentally-appropriate technology are stop watches, pedometers and scales.
PE.2.C.2.4:	Explain the importance of wearing a life jacket (personal flotation device) when on a boat or near water.
PE.2.C.2.5:	Explain how appropriate practice improves the performance of movement skills. **Clarifications:** An example is initially getting two out of five bean bags into a hoop while performing an underhand toss, then improving to four out of five due to practicing.
PE.2.C.2.6:	Apply teacher feedback to effect change in performance. **Clarifications:** An example is a student applying teacher feedback of stepping with the opposite foot when throwing a ball in order to improve performance.
PE.2.C.2.7:	Describe movement concepts. **Clarifications:** Some examples of movement concepts are directions, pathways and levels.
PE.2.C.2.8:	Explain the importance of warm-up and cool-down activities. **Clarifications:** An example of the importance for warm-up activities is the prevention of injuries.
PE.2.C.2.9:	Define offense and defense. **Clarifications:** Offense is when a team is attempting to score and defense is when a team is trying to prevent the other team from scoring.
PE.2.L.3.1:	Identify a moderate physical activity.
PE.2.L.3.2:	Identify a vigorous physical activity.
PE.2.L.3.3:	Identify opportunities for involvement in physical activities during the school day.
PE.2.L.3.4:	Identify opportunities for involvement in physical activities after the school day.
PE.2.L.3.5:	Set and meet physical-activity goals.
PE.2.L.3.6:	Identify how opportunities for participation in physical activities change during the seasons.
PE.2.L.3.7:	Identify healthful benefits that result from regular participation in physical activity.
PE.2.L.3.8:	Identify the proper crossing sequence.
PE.2.L.4.1:	Identify how muscular strength and endurance enhances performance in physical activities.
PE.2.L.4.2:	Discuss the components of health-related physical fitness.
PE.2.L.4.3:	Identify that a stronger heart muscle can pump more blood with each beat.
PE.2.L.4.4:	Identify why sustained physical activity causes an increased heart rate and heavy breathing.
PE.2.L.4.5:	Identify the physiological signs of moderate to vigorous physical activity.
PE.2.L.4.6:	Identify benefits of participation in informal physical fitness assessment.
PE.2.L.4.7:	Identify appropriate stretching exercises.
PE.2.L.4.8:	Categorize food into food groups.
PE.2.M.1.1:	Perform locomotor skills with proficiency in a variety of activity settings to include rhythms/dance.
PE.2.M.1.2:	Strike an object continuously using body parts both upward and downward. **Clarifications:** An example of striking an object downward is dribbling a basketball.
PE.2.M.1.3:	Strike an object continuously using a paddle/racket both upward and downward.
PE.2.M.1.4:	Strike a stationary object a short distance using a long-handled implement so that the object travels in the intended direction. **Clarifications:** Some examples of developmentally-appropriate, long-handled implements are bats, hockey sticks and golf clubs.
PE.2.M.1.5:	Dribble with hands and feet in various pathways, directions and speeds around stationary objects.
PE.2.M.1.6:	Perform a variety of fundamental aquatics skills. **Clarifications:** Some examples of fundamental aquatics skills are prone float with flutter kick and back float recover to a standing position.
PE.2.M.1.7:	Move in different directions to catch a variety of objects softly tossed by a stationary partner.

PE.2.M.1.8:	Demonstrate an overhand-throwing motion for distance demonstrating correct technique and accuracy.
PE.2.M.1.9:	Perform one folk or line dance accurately. **Clarifications:** An example of a line dance is the Electric Slide.
PE.2.M.1.10:	Demonstrate a sequence of a balance, a roll and a different balance with correct technique and smooth transitions.
PE.2.M.1.11:	Perform at least one skill that requires the transfer of weight to hands. **Clarifications:** Some developmentally appropriate examples are hand stands and cartwheels.
PE.2.M.1.12:	Chase, flee and dodge to avoid or catch others while maneuvering around obstacles.
PE.2.R.5.1:	Identify ways to cooperate with others regardless of personal differences during physical activity.
PE.2.R.5.2:	List ways to safely handle physical-activity equipment.
PE.2.R.5.3:	Describe the personal feelings resulting from challenges, successes and failures in physical activity.
PE.2.R.5.4:	Identify ways to successfully resolve conflicts with others.
PE.2.R.6.1:	Identify ways to use physical activity to express feeling.
PE.2.R.6.2:	Discuss the relationship between skill competence and enjoyment.
PE.2.R.6.3:	Identify ways to contribute as a member of a cooperative group.
MA.K12.MTR.1.1:	Mathematicians who participate in effortful learning both individually and with others: • Analyze the problem in a way that makes sense given the task. • Ask questions that will help with solving the task. • Build perseverance by modifying methods as needed while solving a challenging task. • Stay engaged and maintain a positive mindset when working to solve tasks. • Help and support each other when attempting a new method or approach. **Clarifications:** Teachers who encourage students to participate actively in effortful learning both individually and with others: • Cultivate a community of growth mindset learners. • Foster perseverance in students by choosing tasks that are challenging. • Develop students' ability to analyze and problem solve. • Recognize students' effort when solving challenging problems.
MA.K12.MTR.2.1:	Demonstrate understanding by representing problems in multiple ways. Mathematicians who demonstrate understanding by representing problems in multiple ways: • Build understanding through modeling and using manipulatives. • Represent solutions to problems in multiple ways using objects, drawings, tables, graphs and equations. • Progress from modeling problems with objects and drawings to using algorithms and equations. • Express connections between concepts and representations. • Choose a representation based on the given context or purpose. **Clarifications:** Teachers who encourage students to demonstrate understanding by representing problems in multiple ways: • Help students make connections between concepts and representations. • Provide opportunities for students to use manipulatives when investigating concepts. • Guide students from concrete to pictorial to abstract representations as understanding progresses. • Show students that various representations can have different purposes and can be useful in different situations.
MA.K12.MTR.3.1:	Complete tasks with mathematical fluency. Mathematicians who complete tasks with mathematical fluency: • Select efficient and appropriate methods for solving problems within the given context. • Maintain flexibility and accuracy while performing procedures and mental calculations. • Complete tasks accurately and with confidence. • Adapt procedures to apply them to a new context. • Use feedback to improve efficiency when performing calculations. **Clarifications:** Teachers who encourage students to complete tasks with mathematical fluency: • Provide students with the flexibility to solve problems by selecting a procedure that allows them to solve efficiently and accurately. • Offer multiple opportunities for students to practice efficient and generalizable methods. • Provide opportunities for students to reflect on the method they used and determine if a more efficient method could have been used.
MA.K12.MTR.4.1:	Engage in discussions that reflect on the mathematical thinking of self and others. Mathematicians who engage in discussions that reflect on the mathematical thinking of self and others: • Communicate mathematical ideas, vocabulary and methods effectively. • Analyze the mathematical thinking of others. • Compare the efficiency of a method to those expressed by others. • Recognize errors and suggest how to correctly solve the task. • Justify results by explaining methods and processes. • Construct possible arguments based on evidence. **Clarifications:** Teachers who encourage students to engage in discussions that reflect on the mathematical thinking of self and others: • Establish a culture in which students ask questions of the teacher and their peers, and error is an opportunity for learning. • Create opportunities for students to discuss their thinking with peers. • Select, sequence and present student work to advance and deepen understanding of correct and increasingly efficient methods.

	• Develop students' ability to justify methods and compare their responses to the responses of their peers.
MA.K12.MTR.5.1:	Use patterns and structure to help understand and connect mathematical concepts. Mathematicians who use patterns and structure to help understand and connect mathematical concepts: • Focus on relevant details within a problem. • Create plans and procedures to logically order events, steps or ideas to solve problems. • Decompose a complex problem into manageable parts. • Relate previously learned concepts to new concepts. • Look for similarities among problems. • Connect solutions of problems to more complicated large-scale situations. **Clarifications:** Teachers who encourage students to use patterns and structure to help understand and connect mathematical concepts: • Help students recognize the patterns in the world around them and connect these patterns to mathematical concepts. • Support students to develop generalizations based on the similarities found among problems. • Provide opportunities for students to create plans and procedures to solve problems. • Develop students' ability to construct relationships between their current understanding and more sophisticated ways of thinking.
MA.K12.MTR.6.1:	Assess the reasonableness of solutions. Mathematicians who assess the reasonableness of solutions: • Estimate to discover possible solutions. • Use benchmark quantities to determine if a solution makes sense. • Check calculations when solving problems. • Verify possible solutions by explaining the methods used. • Evaluate results based on the given context. **Clarifications:** Teachers who encourage students to assess the reasonableness of solutions: • Have students estimate or predict solutions prior to solving. • Prompt students to continually ask, "Does this solution make sense? How do you know?" • Reinforce that students check their work as they progress within and after a task. • Strengthen students' ability to verify solutions through justifications.
MA.K12.MTR.7.1:	Apply mathematics to real-world contexts. Mathematicians who apply mathematics to real-world contexts: • Connect mathematical concepts to everyday experiences. • Use models and methods to understand, represent and solve problems. • Perform investigations to gather data or determine if a method is appropriate. • Redesign models and methods to improve accuracy or efficiency. **Clarifications:** Teachers who encourage students to apply mathematics to real-world contexts: • Provide opportunities for students to create models, both concrete and abstract, and perform investigations. • Challenge students to question the accuracy of their models and methods. • Support students as they validate conclusions by comparing them to the given situation. • Indicate how various concepts can be applied to other disciplines.
ELA.K12.EE.1.1:	Cite evidence to explain and justify reasoning. **Clarifications:** K-1 Students include textual evidence in their oral communication with guidance and support from adults. The evidence can consist of details from the text without naming the text. During 1st grade, students learn how to incorporate the evidence in their writing. 2-3 Students include relevant textual evidence in their written and oral communication. Students should name the text when they refer to it. In 3rd grade, students should use a combination of direct and indirect citations. 4-5 Students continue with previous skills and reference comments made by speakers and peers. Students cite texts that they've directly quoted, paraphrased, or used for information. When writing, students will use the form of citation dictated by the instructor or the style guide referenced by the instructor. 6-8 Students continue with previous skills and use a style guide to create a proper citation. 9-12 Students continue with previous skills and should be aware of existing style guides and the ways in which they differ.
ELA.K12.EE.2.1:	Read and comprehend grade-level complex texts proficiently. **Clarifications:** See Text Complexity for grade-level complexity bands and a text complexity rubric.
ELA.K12.EE.3.1:	Make inferences to support comprehension. **Clarifications:** Students will make inferences before the words infer or inference are introduced. Kindergarten students will answer questions like "Why is the girl smiling?" or make predictions about what will happen based on the title page. Students will use the terms and apply them in 2nd grade and beyond.
ELA.K12.EE.4.1:	Use appropriate collaborative techniques and active listening skills when engaging in discussions in a variety of situations. **Clarifications:** In kindergarten, students learn to listen to one another respectfully. In grades 1-2, students build upon these skills by justifying what they are thinking. For example: "I think _____ because _____." The collaborative conversations are becoming academic conversations. In grades 3-12, students engage in academic conversations discussing claims and justifying their reasoning, refining and applying skills. Students

	build on ideas, propel the conversation, and support claims and counterclaims with evidence.
ELA.K12.EE.5.1:	Use the accepted rules governing a specific format to create quality work. **Clarifications:** Students will incorporate skills learned into work products to produce quality work. For students to incorporate these skills appropriately, they must receive instruction. A 3rd grade student creating a poster board display must have instruction in how to effectively present information to do quality work.
ELA.K12.EE.6.1:	Use appropriate voice and tone when speaking or writing. **Clarifications:** In kindergarten and 1st grade, students learn the difference between formal and informal language. For example, the way we talk to our friends differs from the way we speak to adults. In 2nd grade and beyond, students practice appropriate social and academic language to discuss texts.
HE.2.C.1.4:	Describe ways to prevent childhood injuries in the home, school, and community settings. **Clarifications:** Recognizing abusive behaviors, following bus/playground rules, and never playing with matches.
HE.2.C.2.1:	Describe how family rules and practices influence health behaviors. **Clarifications:** Consistent/inconsistent home safety rules and modeling of food- sanitation practices at home.
HE.2.C.2.3:	Describe how the school and community influence health behaviors of children. **Clarifications:** Health and safety fairs, school and community gardens, and recycling.
ELD.K12.ELL.SI.1:	English language learners communicate for social and instructional purposes within the school setting.

General Course Information and Notes

GENERAL NOTES

Florida's Benchmarks for Excellent Student Thinking (B.E.S.T.) Standards
This course includes Florida's B.E.S.T. ELA Expectations (EE) and Mathematical Thinking and Reasoning Standards (MTRs) for students. Florida educators should intentionally embed these standards within the content and their instruction as applicable. For guidance on the implementation of the EEs and MTRs, please visit cpalms.org/Standards/BEST_Standards.aspx and select the appropriate B.E.S.T. Standards package.

English Language Development ELD Standards Special Notes Section:
Teachers are required to provide listening, speaking, reading and writing instruction that allows English language learners (ELL) to communicate for social and instructional purposes within the school setting. For the given level of English language proficiency and with visual, graphic, or interactive support, students will interact with grade level words, expressions, sentences and discourse to process or produce language necessary for academic success. The ELD standard should specify a relevant content area concept or topic of study chosen by curriculum developers and teachers which maximizes an ELL's need for communication and social skills. To access an ELL supporting document which delineates performance definitions and descriptors, please click on the following link: cpalms.org/uploads/docs/standards/eld/SI.pdf

QUALIFICATIONS

As well as any certification requirements listed on the course description, the following qualifications may also be acceptable for the course:

Any field when certification reflects a bachelor or higher degree.

GENERAL INFORMATION

Course Number: 5015040

Course Path: Section: Grades PreK to 12 Education Courses > **Grade Group:** Grades PreK to 5 Education Courses > **Subject:** Physical Education > **SubSubject:** General >
Abbreviated Title: PHYSICAL EDUCATION 2
Course Length: Year (Y)

Course Status: Draft - Course Pending Approval

Grade Level(s): 2

Physical Education - Grade 3 (#5015050) 2022 - And Beyond

Course Standards

Name	Description
PE.3.C.2.1:	Identify the importance of purposeful movement and its impact on quality of performance. **Clarifications:** Some examples of purposeful movement are timing, flow, rhythm, sequencing and transfer of weight.
PE.3.C.2.2:	Understand the importance of safety rules and procedures in all physical activities. **Clarifications:** An example of a safety procedure is wearing a helmet when riding a bicycle.
PE.3.C.2.3:	Understand that technology can be utilized to gather information about performance. **Clarifications:** Some examples of technology are pedometers, accelerometers, heart-rate monitors, videos, websites and spreadsheets.
PE.3.C.2.4:	Identify and explain different items that can be used for assisting in a water-related emergency. **Clarifications:** Some examples of items that can be used in a water related emergency are poles, towels and flotation devices.
PE.3.C.2.5:	Explain how appropriate practice improves performance of movement skills. **Clarifications:** An example is initially making two out of five free throws in basketball, then improving to four out of five due to practicing.
PE.3.C.2.6:	Analyze peer performance and provide feedback.
PE.3.C.2.7:	Identify the reasons for warm-up and cool-down activities. **Clarifications:** Some examples of reasons for warm-up and cool-down activities are injury prevention and enhancing performance.
PE.3.C.2.8:	Describe basic offensive and defensive tactics. **Clarifications:** An example of an offensive tactic is keeping your body between the ball and defender while dribbling.
PE.3.L.3.1:	Identify a moderate physical activity.
PE.3.L.3.2:	Identify a vigorous physical activity.
PE.3.L.3.3:	Identify opportunities for involvement in physical activities during the school day.
PE.3.L.3.4:	Identify opportunities for involvement in physical activities after the school day.
PE.3.L.3.5:	Use an activity log to maintain a personal record of participation in physical activity during a period of time.
PE.3.L.3.6:	Identify lifestyle changes that can be made to increase the level of physical activity.
PE.3.L.3.7:	Differentiate between the correct and incorrect way to fit a bicycle helmet.
PE.3.L.4.1:	Describe how muscular strength and endurance enhances performance in physical activities.
PE.3.L.4.2:	Describe the relationship between the heart and lungs during physical activity.
PE.3.L.4.3:	Identify appropriate physical activities that result in the development of cardiorespiratory endurance.
PE.3.L.4.4:	Match physical fitness assessment events to the associated fitness component.
PE.3.L.4.5:	Identify formal and informal physical fitness assessments.
PE.3.L.4.6:	Identify ways to safely stretch major muscle groups.
PE.3.L.4.7:	Read food labels for specific nutrition facts.
PE.3.L.4.8:	Identify the principles of physical fitness.
PE.3.L.4.9:	Identify individual strengths and weaknesses based upon results of a formal fitness assessment.
PE.3.L.4.10:	Identify ways that technology can assist in the pursuit of physical fitness.
PE.3.M.1.1:	Apply locomotor skills in a variety of movement settings. **Clarifications:** Some examples of movement settings are sequences, dances and games.
PE.3.M.1.2:	Strike a stationary object from a stationary position using body parts so that the object travels in the intended direction at the desired height. **Clarifications:** Some examples of striking activities are volleying, kicking and punting.
PE.3.M.1.3:	Strike an object using a paddle/racquet demonstrating correct technique of a forehand pattern.
PE.3.M.1.4:	Strike both moving and stationary objects using a long-handled implement. **Clarifications:** Some examples of developmentally-appropriate long-handled implements are bats, hockey sticks and golf clubs.
PE.3.M.1.5:	Maintain control while dribbling with hands or feet against a defender.
PE.3.M.1.6:	Demonstrate a combination of basic swim skills. **Clarifications:** Some examples of basic swim skills are prone and back float with flutter kick, alternating arm movements and treading water.
PE.3.M.1.7:	Move in different directions to catch objects of different sizes and weights thrown by a stationary partner.
PE.3.M.1.8:	Throw balls of various sizes and weights to a stationary partner using a correct overhand motion.

PE.3.M.1.9:	Perform a teacher-designed sequence using manipulatives. **Clarifications:** Some examples of sequences using manipulatives are tinikling poles, lummi sticks and jump ropes.
PE.3.M.1.10:	Perform one dance accurately. **Clarifications:** Some examples of dances are square, contra, step and social.
PE.3.M.1.11:	Perform a self-designed gymnastics sequence consisting of clear beginning and ending balances and two different movement elements with correct technique and smooth transitions. **Clarifications:** Some examples of movement elements are balances, rolling actions, changes in speed/ direction and skills requiring weight on hands.
PE.3.M.1.12:	Continuously jump a self-turned rope.
PE.3.R.5.1:	List ways to work cooperatively with peers of differing skill levels.
PE.3.R.5.2:	List ways to show respect for the views of a peer from a different cultural background.
PE.3.R.5.3:	Identify ways to take responsibility for his/her own behavior.
PE.3.R.6.1:	List personally challenging physical-activity experiences.
PE.3.R.6.2:	Describe ways to appreciate the good physical performance of others.
PE.3.R.6.3:	Identify ways to celebrate one's own physical accomplishments while displaying sportsmanship.
MA.K12.MTR.1.1:	Mathematicians who participate in effortful learning both individually and with others: • Analyze the problem in a way that makes sense given the task. • Ask questions that will help with solving the task. • Build perseverance by modifying methods as needed while solving a challenging task. • Stay engaged and maintain a positive mindset when working to solve tasks. • Help and support each other when attempting a new method or approach. **Clarifications:** Teachers who encourage students to participate actively in effortful learning both individually and with others: • Cultivate a community of growth mindset learners. • Foster perseverance in students by choosing tasks that are challenging. • Develop students' ability to analyze and problem solve. • Recognize students' effort when solving challenging problems.
MA.K12.MTR.2.1:	Demonstrate understanding by representing problems in multiple ways. Mathematicians who demonstrate understanding by representing problems in multiple ways: • Build understanding through modeling and using manipulatives. • Represent solutions to problems in multiple ways using objects, drawings, tables, graphs and equations. • Progress from modeling problems with objects and drawings to using algorithms and equations. • Express connections between concepts and representations. • Choose a representation based on the given context or purpose. **Clarifications:** Teachers who encourage students to demonstrate understanding by representing problems in multiple ways: • Help students make connections between concepts and representations. • Provide opportunities for students to use manipulatives when investigating concepts. • Guide students from concrete to pictorial to abstract representations as understanding progresses. • Show students that various representations can have different purposes and can be useful in different situations.
MA.K12.MTR.3.1:	Complete tasks with mathematical fluency. Mathematicians who complete tasks with mathematical fluency: • Select efficient and appropriate methods for solving problems within the given context. • Maintain flexibility and accuracy while performing procedures and mental calculations. • Complete tasks accurately and with confidence. • Adapt procedures to apply them to a new context. • Use feedback to improve efficiency when performing calculations. **Clarifications:** Teachers who encourage students to complete tasks with mathematical fluency: • Provide students with the flexibility to solve problems by selecting a procedure that allows them to solve efficiently and accurately. • Offer multiple opportunities for students to practice efficient and generalizable methods. • Provide opportunities for students to reflect on the method they used and determine if a more efficient method could have been used.
MA.K12.MTR.4.1:	Engage in discussions that reflect on the mathematical thinking of self and others. Mathematicians who engage in discussions that reflect on the mathematical thinking of self and others: • Communicate mathematical ideas, vocabulary and methods effectively. • Analyze the mathematical thinking of others. • Compare the efficiency of a method to those expressed by others. • Recognize errors and suggest how to correctly solve the task. • Justify results by explaining methods and processes. • Construct possible arguments based on evidence. **Clarifications:** Teachers who encourage students to engage in discussions that reflect on the mathematical thinking of self and others: • Establish a culture in which students ask questions of the teacher and their peers, and error is an opportunity for learning. • Create opportunities for students to discuss their thinking with peers.

	• Select, sequence and present student work to advance and deepen understanding of correct and increasingly efficient methods. • Develop students' ability to justify methods and compare their responses to the responses of their peers.
MA.K12.MTR.5.1:	Use patterns and structure to help understand and connect mathematical concepts. Mathematicians who use patterns and structure to help understand and connect mathematical concepts: • Focus on relevant details within a problem. • Create plans and procedures to logically order events, steps or ideas to solve problems. • Decompose a complex problem into manageable parts. • Relate previously learned concepts to new concepts. • Look for similarities among problems. • Connect solutions of problems to more complicated large-scale situations. **Clarifications:** Teachers who encourage students to use patterns and structure to help understand and connect mathematical concepts: • Help students recognize the patterns in the world around them and connect these patterns to mathematical concepts. • Support students to develop generalizations based on the similarities found among problems. • Provide opportunities for students to create plans and procedures to solve problems. • Develop students' ability to construct relationships between their current understanding and more sophisticated ways of thinking.
MA.K12.MTR.6.1:	Assess the reasonableness of solutions. Mathematicians who assess the reasonableness of solutions: • Estimate to discover possible solutions. • Use benchmark quantities to determine if a solution makes sense. • Check calculations when solving problems. • Verify possible solutions by explaining the methods used. • Evaluate results based on the given context. **Clarifications:** Teachers who encourage students to assess the reasonableness of solutions: • Have students estimate or predict solutions prior to solving. • Prompt students to continually ask, "Does this solution make sense? How do you know?" • Reinforce that students check their work as they progress within and after a task. • Strengthen students' ability to verify solutions through justifications.
MA.K12.MTR.7.1:	Apply mathematics to real-world contexts. Mathematicians who apply mathematics to real-world contexts: • Connect mathematical concepts to everyday experiences. • Use models and methods to understand, represent and solve problems. • Perform investigations to gather data or determine if a method is appropriate. • Redesign models and methods to improve accuracy or efficiency. **Clarifications:** Teachers who encourage students to apply mathematics to real-world contexts: • Provide opportunities for students to create models, both concrete and abstract, and perform investigations. • Challenge students to question the accuracy of their models and methods. • Support students as they validate conclusions by comparing them to the given situation. • Indicate how various concepts can be applied to other disciplines.
ELA.K12.EE.1.1:	Cite evidence to explain and justify reasoning. **Clarifications:** K-1 Students include textual evidence in their oral communication with guidance and support from adults. The evidence can consist of details from the text without naming the text. During 1st grade, students learn how to incorporate the evidence in their writing. 2-3 Students include relevant textual evidence in their written and oral communication. Students should name the text when they refer to it. In 3rd grade, students should use a combination of direct and indirect citations. 4-5 Students continue with previous skills and reference comments made by speakers and peers. Students cite texts that they've directly quoted, paraphrased, or used for information. When writing, students will use the form of citation dictated by the instructor or the style guide referenced by the instructor. 6-8 Students continue with previous skills and use a style guide to create a proper citation. 9-12 Students continue with previous skills and should be aware of existing style guides and the ways in which they differ.
ELA.K12.EE.2.1:	Read and comprehend grade-level complex texts proficiently. **Clarifications:** See Text Complexity for grade-level complexity bands and a text complexity rubric.
ELA.K12.EE.3.1:	Make inferences to support comprehension. **Clarifications:** Students will make inferences before the words infer or inference are introduced. Kindergarten students will answer questions like "Why is the girl smiling?" or make predictions about what will happen based on the title page. Students will use the terms and apply them in 2nd grade and beyond.
ELA.K12.EE.4.1:	Use appropriate collaborative techniques and active listening skills when engaging in discussions in a variety of situations. **Clarifications:** In kindergarten, students learn to listen to one another respectfully. In grades 1-2, students build upon these skills by justifying what they are thinking. For example: "I think _____ because _____." The collaborative conversations are becoming academic conversations.

	In grades 3-12, students engage in academic conversations discussing claims and justifying their reasoning, refining and applying skills. Students build on ideas, propel the conversation, and support claims and counterclaims with evidence.
ELA.K12.EE.5.1:	Use the accepted rules governing a specific format to create quality work. **Clarifications:** Students will incorporate skills learned into work products to produce quality work. For students to incorporate these skills appropriately, they must receive instruction. A 3rd grade student creating a poster board display must have instruction in how to effectively present information to do quality work.
ELA.K12.EE.6.1:	Use appropriate voice and tone when speaking or writing. **Clarifications:** In kindergarten and 1st grade, students learn the difference between formal and informal language. For example, the way we talk to our friends differs from the way we speak to adults. In 2nd grade and beyond, students practice appropriate social and academic language to discuss texts.
HE.3.B.5.2:	List healthy options to health-related issues or problems. **Clarifications:** Healthy alternatives to unhealthy messages in the media, fear of personal safety, and nutrition options.
HE.3.B.6.1:	Select a personal health goal and track progress toward achievement. **Clarifications:** Working collaboratively with class/small group, tracking daily physical activity, using seat belts and bike helmets, limiting media time, consuming healthy foods daily, understanding the dangers of drugs, practicing refusal and conflict-resolution skills.
HE.3.C.2.1:	Explore how family and friend's traditions and customs may influence health behaviors. **Clarifications:** Family nutritional choices, gatherings, fears, traditions, religious practices, belief in holistic approach, and accepted celebration behaviors demonstrated by others.
ELD.K12.ELL.SI.1:	English language learners communicate for social and instructional purposes within the school setting.

General Course Information and Notes

GENERAL NOTES

Florida's Benchmarks for Excellent Student Thinking (B.E.S.T.) Standards
This course includes Florida's B.E.S.T. ELA Expectations (EE) and Mathematical Thinking and Reasoning Standards (MTRs) for students. Florida educators should intentionally embed these standards within the content and their instruction as applicable. For guidance on the implementation of the EEs and MTRs, please visit cpalms.org/Standards/BEST_Standards.aspx and select the appropriate B.E.S.T. Standards package.

English Language Development ELD Standards Special Notes Section:
Teachers are required to provide listening, speaking, reading and writing instruction that allows English language learners (ELL) to communicate for social and instructional purposes within the school setting. For the given level of English language proficiency and with visual, graphic, or interactive support, students will interact with grade level words, expressions, sentences and discourse to process or produce language necessary for academic success. The ELD standard should specify a relevant content area concept or topic of study chosen by curriculum developers and teachers which maximizes an ELL's need for communication and social skills. To access an ELL supporting document which delineates performance definitions and descriptors, please click on the following link: cpalms.org/uploads/docs/standards/eld/SI.pdf

QUALIFICATIONS

As well as any certification requirements listed on the course description, the following qualifications may also be acceptable for the course:

Any field when certification reflects a bachelor or higher degree.

GENERAL INFORMATION

Course Number: 5015050

Course Path: Section: Grades PreK to 12 Education Courses > **Grade Group:** Grades PreK to 5 Education Courses > **Subject:** Physical Education > **SubSubject:** General >
Abbreviated Title: PHYSICAL EDUCATION 3
Course Length: Year (Y)

Course Status: Draft - Course Pending Approval

Grade Level(s): 3

Physical Education - Grade 4 (#5015060) 2022 - And Beyond

Course Standards

Name	Description
PE.4.C.2.1:	Understand the importance of purposeful movement in a variety of movement settings. **Clarifications:** Some examples of purposeful movement are timing, flow, rhythm, sequencing and transfer of weight.
PE.4.C.2.2:	Understand the importance of safety rules and procedures in all physical activities, especially those that are high risk. **Clarifications:** An example of a safety procedure is having students stand a safe distance away from a student swinging a golf club during striking activities.
PE.4.C.2.3:	Use technology to gather information about performance. **Clarifications:** Some examples of technology are pedometers, accelerometers, heart-rate monitors, videos, websites and spreadsheets.
PE.4.C.2.4:	Understand the importance of protecting parts of the body from the harmful rays of the sun. **Clarifications:** Some examples are sunscreen and protective clothing.
PE.4.C.2.5:	Detect errors in personal movement patterns. **Clarifications:** An example of a way to detect errors in personal movement patterns is through the use of videotaping.
PE.4.C.2.6:	Compare and discuss skills/sports that use similar movement patterns. **Clarifications:** Some examples are volleyball and tennis serve, surfing and skate boarding.
PE.4.C.2.7:	Identify proper warm-up and cool-down techniques and the reasons for using them. **Clarifications:** An example of a warm-up technique for sprinting is stretching the hamstring muscles in order to prevent injury.
PE.4.C.2.8:	Identify the importance of hydration before, during and after physical activity. **Clarifications:** An example of the importance of hydration is to prevent heat-related illnesses.
PE.4.C.2.9:	Identify basic offensive and defensive tactics for modified invasion and net activities. **Clarifications:** An example of an offensive tactic in tennis is hitting the ball away from the opponent.
PE.4.L.3.1:	Identify a moderate physical activity.
PE.4.L.3.2:	Identify a vigorous physical activity.
PE.4.L.3.3:	Identify opportunities for involvement in physical activities during the school day.
PE.4.L.3.4:	Identify opportunities for involvement in physical activities after the school day.
PE.4.L.3.5:	Implement at least one lifestyle behavior to increase physical activity.
PE.4.L.3.6:	Discuss the importance of wearing a bicycle helmet.
PE.4.L.4.1:	Identify the muscles being strengthened during the performance of specific activities.
PE.4.L.4.2:	Identify several activities related to each component of physical fitness.
PE.4.L.4.3:	Maintain heart rate within the target heart rate zone for a specified length of time during an aerobic activity.
PE.4.L.4.4:	Identify ways to participate in selected physical activities for the purpose of improving physical fitness.
PE.4.L.4.5:	Identify ways to participate in formal and informal physical fitness assessment.
PE.4.L.4.6:	Identify how specific stretches increase flexibility and reduce the chance of injury.
PE.4.L.4.7:	Understand appropriate serving size.
PE.4.L.4.8:	Explain the principles of physical fitness.
PE.4.L.4.9:	Develop short- and long-term fitness goals.
PE.4.L.4.10:	Describe ways that technology can assist in the pursuit of physical fitness.
PE.4.M.1.1:	Apply movement concepts to the performance of locomotor skills in a variety of movement settings. **Clarifications:** Some examples of movement settings are sequences, dances and games. Some examples of movement concepts are directions, effort and relationships.
PE.4.M.1.2:	Strike a moving object using body parts so that the object travels in the intended direction at the desired height. **Clarifications:** Some examples of activities to apply this are volleying, kicking and punting.
PE.4.M.1.3:	Strike an object continuously using a paddle/racquet demonstrating correct technique of a forehand pattern. **Clarifications:** Some examples of ways to strike continuously are against a wall and a partner-fed toss.
PE.4.M.1.4:	Strike moving and/or stationary objects with long-handled implements using correct technique so the objects travel in the intended direction. **Clarifications:**

	Some examples of long-handled implements are golf clubs, bats and hockey sticks.
PE.4.M.1.5:	Dribble and pass to a moving partner.
PE.4.M.1.6:	Perform a variety of swim strokes. **Clarifications:** Some examples of swim strokes are front crawl, backstroke, elementary back stroke and modified breaststroke.
PE.4.M.1.7:	Move in different directions to catch objects of different sizes and weights thrown by a stationary partner from varying distances.
PE.4.M.1.8:	Throw balls of various sizes and weights to a stationary partner from varying distances using a correct overhand motion.
PE.4.M.1.9:	Perform a teacher-designed sequence, with or without manipulatives, while demonstrating balance, coordination, clear shapes, purposeful movements and smooth transitions. **Clarifications:** Some examples of sequences are rhythm, movement and dance. Some examples of manipulatives are tinikling poles, lummi sticks and jump ropes.
PE.4.M.1.10:	Perform two or more dances accurately. **Clarifications:** Some examples of dances are line, square, contra, folk, step and social.
PE.4.M.1.11:	Perform a self-designed gymnastics sequence consisting of clear beginning and ending balances and three different movement elements with correct technique and smooth transitions. **Clarifications:** Some examples of movement elements are balances, rolling actions, changes in speed/ direction and skills requiring weight on hands.
PE.4.M.1.12:	Run and hurdle a succession of low- to medium-level obstacles.
PE.4.R.5.1:	Discuss the influence of individual differences on participation in physical activities.
PE.4.R.5.2:	List ways to encourage others while refraining from insulting/negative statements.
PE.4.R.5.3:	Demonstrate respect and caring for students with disabilities through verbal and non-verbal encouragement and assistance.
PE.4.R.6.1:	Discuss how physical activity can be a positive opportunity for social and group interaction.
PE.4.R.6.2:	Describe the connection between skill competence and enjoyment of physical activity.
PE.4.R.6.3:	Discuss ways to celebrate one's own physical accomplishments while displaying sportsmanship.
MA.K12.MTR.1.1:	Mathematicians who participate in effortful learning both individually and with others: • Analyze the problem in a way that makes sense given the task. • Ask questions that will help with solving the task. • Build perseverance by modifying methods as needed while solving a challenging task. • Stay engaged and maintain a positive mindset when working to solve tasks. • Help and support each other when attempting a new method or approach. **Clarifications:** Teachers who encourage students to participate actively in effortful learning both individually and with others: • Cultivate a community of growth mindset learners. • Foster perseverance in students by choosing tasks that are challenging. • Develop students' ability to analyze and problem solve. • Recognize students' effort when solving challenging problems.
MA.K12.MTR.2.1:	Demonstrate understanding by representing problems in multiple ways. Mathematicians who demonstrate understanding by representing problems in multiple ways: • Build understanding through modeling and using manipulatives. • Represent solutions to problems in multiple ways using objects, drawings, tables, graphs and equations. • Progress from modeling problems with objects and drawings to using algorithms and equations. • Express connections between concepts and representations. • Choose a representation based on the given context or purpose. **Clarifications:** Teachers who encourage students to demonstrate understanding by representing problems in multiple ways: • Help students make connections between concepts and representations. • Provide opportunities for students to use manipulatives when investigating concepts. • Guide students from concrete to pictorial to abstract representations as understanding progresses. • Show students that various representations can have different purposes and can be useful in different situations.
MA.K12.MTR.3.1:	Complete tasks with mathematical fluency. Mathematicians who complete tasks with mathematical fluency: • Select efficient and appropriate methods for solving problems within the given context. • Maintain flexibility and accuracy while performing procedures and mental calculations. • Complete tasks accurately and with confidence. • Adapt procedures to apply them to a new context. • Use feedback to improve efficiency when performing calculations. **Clarifications:** Teachers who encourage students to complete tasks with mathematical fluency: • Provide students with the flexibility to solve problems by selecting a procedure that allows them to solve efficiently and accurately. • Offer multiple opportunities for students to practice efficient and generalizable methods. • Provide opportunities for students to reflect on the method they used and determine if a more efficient method could have been used.
	Engage in discussions that reflect on the mathematical thinking of self and others. Mathematicians who engage in discussions that reflect on the mathematical thinking of self and others: • Communicate mathematical ideas, vocabulary and methods effectively.

MA.K12.MTR.4.1:	• Analyze the mathematical thinking of others. • Compare the efficiency of a method to those expressed by others. • Recognize errors and suggest how to correctly solve the task. • Justify results by explaining methods and processes. • Construct possible arguments based on evidence. **Clarifications:** Teachers who encourage students to engage in discussions that reflect on the mathematical thinking of self and others: • Establish a culture in which students ask questions of the teacher and their peers, and error is an opportunity for learning. • Create opportunities for students to discuss their thinking with peers. • Select, sequence and present student work to advance and deepen understanding of correct and increasingly efficient methods. • Develop students' ability to justify methods and compare their responses to the responses of their peers.
MA.K12.MTR.5.1:	Use patterns and structure to help understand and connect mathematical concepts. Mathematicians who use patterns and structure to help understand and connect mathematical concepts: • Focus on relevant details within a problem. • Create plans and procedures to logically order events, steps or ideas to solve problems. • Decompose a complex problem into manageable parts. • Relate previously learned concepts to new concepts. • Look for similarities among problems. • Connect solutions of problems to more complicated large-scale situations. **Clarifications:** Teachers who encourage students to use patterns and structure to help understand and connect mathematical concepts: • Help students recognize the patterns in the world around them and connect these patterns to mathematical concepts. • Support students to develop generalizations based on the similarities found among problems. • Provide opportunities for students to create plans and procedures to solve problems. • Develop students' ability to construct relationships between their current understanding and more sophisticated ways of thinking.
MA.K12.MTR.6.1:	Assess the reasonableness of solutions. Mathematicians who assess the reasonableness of solutions: • Estimate to discover possible solutions. • Use benchmark quantities to determine if a solution makes sense. • Check calculations when solving problems. • Verify possible solutions by explaining the methods used. • Evaluate results based on the given context. **Clarifications:** Teachers who encourage students to assess the reasonableness of solutions: • Have students estimate or predict solutions prior to solving. • Prompt students to continually ask, "Does this solution make sense? How do you know?" • Reinforce that students check their work as they progress within and after a task. • Strengthen students' ability to verify solutions through justifications.
MA.K12.MTR.7.1:	Apply mathematics to real-world contexts. Mathematicians who apply mathematics to real-world contexts: • Connect mathematical concepts to everyday experiences. • Use models and methods to understand, represent and solve problems. • Perform investigations to gather data or determine if a method is appropriate. • Redesign models and methods to improve accuracy or efficiency. **Clarifications:** Teachers who encourage students to apply mathematics to real-world contexts: • Provide opportunities for students to create models, both concrete and abstract, and perform investigations. • Challenge students to question the accuracy of their models and methods. • Support students as they validate conclusions by comparing them to the given situation. • Indicate how various concepts can be applied to other disciplines.
ELA.K12.EE.1.1:	Cite evidence to explain and justify reasoning. **Clarifications:** K-1 Students include textual evidence in their oral communication with guidance and support from adults. The evidence can consist of details from the text without naming the text. During 1st grade, students learn how to incorporate the evidence in their writing. 2-3 Students include relevant textual evidence in their written and oral communication. Students should name the text when they refer to it. In 3rd grade, students should use a combination of direct and indirect citations. 4-5 Students continue with previous skills and reference comments made by speakers and peers. Students cite texts that they've directly quoted, paraphrased, or used for information. When writing, students will use the form of citation dictated by the instructor or the style guide referenced by the instructor. 6-8 Students continue with previous skills and use a style guide to create a proper citation. 9-12 Students continue with previous skills and should be aware of existing style guides and the ways in which they differ.
ELA.K12.EE.2.1:	Read and comprehend grade-level complex texts proficiently. **Clarifications:** See Text Complexity for grade-level complexity bands and a text complexity rubric.
	Make inferences to support comprehension.

ELA.K12.EE.3.1:	**Clarifications:** Students will make inferences before the words infer or inference are introduced. Kindergarten students will answer questions like "Why is the girl smiling?" or make predictions about what will happen based on the title page. Students will use the terms and apply them in 2nd grade and beyond.
ELA.K12.EE.4.1:	Use appropriate collaborative techniques and active listening skills when engaging in discussions in a variety of situations. **Clarifications:** In kindergarten, students learn to listen to one another respectfully. In grades 1-2, students build upon these skills by justifying what they are thinking. For example: "I think _____ because _____." The collaborative conversations are becoming academic conversations. In grades 3-12, students engage in academic conversations discussing claims and justifying their reasoning, refining and applying skills. Students build on ideas, propel the conversation, and support claims and counterclaims with evidence.
ELA.K12.EE.5.1:	Use the accepted rules governing a specific format to create quality work. **Clarifications:** Students will incorporate skills learned into work products to produce quality work. For students to incorporate these skills appropriately, they must receive instruction. A 3rd grade student creating a poster board display must have instruction in how to effectively present information to do quality work.
ELA.K12.EE.6.1:	Use appropriate voice and tone when speaking or writing. **Clarifications:** In kindergarten and 1st grade, students learn the difference between formal and informal language. For example, the way we talk to our friends differs from the way we speak to adults. In 2nd grade and beyond, students practice appropriate social and academic language to discuss texts.
HE.4.B.3.3:	Examine resources from home, school and community that provide valid health information. **Clarifications:** Internet; reputable websites, media; television, radio, brochures, books; professional interview;, and hospitals.
HE.4.C.1.2:	Identify examples of mental/emotional, physical, and social health. **Clarifications:** Expressing appropriate feelings, treating others with respect, and participating in a daily physical activity.
HE.4.C.2.6:	Explain how technology influences personal thoughts, feelings, and health behaviors. **Clarifications:** Cyber-bullying, habitual gaming, violent video games, and seat-belt alarm.
ELD.K12.ELL.SI.1:	English language learners communicate for social and instructional purposes within the school setting.

General Course Information and Notes

GENERAL NOTES

Florida's Benchmarks for Excellent Student Thinking (B.E.S.T.) Standards
This course includes Florida's B.E.S.T. ELA Expectations (EE) and Mathematical Thinking and Reasoning Standards (MTRs) for students. Florida educators should intentionally embed these standards within the content and their instruction as applicable. For guidance on the implementation of the EEs and MTRs, please visit cpalms.org/Standards/BEST_Standards.aspx and select the appropriate B.E.S.T. Standards package.

English Language Development ELD Standards Special Notes Section:
Teachers are required to provide listening, speaking, reading and writing instruction that allows English language learners (ELL) to communicate for social and instructional purposes within the school setting. For the given level of English language proficiency and with visual, graphic, or interactive support, students will interact with grade level words, expressions, sentences and discourse to process or produce language necessary for academic success. The ELD standard should specify a relevant content area concept or topic of study chosen by curriculum developers and teachers which maximizes an ELL's need for communication and social skills. To access an ELL supporting document which delineates performance definitions and descriptors, please click on the following link: cpalms.org/uploads/docs/standards/eld/SI.pdf

QUALIFICATIONS

As well as any certification requirements listed on the course description, the following qualifications may also be acceptable for the course:

Any field when certification reflects a bachelor or higher degree.

GENERAL INFORMATION

Course Number: 5015060

Course Path: Section: Grades PreK to 12 Education Courses > **Grade Group:** Grades PreK to 5 Education Courses > **Subject:** Physical Education >
SubSubject: General >
Abbreviated Title: PHYSICAL EDUCATION 4
Course Length: Year (Y)

Course Status: Draft - Course Pending Approval
Grade Level(s): 4

Physical Education - Grade 5 (#5015070) 2022 - And Beyond

Course Standards

Name	Description
PE.5.C.2.1:	Apply purposeful movement to a variety of movement settings to include designing and performing movement routines. **Clarifications:** Some examples of purposeful movement are timing, flow, rhythm, sequencing and transfer of weight.
PE.5.C.2.2:	Design or modify a game incorporating skills, rules and strategies.
PE.5.C.2.3:	Apply feedback gathered from the use of technology to assess and enhance performance. **Clarifications:** Some examples of technology are pedometers, accelerometers, heart-rate monitors, videos, websites and spreadsheets.
PE.5.C.2.4:	Identify the different types of basic water- rescue techniques, using various types of items. **Clarifications:** An example of a water-rescue technique is to reach out to the victim with a pole and pull him/her to safety.
PE.5.C.2.5:	Detect, analyze and correct errors in personal movement patterns.
PE.5.C.2.6:	Compare and contrast skills/sports that use similar movement patterns and concepts. **Clarifications:** Some examples are volleyball and tennis serve, surfing and skate boarding.
PE.5.C.2.7:	Identify basic practice and conditioning principles that enhance performance. **Clarifications:** An example of a conditioning principle that would enhance performance is running with weight resistance to improve speed.
PE.5.C.2.8:	Categorize basic offensive and defensive tactics for modified invasion and net activities. **Clarifications:** An example of an offensive tactic in basketball is keeping your body between the ball and the defender.
PE.5.L.3.1:	Identify a moderate physical activity.
PE.5.L.3.2:	Identify a vigorous physical activity.
PE.5.L.3.3:	Identify opportunities for involvement in physical activities during the school day.
PE.5.L.3.4:	Identify opportunities for involvement in physical activities after the school day.
PE.5.L.3.5:	Formulate a plan to increase the amount of time spent in physical activity.
PE.5.L.3.6:	Discuss lifestyle behaviors that can be made to increase physical activity.
PE.5.L.3.7:	Use technology to enhance regular participation in physical activities.
PE.5.L.3.8:	Discuss the importance of being visible, being predictable and communicating when cycling.
PE.5.L.4.1:	Differentiate between muscular strength and muscular endurance.
PE.5.L.4.2:	Identify activities that develop and maintain each component of physical fitness.
PE.5.L.4.3:	Identify that an increase in heart rate intensity is necessary to enhance cardiorespiratory endurance.
PE.5.L.4.4:	Analyze one's own physical fitness assessment results and develop strategies to enhance performance.
PE.5.L.4.5:	Select proper stretching exercises to increase flexibility and reduce the chance of injury.
PE.5.L.4.6:	Plan a menu for a balanced meal.
PE.5.L.4.7:	Apply the principles of physical fitness to exercise.
PE.5.L.4.8:	Evaluate progress toward short- and long-term fitness goals.
PE.5.L.4.9:	Explain how technology can assist in the pursuit of physical fitness.
PE.5.M.1.1:	Apply locomotor skills in a variety of movement settings, while applying the appropriate movement concepts as the situation demands. **Clarifications:** Some examples of movement settings are sequences, dances and games. Some examples of movement concepts are directions, effort and relationships.
PE.5.M.1.2:	Approach and strike a moving object with body parts so that the object travels in the intended direction at the desired height using correct technique. **Clarifications:** Some examples of activities to apply this are volleying, kicking and punting.
PE.5.M.1.3:	Strike an object continuously with a partner using a paddle/racquet demonstrating correct technique of a forehand pattern.
PE.5.M.1.4:	Strike moving and/or stationary objects with long-handled implements so the objects travel in the intended direction at the desired height using correct technique. **Clarifications:** Some examples of long-handled implements are golf clubs, bats and hockey sticks.
PE.5.M.1.5:	Apply dribbling skills in modified games, focusing on offensive strategies. **Clarifications:** Some examples of offensive strategies are fakes, stopping and starting, changing directions and changing speeds.
PE.5.M.1.6:	Demonstrate proficiency in one or more swim strokes. **Clarifications:**

	Some examples of swim strokes are front crawl, backstroke, breaststroke, sidestroke and butterfly.
PE.5.M.1.7:	Catch a variety of objects while traveling and being defended.
PE.5.M.1.8:	Throw a leading pass overhand to a moving partner using a variety of objects.
PE.5.M.1.9:	Perform a self-designed sequence, with or without manipulatives, while demonstrating balance, coordination, clear shapes, purposeful movements and smooth transitions. **Clarifications:** Some examples of sequences are rhythm, movement and dance. Some examples of manipulatives are tinikling poles, lummi sticks and jump ropes.
PE.5.M.1.10:	Perform a variety of dances accurately. **Clarifications:** Some examples of dances are line, square, contra, folk, step and social.
PE.5.M.1.11:	Perform a self-designed gymnastics sequence consisting of clear beginning and ending balances and four different movement elements with correct technique and smooth transitions. **Clarifications:** Some examples of movement elements are balances, rolling actions, changes in speed/direction and skills requiring weight on hands.
PE.5.R.5.1:	Describe a benefit of working productively with a partner to improve performance.
PE.5.R.5.2:	Describe ways to utilize equipment safely during physical activities.
PE.5.R.5.3:	Describe the influence of individual differences on participation in physical activities.
PE.5.R.6.1:	Describe how participation in physical activity is a source of self-expression and meaning.
PE.5.R.6.2:	Explain the benefits of physical activity.
PE.5.R.6.3:	Explain ways to celebrate one's own physical accomplishments while displaying sportsmanship.
MA.K12.MTR.1.1:	Mathematicians who participate in effortful learning both individually and with others: • Analyze the problem in a way that makes sense given the task. • Ask questions that will help with solving the task. • Build perseverance by modifying methods as needed while solving a challenging task. • Stay engaged and maintain a positive mindset when working to solve tasks. • Help and support each other when attempting a new method or approach. **Clarifications:** Teachers who encourage students to participate actively in effortful learning both individually and with others: • Cultivate a community of growth mindset learners. • Foster perseverance in students by choosing tasks that are challenging. • Develop students' ability to analyze and problem solve. • Recognize students' effort when solving challenging problems.
MA.K12.MTR.2.1:	Demonstrate understanding by representing problems in multiple ways. Mathematicians who demonstrate understanding by representing problems in multiple ways: • Build understanding through modeling and using manipulatives. • Represent solutions to problems in multiple ways using objects, drawings, tables, graphs and equations. • Progress from modeling problems with objects and drawings to using algorithms and equations. • Express connections between concepts and representations. • Choose a representation based on the given context or purpose. **Clarifications:** Teachers who encourage students to demonstrate understanding by representing problems in multiple ways: • Help students make connections between concepts and representations. • Provide opportunities for students to use manipulatives when investigating concepts. • Guide students from concrete to pictorial to abstract representations as understanding progresses. • Show students that various representations can have different purposes and can be useful in different situations.
MA.K12.MTR.3.1:	Complete tasks with mathematical fluency. Mathematicians who complete tasks with mathematical fluency: • Select efficient and appropriate methods for solving problems within the given context. • Maintain flexibility and accuracy while performing procedures and mental calculations. • Complete tasks accurately and with confidence. • Adapt procedures to apply them to a new context. • Use feedback to improve efficiency when performing calculations. **Clarifications:** Teachers who encourage students to complete tasks with mathematical fluency: • Provide students with the flexibility to solve problems by selecting a procedure that allows them to solve efficiently and accurately. • Offer multiple opportunities for students to practice efficient and generalizable methods. • Provide opportunities for students to reflect on the method they used and determine if a more efficient method could have been used.
MA.K12.MTR.4.1:	Engage in discussions that reflect on the mathematical thinking of self and others. Mathematicians who engage in discussions that reflect on the mathematical thinking of self and others: • Communicate mathematical ideas, vocabulary and methods effectively. • Analyze the mathematical thinking of others. • Compare the efficiency of a method to those expressed by others. • Recognize errors and suggest how to correctly solve the task. • Justify results by explaining methods and processes. • Construct possible arguments based on evidence. **Clarifications:**

	Teachers who encourage students to engage in discussions that reflect on the mathematical thinking of self and others: • Establish a culture in which students ask questions of the teacher and their peers, and error is an opportunity for learning. • Create opportunities for students to discuss their thinking with peers. • Select, sequence and present student work to advance and deepen understanding of correct and increasingly efficient methods. • Develop students' ability to justify methods and compare their responses to the responses of their peers.
MA.K12.MTR.5.1:	Use patterns and structure to help understand and connect mathematical concepts. Mathematicians who use patterns and structure to help understand and connect mathematical concepts: • Focus on relevant details within a problem. • Create plans and procedures to logically order events, steps or ideas to solve problems. • Decompose a complex problem into manageable parts. • Relate previously learned concepts to new concepts. • Look for similarities among problems. • Connect solutions of problems to more complicated large-scale situations. **Clarifications:** Teachers who encourage students to use patterns and structure to help understand and connect mathematical concepts: • Help students recognize the patterns in the world around them and connect these patterns to mathematical concepts. • Support students to develop generalizations based on the similarities found among problems. • Provide opportunities for students to create plans and procedures to solve problems. • Develop students' ability to construct relationships between their current understanding and more sophisticated ways of thinking.
MA.K12.MTR.6.1:	Assess the reasonableness of solutions. Mathematicians who assess the reasonableness of solutions: • Estimate to discover possible solutions. • Use benchmark quantities to determine if a solution makes sense. • Check calculations when solving problems. • Verify possible solutions by explaining the methods used. • Evaluate results based on the given context. **Clarifications:** Teachers who encourage students to assess the reasonableness of solutions: • Have students estimate or predict solutions prior to solving. • Prompt students to continually ask, "Does this solution make sense? How do you know?" • Reinforce that students check their work as they progress within and after a task. • Strengthen students' ability to verify solutions through justifications.
MA.K12.MTR.7.1:	Apply mathematics to real-world contexts. Mathematicians who apply mathematics to real-world contexts: • Connect mathematical concepts to everyday experiences. • Use models and methods to understand, represent and solve problems. • Perform investigations to gather data or determine if a method is appropriate. • Redesign models and methods to improve accuracy or efficiency. **Clarifications:** Teachers who encourage students to apply mathematics to real-world contexts: • Provide opportunities for students to create models, both concrete and abstract, and perform investigations. • Challenge students to question the accuracy of their models and methods. • Support students as they validate conclusions by comparing them to the given situation. • Indicate how various concepts can be applied to other disciplines.
ELA.K12.EE.1.1:	Cite evidence to explain and justify reasoning. **Clarifications:** K-1 Students include textual evidence in their oral communication with guidance and support from adults. The evidence can consist of details from the text without naming the text. During 1st grade, students learn how to incorporate the evidence in their writing. 2-3 Students include relevant textual evidence in their written and oral communication. Students should name the text when they refer to it. In 3rd grade, students should use a combination of direct and indirect citations. 4-5 Students continue with previous skills and reference comments made by speakers and peers. Students cite texts that they've directly quoted, paraphrased, or used for information. When writing, students will use the form of citation dictated by the instructor or the style guide referenced by the instructor. 6-8 Students continue with previous skills and use a style guide to create a proper citation. 9-12 Students continue with previous skills and should be aware of existing style guides and the ways in which they differ.
ELA.K12.EE.2.1:	Read and comprehend grade-level complex texts proficiently. **Clarifications:** See Text Complexity for grade-level complexity bands and a text complexity rubric.
ELA.K12.EE.3.1:	Make inferences to support comprehension. **Clarifications:** Students will make inferences before the words infer or inference are introduced. Kindergarten students will answer questions like "Why is the girl smiling?" or make predictions about what will happen based on the title page. Students will use the terms and apply them in 2nd grade and beyond.
	Use appropriate collaborative techniques and active listening skills when engaging in discussions in a variety of situations. **Clarifications:**

ELA.K12.EE.4.1:	In kindergarten, students learn to listen to one another respectfully. In grades 1-2, students build upon these skills by justifying what they are thinking. For example: "I think _____ because _____." The collaborative conversations are becoming academic conversations. In grades 3-12, students engage in academic conversations discussing claims and justifying their reasoning, refining and applying skills. Students build on ideas, propel the conversation, and support claims and counterclaims with evidence.
ELA.K12.EE.5.1:	Use the accepted rules governing a specific format to create quality work. **Clarifications:** Students will incorporate skills learned into work products to produce quality work. For students to incorporate these skills appropriately, they must receive instruction. A 3rd grade student creating a poster board display must have instruction in how to effectively present information to do quality work.
ELA.K12.EE.6.1:	Use appropriate voice and tone when speaking or writing. **Clarifications:** In kindergarten and 1st grade, students learn the difference between formal and informal language. For example, the way we talk to our friends differs from the way we speak to adults. In 2nd grade and beyond, students practice appropriate social and academic language to discuss texts.
HE.5.B.5.4:	Select a healthy option when making decisions for yourself and/or others. **Clarifications:** Report bullying, resolve conflicts, and use safety equipment.
HE.5.C.1.3:	Explain ways a safe, healthy home and school environment promote personal health. **Clarifications:** Smoke-free environment, clean/orderly environment, behavior rules, and availability of fresh produce.
HE.5.C.1.6:	Recognize how appropriate health care can promote personal health. **Clarifications:** Having immunizations, using medication appropriately, and seeking grief/loss counseling.
ELD.K12.ELL.SI.1:	English language learners communicate for social and instructional purposes within the school setting.

General Course Information and Notes

GENERAL NOTES

Florida's Benchmarks for Excellent Student Thinking (B.E.S.T.) Standards
This course includes Florida's B.E.S.T. ELA Expectations (EE) and Mathematical Thinking and Reasoning Standards (MTRs) for students. Florida educators should intentionally embed these standards within the content and their instruction as applicable. For guidance on the implementation of the EEs and MTRs, please visit cpalms.org/Standards/BEST_Standards.aspx and select the appropriate B.E.S.T. Standards package.

English Language Development ELD Standards Special Notes Section:
Teachers are required to provide listening, speaking, reading and writing instruction that allows English language learners (ELL) to communicate for social and instructional purposes within the school setting. For the given level of English language proficiency and with visual, graphic, or interactive support, students will interact with grade level words, expressions, sentences and discourse to process or produce language necessary for academic success. The ELD standard should specify a relevant content area concept or topic of study chosen by curriculum developers and teachers which maximizes an ELL's need for communication and social skills. To access an ELL supporting document which delineates performance definitions and descriptors, please click on the following link: cpalms.org/uploads/docs/standards/eld/SI.pdf

QUALIFICATIONS

As well as any certification requirements listed on the course description, the following qualifications may also be acceptable for the course:

Any field when certification reflects a bachelor or higher degree.

GENERAL INFORMATION

Course Number: 5015070

Course Path: Section: Grades PreK to 12 Education Courses > **Grade Group:** Grades PreK to 5 Education Courses > **Subject:** Physical Education > **SubSubject:** General >
Abbreviated Title: PHYSICAL EDUCATION 5
Course Length: Year (Y)

Course Status: Draft - Course Pending Approval

Grade Level(s): 5

District Head Start (#5100520) 2022 - And Beyond

Course Standards

Name	Description
MA.K12.MTR.1.1:	Mathematicians who participate in effortful learning both individually and with others: • Analyze the problem in a way that makes sense given the task. • Ask questions that will help with solving the task. • Build perseverance by modifying methods as needed while solving a challenging task. • Stay engaged and maintain a positive mindset when working to solve tasks. • Help and support each other when attempting a new method or approach. **Clarifications:** Teachers who encourage students to participate actively in effortful learning both individually and with others: • Cultivate a community of growth mindset learners. • Foster perseverance in students by choosing tasks that are challenging. • Develop students' ability to analyze and problem solve. • Recognize students' effort when solving challenging problems.
MA.K12.MTR.2.1:	Demonstrate understanding by representing problems in multiple ways. Mathematicians who demonstrate understanding by representing problems in multiple ways: • Build understanding through modeling and using manipulatives. • Represent solutions to problems in multiple ways using objects, drawings, tables, graphs and equations. • Progress from modeling problems with objects and drawings to using algorithms and equations. • Express connections between concepts and representations. • Choose a representation based on the given context or purpose. **Clarifications:** Teachers who encourage students to demonstrate understanding by representing problems in multiple ways: • Help students make connections between concepts and representations. • Provide opportunities for students to use manipulatives when investigating concepts. • Guide students from concrete to pictorial to abstract representations as understanding progresses. • Show students that various representations can have different purposes and can be useful in different situations.
MA.K12.MTR.3.1:	Complete tasks with mathematical fluency. Mathematicians who complete tasks with mathematical fluency: • Select efficient and appropriate methods for solving problems within the given context. • Maintain flexibility and accuracy while performing procedures and mental calculations. • Complete tasks accurately and with confidence. • Adapt procedures to apply them to a new context. • Use feedback to improve efficiency when performing calculations. **Clarifications:** Teachers who encourage students to complete tasks with mathematical fluency: • Provide students with the flexibility to solve problems by selecting a procedure that allows them to solve efficiently and accurately. • Offer multiple opportunities for students to practice efficient and generalizable methods. • Provide opportunities for students to reflect on the method they used and determine if a more efficient method could have been used.
MA.K12.MTR.4.1:	Engage in discussions that reflect on the mathematical thinking of self and others. Mathematicians who engage in discussions that reflect on the mathematical thinking of self and others: • Communicate mathematical ideas, vocabulary and methods effectively. • Analyze the mathematical thinking of others. • Compare the efficiency of a method to those expressed by others. • Recognize errors and suggest how to correctly solve the task. • Justify results by explaining methods and processes. • Construct possible arguments based on evidence. **Clarifications:** Teachers who encourage students to engage in discussions that reflect on the mathematical thinking of self and others: • Establish a culture in which students ask questions of the teacher and their peers, and error is an opportunity for learning. • Create opportunities for students to discuss their thinking with peers. • Select, sequence and present student work to advance and deepen understanding of correct and increasingly efficient methods. • Develop students' ability to justify methods and compare their responses to the responses of their peers.
	Use patterns and structure to help understand and connect mathematical concepts. Mathematicians who use patterns and structure to help understand and connect mathematical concepts: • Focus on relevant details within a problem. • Create plans and procedures to logically order events, steps or ideas to solve problems. • Decompose a complex problem into manageable parts. • Relate previously learned concepts to new concepts.

MA.K12.MTR.5.1:	• Look for similarities among problems. • Connect solutions of problems to more complicated large-scale situations. **Clarifications:** Teachers who encourage students to use patterns and structure to help understand and connect mathematical concepts: • Help students recognize the patterns in the world around them and connect these patterns to mathematical concepts. • Support students to develop generalizations based on the similarities found among problems. • Provide opportunities for students to create plans and procedures to solve problems. • Develop students' ability to construct relationships between their current understanding and more sophisticated ways of thinking.
MA.K12.MTR.6.1:	Assess the reasonableness of solutions. Mathematicians who assess the reasonableness of solutions: • Estimate to discover possible solutions. • Use benchmark quantities to determine if a solution makes sense. • Check calculations when solving problems. • Verify possible solutions by explaining the methods used. • Evaluate results based on the given context. **Clarifications:** Teachers who encourage students to assess the reasonableness of solutions: • Have students estimate or predict solutions prior to solving. • Prompt students to continually ask, "Does this solution make sense? How do you know?" • Reinforce that students check their work as they progress within and after a task. • Strengthen students' ability to verify solutions through justifications.
MA.K12.MTR.7.1:	Apply mathematics to real-world contexts. Mathematicians who apply mathematics to real-world contexts: • Connect mathematical concepts to everyday experiences. • Use models and methods to understand, represent and solve problems. • Perform investigations to gather data or determine if a method is appropriate. • Redesign models and methods to improve accuracy or efficiency. **Clarifications:** Teachers who encourage students to apply mathematics to real-world contexts: • Provide opportunities for students to create models, both concrete and abstract, and perform investigations. • Challenge students to question the accuracy of their models and methods. • Support students as they validate conclusions by comparing them to the given situation. • Indicate how various concepts can be applied to other disciplines.
ELA.K12.EE.1.1:	Cite evidence to explain and justify reasoning. **Clarifications:** K-1 Students include textual evidence in their oral communication with guidance and support from adults. The evidence can consist of details from the text without naming the text. During 1st grade, students learn how to incorporate the evidence in their writing. 2-3 Students include relevant textual evidence in their written and oral communication. Students should name the text when they refer to it. In 3rd grade, students should use a combination of direct and indirect citations. 4-5 Students continue with previous skills and reference comments made by speakers and peers. Students cite texts that they've directly quoted, paraphrased, or used for information. When writing, students will use the form of citation dictated by the instructor or the style guide referenced by the instructor. 6-8 Students continue with previous skills and use a style guide to create a proper citation. 9-12 Students continue with previous skills and should be aware of existing style guides and the ways in which they differ.
ELA.K12.EE.2.1:	Read and comprehend grade-level complex texts proficiently. **Clarifications:** See Text Complexity for grade-level complexity bands and a text complexity rubric.
ELA.K12.EE.3.1:	Make inferences to support comprehension. **Clarifications:** Students will make inferences before the words infer or inference are introduced. Kindergarten students will answer questions like "Why is the girl smiling?" or make predictions about what will happen based on the title page. Students will use the terms and apply them in 2nd grade and beyond.
ELA.K12.EE.4.1:	Use appropriate collaborative techniques and active listening skills when engaging in discussions in a variety of situations. **Clarifications:** In kindergarten, students learn to listen to one another respectfully. In grades 1-2, students build upon these skills by justifying what they are thinking. For example: "I think _____ because _____." The collaborative conversations are becoming academic conversations. In grades 3-12, students engage in academic conversations discussing claims and justifying their reasoning, refining and applying skills. Students build on ideas, propel the conversation, and support claims and counterclaims with evidence.
ELA.K12.EE.5.1:	Use the accepted rules governing a specific format to create quality work. **Clarifications:** Students will incorporate skills learned into work products to produce quality work. For students to incorporate these skills appropriately, they must receive instruction. A 3rd grade student creating a poster board display must have instruction in how to effectively present information to do quality work.
	Use appropriate voice and tone when speaking or writing.

ELA.K12.EE.6.1:	**Clarifications:** In kindergarten and 1st grade, students learn the difference between formal and informal language. For example, the way we talk to our friends differs from the way we speak to adults. In 2nd grade and beyond, students practice appropriate social and academic language to discuss texts.

General Course Information and Notes

QUALIFICATIONS

For Child Development Association (CDA) or CDA equivalencies, see Section 1: PreKindergarten Basic Definitions. If program serves children with disabilities as an inclusion setting, see Section 1: PreKindergarten Exceptional.

GENERAL INFORMATION

Course Number: 5100520

Course Path: Section: Grades PreK to 12 Education Courses > **Grade Group:** Grades PreK to 5 Education Courses > **Subject:** Prekindergarten > **SubSubject:** General >

Abbreviated Title: DIST HEAD START

Course Length: Year (Y)

Course Status: Draft - Course Pending Approval

Grade Level(s): PreK

Educator Certifications

Early Childhood Education (Early Childhood)
Preschool Education (Birth through Age 4)
Primary Education (K-3)
Prekindergarten/Primary Education (Age 3 through Grade 3)

District Title 1 Prekindergarten (#5100530) 2022 - And Beyond

Course Standards

Name	Description
MA.K12.MTR.1.1:	Mathematicians who participate in effortful learning both individually and with others: • Analyze the problem in a way that makes sense given the task. • Ask questions that will help with solving the task. • Build perseverance by modifying methods as needed while solving a challenging task. • Stay engaged and maintain a positive mindset when working to solve tasks. • Help and support each other when attempting a new method or approach. **Clarifications:** Teachers who encourage students to participate actively in effortful learning both individually and with others: • Cultivate a community of growth mindset learners. • Foster perseverance in students by choosing tasks that are challenging. • Develop students' ability to analyze and problem solve. • Recognize students' effort when solving challenging problems.
MA.K12.MTR.2.1:	Demonstrate understanding by representing problems in multiple ways. Mathematicians who demonstrate understanding by representing problems in multiple ways: • Build understanding through modeling and using manipulatives. • Represent solutions to problems in multiple ways using objects, drawings, tables, graphs and equations. • Progress from modeling problems with objects and drawings to using algorithms and equations. • Express connections between concepts and representations. • Choose a representation based on the given context or purpose. **Clarifications:** Teachers who encourage students to demonstrate understanding by representing problems in multiple ways: • Help students make connections between concepts and representations. • Provide opportunities for students to use manipulatives when investigating concepts. • Guide students from concrete to pictorial to abstract representations as understanding progresses. • Show students that various representations can have different purposes and can be useful in different situations.
MA.K12.MTR.3.1:	Complete tasks with mathematical fluency. Mathematicians who complete tasks with mathematical fluency: • Select efficient and appropriate methods for solving problems within the given context. • Maintain flexibility and accuracy while performing procedures and mental calculations. • Complete tasks accurately and with confidence. • Adapt procedures to apply them to a new context. • Use feedback to improve efficiency when performing calculations. **Clarifications:** Teachers who encourage students to complete tasks with mathematical fluency: • Provide students with the flexibility to solve problems by selecting a procedure that allows them to solve efficiently and accurately. • Offer multiple opportunities for students to practice efficient and generalizable methods. • Provide opportunities for students to reflect on the method they used and determine if a more efficient method could have been used.
MA.K12.MTR.4.1:	Engage in discussions that reflect on the mathematical thinking of self and others. Mathematicians who engage in discussions that reflect on the mathematical thinking of self and others: • Communicate mathematical ideas, vocabulary and methods effectively. • Analyze the mathematical thinking of others. • Compare the efficiency of a method to those expressed by others. • Recognize errors and suggest how to correctly solve the task. • Justify results by explaining methods and processes. • Construct possible arguments based on evidence. **Clarifications:** Teachers who encourage students to engage in discussions that reflect on the mathematical thinking of self and others: • Establish a culture in which students ask questions of the teacher and their peers, and error is an opportunity for learning. • Create opportunities for students to discuss their thinking with peers. • Select, sequence and present student work to advance and deepen understanding of correct and increasingly efficient methods. • Develop students' ability to justify methods and compare their responses to the responses of their peers.
	Use patterns and structure to help understand and connect mathematical concepts. Mathematicians who use patterns and structure to help understand and connect mathematical concepts: • Focus on relevant details within a problem. • Create plans and procedures to logically order events, steps or ideas to solve problems. • Decompose a complex problem into manageable parts. • Relate previously learned concepts to new concepts.

MA.K12.MTR.5.1:	• Look for similarities among problems. • Connect solutions of problems to more complicated large-scale situations. **Clarifications:** Teachers who encourage students to use patterns and structure to help understand and connect mathematical concepts: • Help students recognize the patterns in the world around them and connect these patterns to mathematical concepts. • Support students to develop generalizations based on the similarities found among problems. • Provide opportunities for students to create plans and procedures to solve problems. • Develop students' ability to construct relationships between their current understanding and more sophisticated ways of thinking.
MA.K12.MTR.6.1:	Assess the reasonableness of solutions. Mathematicians who assess the reasonableness of solutions: • Estimate to discover possible solutions. • Use benchmark quantities to determine if a solution makes sense. • Check calculations when solving problems. • Verify possible solutions by explaining the methods used. • Evaluate results based on the given context. **Clarifications:** Teachers who encourage students to assess the reasonableness of solutions: • Have students estimate or predict solutions prior to solving. • Prompt students to continually ask, "Does this solution make sense? How do you know?" • Reinforce that students check their work as they progress within and after a task. • Strengthen students' ability to verify solutions through justifications.
MA.K12.MTR.7.1:	Apply mathematics to real-world contexts. Mathematicians who apply mathematics to real-world contexts: • Connect mathematical concepts to everyday experiences. • Use models and methods to understand, represent and solve problems. • Perform investigations to gather data or determine if a method is appropriate. • Redesign models and methods to improve accuracy or efficiency. **Clarifications:** Teachers who encourage students to apply mathematics to real-world contexts: • Provide opportunities for students to create models, both concrete and abstract, and perform investigations. • Challenge students to question the accuracy of their models and methods. • Support students as they validate conclusions by comparing them to the given situation. • Indicate how various concepts can be applied to other disciplines.
ELA.K12.EE.1.1:	Cite evidence to explain and justify reasoning. **Clarifications:** K-1 Students include textual evidence in their oral communication with guidance and support from adults. The evidence can consist of details from the text without naming the text. During 1st grade, students learn how to incorporate the evidence in their writing. 2-3 Students include relevant textual evidence in their written and oral communication. Students should name the text when they refer to it. In 3rd grade, students should use a combination of direct and indirect citations. 4-5 Students continue with previous skills and reference comments made by speakers and peers. Students cite texts that they've directly quoted, paraphrased, or used for information. When writing, students will use the form of citation dictated by the instructor or the style guide referenced by the instructor. 6-8 Students continue with previous skills and use a style guide to create a proper citation. 9-12 Students continue with previous skills and should be aware of existing style guides and the ways in which they differ.
ELA.K12.EE.2.1:	Read and comprehend grade-level complex texts proficiently. **Clarifications:** See Text Complexity for grade-level complexity bands and a text complexity rubric.
ELA.K12.EE.3.1:	Make inferences to support comprehension. **Clarifications:** Students will make inferences before the words infer or inference are introduced. Kindergarten students will answer questions like "Why is the girl smiling?" or make predictions about what will happen based on the title page. Students will use the terms and apply them in 2nd grade and beyond.
ELA.K12.EE.4.1:	Use appropriate collaborative techniques and active listening skills when engaging in discussions in a variety of situations. **Clarifications:** In kindergarten, students learn to listen to one another respectfully. In grades 1-2, students build upon these skills by justifying what they are thinking. For example: "I think _____ because _____." The collaborative conversations are becoming academic conversations. In grades 3-12, students engage in academic conversations discussing claims and justifying their reasoning, refining and applying skills. Students build on ideas, propel the conversation, and support claims and counterclaims with evidence.
ELA.K12.EE.5.1:	Use the accepted rules governing a specific format to create quality work. **Clarifications:** Students will incorporate skills learned into work products to produce quality work. For students to incorporate these skills appropriately, they must receive instruction. A 3rd grade student creating a poster board display must have instruction in how to effectively present information to do quality work.
	Use appropriate voice and tone when speaking or writing.

ELA.K12.EE.6.1:	**Clarifications:** In kindergarten and 1st grade, students learn the difference between formal and informal language. For example, the way we talk to our friends differs from the way we speak to adults. In 2nd grade and beyond, students practice appropriate social and academic language to discuss texts.

General Course Information and Notes

QUALIFICATIONS

For Child Development Associate (CDA) or CDA equivalent, see Section 1: PreKindergarten Basic Definitions. If program serves children with disabilities as an inclusive setting, see Section 1: PreKindergarten Exceptional.

GENERAL INFORMATION

Course Number: 5100530

Course Path: Section: Grades PreK to 12 Education Courses > **Grade Group:** Grades PreK to 5 Education Courses > **Subject:** Prekindergarten > **SubSubject:** General >

Abbreviated Title: DIST TITLE 1 PK

Course Length: Year (Y)

Course Status: Draft - Course Pending Approval

Grade Level(s): PreK

Educator Certifications

Early Childhood Education (Early Childhood)
Preschool Education (Birth through Age 4)
Primary Education (K-3)
Prekindergarten/Primary Education (Age 3 through Grade 3)

Prekindergarten Other (#5100560) 2022 - And Beyond

Course Standards

Name	Description
MA.K12.MTR.1.1:	Mathematicians who participate in effortful learning both individually and with others: • Analyze the problem in a way that makes sense given the task. • Ask questions that will help with solving the task. • Build perseverance by modifying methods as needed while solving a challenging task. • Stay engaged and maintain a positive mindset when working to solve tasks. • Help and support each other when attempting a new method or approach. **Clarifications:** Teachers who encourage students to participate actively in effortful learning both individually and with others: • Cultivate a community of growth mindset learners. • Foster perseverance in students by choosing tasks that are challenging. • Develop students' ability to analyze and problem solve. • Recognize students' effort when solving challenging problems.
MA.K12.MTR.2.1:	Demonstrate understanding by representing problems in multiple ways. Mathematicians who demonstrate understanding by representing problems in multiple ways: • Build understanding through modeling and using manipulatives. • Represent solutions to problems in multiple ways using objects, drawings, tables, graphs and equations. • Progress from modeling problems with objects and drawings to using algorithms and equations. • Express connections between concepts and representations. • Choose a representation based on the given context or purpose. **Clarifications:** Teachers who encourage students to demonstrate understanding by representing problems in multiple ways: • Help students make connections between concepts and representations. • Provide opportunities for students to use manipulatives when investigating concepts. • Guide students from concrete to pictorial to abstract representations as understanding progresses. • Show students that various representations can have different purposes and can be useful in different situations.
MA.K12.MTR.3.1:	Complete tasks with mathematical fluency. Mathematicians who complete tasks with mathematical fluency: • Select efficient and appropriate methods for solving problems within the given context. • Maintain flexibility and accuracy while performing procedures and mental calculations. • Complete tasks accurately and with confidence. • Adapt procedures to apply them to a new context. • Use feedback to improve efficiency when performing calculations. **Clarifications:** Teachers who encourage students to complete tasks with mathematical fluency: • Provide students with the flexibility to solve problems by selecting a procedure that allows them to solve efficiently and accurately. • Offer multiple opportunities for students to practice efficient and generalizable methods. • Provide opportunities for students to reflect on the method they used and determine if a more efficient method could have been used.
MA.K12.MTR.4.1:	Engage in discussions that reflect on the mathematical thinking of self and others. Mathematicians who engage in discussions that reflect on the mathematical thinking of self and others: • Communicate mathematical ideas, vocabulary and methods effectively. • Analyze the mathematical thinking of others. • Compare the efficiency of a method to those expressed by others. • Recognize errors and suggest how to correctly solve the task. • Justify results by explaining methods and processes. • Construct possible arguments based on evidence. **Clarifications:** Teachers who encourage students to engage in discussions that reflect on the mathematical thinking of self and others: • Establish a culture in which students ask questions of the teacher and their peers, and error is an opportunity for learning. • Create opportunities for students to discuss their thinking with peers. • Select, sequence and present student work to advance and deepen understanding of correct and increasingly efficient methods. • Develop students' ability to justify methods and compare their responses to the responses of their peers.
	Use patterns and structure to help understand and connect mathematical concepts. Mathematicians who use patterns and structure to help understand and connect mathematical concepts: • Focus on relevant details within a problem. • Create plans and procedures to logically order events, steps or ideas to solve problems. • Decompose a complex problem into manageable parts. • Relate previously learned concepts to new concepts.

MA.K12.MTR.5.1:	• Look for similarities among problems. • Connect solutions of problems to more complicated large-scale situations. **Clarifications:** Teachers who encourage students to use patterns and structure to help understand and connect mathematical concepts: • Help students recognize the patterns in the world around them and connect these patterns to mathematical concepts. • Support students to develop generalizations based on the similarities found among problems. • Provide opportunities for students to create plans and procedures to solve problems. • Develop students' ability to construct relationships between their current understanding and more sophisticated ways of thinking.
MA.K12.MTR.6.1:	Assess the reasonableness of solutions. Mathematicians who assess the reasonableness of solutions: • Estimate to discover possible solutions. • Use benchmark quantities to determine if a solution makes sense. • Check calculations when solving problems. • Verify possible solutions by explaining the methods used. • Evaluate results based on the given context. **Clarifications:** Teachers who encourage students to assess the reasonableness of solutions: • Have students estimate or predict solutions prior to solving. • Prompt students to continually ask, "Does this solution make sense? How do you know?" • Reinforce that students check their work as they progress within and after a task. • Strengthen students' ability to verify solutions through justifications.
MA.K12.MTR.7.1:	Apply mathematics to real-world contexts. Mathematicians who apply mathematics to real-world contexts: • Connect mathematical concepts to everyday experiences. • Use models and methods to understand, represent and solve problems. • Perform investigations to gather data or determine if a method is appropriate. • Redesign models and methods to improve accuracy or efficiency. **Clarifications:** Teachers who encourage students to apply mathematics to real-world contexts: • Provide opportunities for students to create models, both concrete and abstract, and perform investigations. • Challenge students to question the accuracy of their models and methods. • Support students as they validate conclusions by comparing them to the given situation. • Indicate how various concepts can be applied to other disciplines.
ELA.K12.EE.1.1:	Cite evidence to explain and justify reasoning. **Clarifications:** K-1 Students include textual evidence in their oral communication with guidance and support from adults. The evidence can consist of details from the text without naming the text. During 1st grade, students learn how to incorporate the evidence in their writing. 2-3 Students include relevant textual evidence in their written and oral communication. Students should name the text when they refer to it. In 3rd grade, students should use a combination of direct and indirect citations. 4-5 Students continue with previous skills and reference comments made by speakers and peers. Students cite texts that they've directly quoted, paraphrased, or used for information. When writing, students will use the form of citation dictated by the instructor or the style guide referenced by the instructor. 6-8 Students continue with previous skills and use a style guide to create a proper citation. 9-12 Students continue with previous skills and should be aware of existing style guides and the ways in which they differ.
ELA.K12.EE.2.1:	Read and comprehend grade-level complex texts proficiently. **Clarifications:** See Text Complexity for grade-level complexity bands and a text complexity rubric.
ELA.K12.EE.3.1:	Make inferences to support comprehension. **Clarifications:** Students will make inferences before the words infer or inference are introduced. Kindergarten students will answer questions like "Why is the girl smiling?" or make predictions about what will happen based on the title page. Students will use the terms and apply them in 2nd grade and beyond.
ELA.K12.EE.4.1:	Use appropriate collaborative techniques and active listening skills when engaging in discussions in a variety of situations. **Clarifications:** In kindergarten, students learn to listen to one another respectfully. In grades 1-2, students build upon these skills by justifying what they are thinking. For example: "I think _____ because _____." The collaborative conversations are becoming academic conversations. In grades 3-12, students engage in academic conversations discussing claims and justifying their reasoning, refining and applying skills. Students build on ideas, propel the conversation, and support claims and counterclaims with evidence.
ELA.K12.EE.5.1:	Use the accepted rules governing a specific format to create quality work. **Clarifications:** Students will incorporate skills learned into work products to produce quality work. For students to incorporate these skills appropriately, they must receive instruction. A 3rd grade student creating a poster board display must have instruction in how to effectively present information to do quality work.
	Use appropriate voice and tone when speaking or writing.

ELA.K12.EE.6.1:	**Clarifications:** In kindergarten and 1st grade, students learn the difference between formal and informal language. For example, the way we talk to our friends differs from the way we speak to adults. In 2nd grade and beyond, students practice appropriate social and academic language to discuss texts.

General Course Information and Notes

QUALIFICATIONS

For Child Development Associate (CDA) or CDA equivalent, see Section 1: PreKindergarten Basic Definitions. If program serves children with disabilities as an inclusive setting, see Section 1: PreKindergarten Exceptional.

GENERAL INFORMATION

Course Number: 5100560

Course Path: Section: Grades PreK to 12 Education Courses > **Grade Group:** Grades PreK to 5 Education Courses > **Subject:** Prekindergarten > **SubSubject:** General >

Abbreviated Title: PK OTHER

Course Length: Year (Y)

Course Status: Draft - Course Pending Approval

Grade Level(s): PreK

Educator Certifications

Early Childhood Education (Early Childhood)
Preschool Education (Birth through Age 4)
Primary Education (K-3)
Prekindergarten/Primary Education (Age 3 through Grade 3)

School Readiness (#5100570) 2022 - And Beyond

Course Standards

Name	Description
MA.K12.MTR.1.1:	Mathematicians who participate in effortful learning both individually and with others: • Analyze the problem in a way that makes sense given the task. • Ask questions that will help with solving the task. • Build perseverance by modifying methods as needed while solving a challenging task. • Stay engaged and maintain a positive mindset when working to solve tasks. • Help and support each other when attempting a new method or approach. **Clarifications:** Teachers who encourage students to participate actively in effortful learning both individually and with others: • Cultivate a community of growth mindset learners. • Foster perseverance in students by choosing tasks that are challenging. • Develop students' ability to analyze and problem solve. • Recognize students' effort when solving challenging problems.
MA.K12.MTR.2.1:	Demonstrate understanding by representing problems in multiple ways. Mathematicians who demonstrate understanding by representing problems in multiple ways: • Build understanding through modeling and using manipulatives. • Represent solutions to problems in multiple ways using objects, drawings, tables, graphs and equations. • Progress from modeling problems with objects and drawings to using algorithms and equations. • Express connections between concepts and representations. • Choose a representation based on the given context or purpose. **Clarifications:** Teachers who encourage students to demonstrate understanding by representing problems in multiple ways: • Help students make connections between concepts and representations. • Provide opportunities for students to use manipulatives when investigating concepts. • Guide students from concrete to pictorial to abstract representations as understanding progresses. • Show students that various representations can have different purposes and can be useful in different situations.
MA.K12.MTR.3.1:	Complete tasks with mathematical fluency. Mathematicians who complete tasks with mathematical fluency: • Select efficient and appropriate methods for solving problems within the given context. • Maintain flexibility and accuracy while performing procedures and mental calculations. • Complete tasks accurately and with confidence. • Adapt procedures to apply them to a new context. • Use feedback to improve efficiency when performing calculations. **Clarifications:** Teachers who encourage students to complete tasks with mathematical fluency: • Provide students with the flexibility to solve problems by selecting a procedure that allows them to solve efficiently and accurately. • Offer multiple opportunities for students to practice efficient and generalizable methods. • Provide opportunities for students to reflect on the method they used and determine if a more efficient method could have been used.
MA.K12.MTR.4.1:	Engage in discussions that reflect on the mathematical thinking of self and others. Mathematicians who engage in discussions that reflect on the mathematical thinking of self and others: • Communicate mathematical ideas, vocabulary and methods effectively. • Analyze the mathematical thinking of others. • Compare the efficiency of a method to those expressed by others. • Recognize errors and suggest how to correctly solve the task. • Justify results by explaining methods and processes. • Construct possible arguments based on evidence. **Clarifications:** Teachers who encourage students to engage in discussions that reflect on the mathematical thinking of self and others: • Establish a culture in which students ask questions of the teacher and their peers, and error is an opportunity for learning. • Create opportunities for students to discuss their thinking with peers. • Select, sequence and present student work to advance and deepen understanding of correct and increasingly efficient methods. • Develop students' ability to justify methods and compare their responses to the responses of their peers.
	Use patterns and structure to help understand and connect mathematical concepts. Mathematicians who use patterns and structure to help understand and connect mathematical concepts: • Focus on relevant details within a problem. • Create plans and procedures to logically order events, steps or ideas to solve problems. • Decompose a complex problem into manageable parts. • Relate previously learned concepts to new concepts.

MA.K12.MTR.5.1:	• Look for similarities among problems. • Connect solutions of problems to more complicated large-scale situations. **Clarifications:** Teachers who encourage students to use patterns and structure to help understand and connect mathematical concepts: • Help students recognize the patterns in the world around them and connect these patterns to mathematical concepts. • Support students to develop generalizations based on the similarities found among problems. • Provide opportunities for students to create plans and procedures to solve problems. • Develop students' ability to construct relationships between their current understanding and more sophisticated ways of thinking.
MA.K12.MTR.6.1:	Assess the reasonableness of solutions. Mathematicians who assess the reasonableness of solutions: • Estimate to discover possible solutions. • Use benchmark quantities to determine if a solution makes sense. • Check calculations when solving problems. • Verify possible solutions by explaining the methods used. • Evaluate results based on the given context. **Clarifications:** Teachers who encourage students to assess the reasonableness of solutions: • Have students estimate or predict solutions prior to solving. • Prompt students to continually ask, "Does this solution make sense? How do you know?" • Reinforce that students check their work as they progress within and after a task. • Strengthen students' ability to verify solutions through justifications.
MA.K12.MTR.7.1:	Apply mathematics to real-world contexts. Mathematicians who apply mathematics to real-world contexts: • Connect mathematical concepts to everyday experiences. • Use models and methods to understand, represent and solve problems. • Perform investigations to gather data or determine if a method is appropriate. • Redesign models and methods to improve accuracy or efficiency. **Clarifications:** Teachers who encourage students to apply mathematics to real-world contexts: • Provide opportunities for students to create models, both concrete and abstract, and perform investigations. • Challenge students to question the accuracy of their models and methods. • Support students as they validate conclusions by comparing them to the given situation. • Indicate how various concepts can be applied to other disciplines.
ELA.K12.EE.1.1:	Cite evidence to explain and justify reasoning. **Clarifications:** K-1 Students include textual evidence in their oral communication with guidance and support from adults. The evidence can consist of details from the text without naming the text. During 1st grade, students learn how to incorporate the evidence in their writing. 2-3 Students include relevant textual evidence in their written and oral communication. Students should name the text when they refer to it. In 3rd grade, students should use a combination of direct and indirect citations. 4-5 Students continue with previous skills and reference comments made by speakers and peers. Students cite texts that they've directly quoted, paraphrased, or used for information. When writing, students will use the form of citation dictated by the instructor or the style guide referenced by the instructor. 6-8 Students continue with previous skills and use a style guide to create a proper citation. 9-12 Students continue with previous skills and should be aware of existing style guides and the ways in which they differ.
ELA.K12.EE.2.1:	Read and comprehend grade-level complex texts proficiently. **Clarifications:** See Text Complexity for grade-level complexity bands and a text complexity rubric.
ELA.K12.EE.3.1:	Make inferences to support comprehension. **Clarifications:** Students will make inferences before the words infer or inference are introduced. Kindergarten students will answer questions like "Why is the girl smiling?" or make predictions about what will happen based on the title page. Students will use the terms and apply them in 2nd grade and beyond.
ELA.K12.EE.4.1:	Use appropriate collaborative techniques and active listening skills when engaging in discussions in a variety of situations. **Clarifications:** In kindergarten, students learn to listen to one another respectfully. In grades 1-2, students build upon these skills by justifying what they are thinking. For example: "I think _____ because _____." The collaborative conversations are becoming academic conversations. In grades 3-12, students engage in academic conversations discussing claims and justifying their reasoning, refining and applying skills. Students build on ideas, propel the conversation, and support claims and counterclaims with evidence.
ELA.K12.EE.5.1:	Use the accepted rules governing a specific format to create quality work. **Clarifications:** Students will incorporate skills learned into work products to produce quality work. For students to incorporate these skills appropriately, they must receive instruction. A 3rd grade student creating a poster board display must have instruction in how to effectively present information to do quality work.
	Use appropriate voice and tone when speaking or writing.

ELA.K12.EE.6.1:	**Clarifications:** In kindergarten and 1st grade, students learn the difference between formal and informal language. For example, the way we talk to our friends differs from the way we speak to adults. In 2nd grade and beyond, students practice appropriate social and academic language to discuss texts.

General Course Information and Notes

QUALIFICATIONS

Child Development Associate (or equivalent) required.

For Child Development Associate (CDA) or CDA equivalent, see Section 1: PreKindergarten Basic Definitions. If program serves children with disabilities as an inclusive setting, see Section 1: PreKindergarten Exceptional.

GENERAL INFORMATION

Course Number: 5100570

Course Path: Section: Grades PreK to 12 Education Courses > **Grade Group:** Grades PreK to 5 Education Courses > **Subject:** Prekindergarten > **SubSubject:** General >

Abbreviated Title: SCHOOL READINESS

Course Length: Year (Y)

Course Status: Draft - Course Pending Approval

Grade Level(s): PreK

Voluntary Prekindergarten Education- school year program (#5100580) 2022 - And Beyond

Course Standards

Name	Description
MA.K12.MTR.1.1:	Mathematicians who participate in effortful learning both individually and with others: • Analyze the problem in a way that makes sense given the task. • Ask questions that will help with solving the task. • Build perseverance by modifying methods as needed while solving a challenging task. • Stay engaged and maintain a positive mindset when working to solve tasks. • Help and support each other when attempting a new method or approach. **Clarifications:** Teachers who encourage students to participate actively in effortful learning both individually and with others: • Cultivate a community of growth mindset learners. • Foster perseverance in students by choosing tasks that are challenging. • Develop students' ability to analyze and problem solve. • Recognize students' effort when solving challenging problems.
MA.K12.MTR.2.1:	Demonstrate understanding by representing problems in multiple ways. Mathematicians who demonstrate understanding by representing problems in multiple ways: • Build understanding through modeling and using manipulatives. • Represent solutions to problems in multiple ways using objects, drawings, tables, graphs and equations. • Progress from modeling problems with objects and drawings to using algorithms and equations. • Express connections between concepts and representations. • Choose a representation based on the given context or purpose. **Clarifications:** Teachers who encourage students to demonstrate understanding by representing problems in multiple ways: • Help students make connections between concepts and representations. • Provide opportunities for students to use manipulatives when investigating concepts. • Guide students from concrete to pictorial to abstract representations as understanding progresses. • Show students that various representations can have different purposes and can be useful in different situations.
MA.K12.MTR.3.1:	Complete tasks with mathematical fluency. Mathematicians who complete tasks with mathematical fluency: • Select efficient and appropriate methods for solving problems within the given context. • Maintain flexibility and accuracy while performing procedures and mental calculations. • Complete tasks accurately and with confidence. • Adapt procedures to apply them to a new context. • Use feedback to improve efficiency when performing calculations. **Clarifications:** Teachers who encourage students to complete tasks with mathematical fluency: • Provide students with the flexibility to solve problems by selecting a procedure that allows them to solve efficiently and accurately. • Offer multiple opportunities for students to practice efficient and generalizable methods. • Provide opportunities for students to reflect on the method they used and determine if a more efficient method could have been used.
MA.K12.MTR.4.1:	Engage in discussions that reflect on the mathematical thinking of self and others. Mathematicians who engage in discussions that reflect on the mathematical thinking of self and others: • Communicate mathematical ideas, vocabulary and methods effectively. • Analyze the mathematical thinking of others. • Compare the efficiency of a method to those expressed by others. • Recognize errors and suggest how to correctly solve the task. • Justify results by explaining methods and processes. • Construct possible arguments based on evidence. **Clarifications:** Teachers who encourage students to engage in discussions that reflect on the mathematical thinking of self and others: • Establish a culture in which students ask questions of the teacher and their peers, and error is an opportunity for learning. • Create opportunities for students to discuss their thinking with peers. • Select, sequence and present student work to advance and deepen understanding of correct and increasingly efficient methods. • Develop students' ability to justify methods and compare their responses to the responses of their peers.
	Use patterns and structure to help understand and connect mathematical concepts. Mathematicians who use patterns and structure to help understand and connect mathematical concepts: • Focus on relevant details within a problem.

MA.K12.MTR.5.1:	• Create plans and procedures to logically order events, steps or ideas to solve problems. • Decompose a complex problem into manageable parts. • Relate previously learned concepts to new concepts. • Look for similarities among problems. • Connect solutions of problems to more complicated large-scale situations. **Clarifications:** Teachers who encourage students to use patterns and structure to help understand and connect mathematical concepts: • Help students recognize the patterns in the world around them and connect these patterns to mathematical concepts. • Support students to develop generalizations based on the similarities found among problems. • Provide opportunities for students to create plans and procedures to solve problems. • Develop students' ability to construct relationships between their current understanding and more sophisticated ways of thinking.
MA.K12.MTR.6.1:	Assess the reasonableness of solutions. Mathematicians who assess the reasonableness of solutions: • Estimate to discover possible solutions. • Use benchmark quantities to determine if a solution makes sense. • Check calculations when solving problems. • Verify possible solutions by explaining the methods used. • Evaluate results based on the given context. **Clarifications:** Teachers who encourage students to assess the reasonableness of solutions: • Have students estimate or predict solutions prior to solving. • Prompt students to continually ask, "Does this solution make sense? How do you know?" • Reinforce that students check their work as they progress within and after a task. • Strengthen students' ability to verify solutions through justifications.
MA.K12.MTR.7.1:	Apply mathematics to real-world contexts. Mathematicians who apply mathematics to real-world contexts: • Connect mathematical concepts to everyday experiences. • Use models and methods to understand, represent and solve problems. • Perform investigations to gather data or determine if a method is appropriate. • Redesign models and methods to improve accuracy or efficiency. **Clarifications:** Teachers who encourage students to apply mathematics to real-world contexts: • Provide opportunities for students to create models, both concrete and abstract, and perform investigations. • Challenge students to question the accuracy of their models and methods. • Support students as they validate conclusions by comparing them to the given situation. • Indicate how various concepts can be applied to other disciplines.
ELA.K12.EE.1.1:	Cite evidence to explain and justify reasoning. **Clarifications:** K-1 Students include textual evidence in their oral communication with guidance and support from adults. The evidence can consist of details from the text without naming the text. During 1st grade, students learn how to incorporate the evidence in their writing. 2-3 Students include relevant textual evidence in their written and oral communication. Students should name the text when they refer to it. In 3rd grade, students should use a combination of direct and indirect citations. 4-5 Students continue with previous skills and reference comments made by speakers and peers. Students cite texts that they've directly quoted, paraphrased, or used for information. When writing, students will use the form of citation dictated by the instructor or the style guide referenced by the instructor. 6-8 Students continue with previous skills and use a style guide to create a proper citation. 9-12 Students continue with previous skills and should be aware of existing style guides and the ways in which they differ.
ELA.K12.EE.2.1:	Read and comprehend grade-level complex texts proficiently. **Clarifications:** See Text Complexity for grade-level complexity bands and a text complexity rubric.
ELA.K12.EE.3.1:	Make inferences to support comprehension. **Clarifications:** Students will make inferences before the words infer or inference are introduced. Kindergarten students will answer questions like "Why is the girl smiling?" or make predictions about what will happen based on the title page. Students will use the terms and apply them in 2nd grade and beyond.
ELA.K12.EE.4.1:	Use appropriate collaborative techniques and active listening skills when engaging in discussions in a variety of situations. **Clarifications:** In kindergarten, students learn to listen to one another respectfully. In grades 1-2, students build upon these skills by justifying what they are thinking. For example: "I think _____ because _____." The collaborative conversations are becoming academic conversations. In grades 3-12, students engage in academic conversations discussing claims and justifying their reasoning, refining and applying skills. Students build on ideas, propel the conversation, and support claims and counterclaims with evidence.
ELA.K12.EE.5.1:	Use the accepted rules governing a specific format to create quality work. **Clarifications:** Students will incorporate skills learned into work products to produce quality work. For students to incorporate these skills appropriately, they

	must receive instruction. A 3rd grade student creating a poster board display must have instruction in how to effectively present information to do quality work.
ELA.K12.EE.6.1:	Use appropriate voice and tone when speaking or writing. **Clarifications:** In kindergarten and 1st grade, students learn the difference between formal and informal language. For example, the way we talk to our friends differs from the way we speak to adults. In 2nd grade and beyond, students practice appropriate social and academic language to discuss texts.

General Course Information and Notes

QUALIFICATIONS

Child Development Associate (or equivalent) OR bachelors degree (or higher) in elementary education is required.

For Child Development Associate (CDA) or CDA equivalent, see Section 1: PreKindergarten Basic Definitions. If program serves children with disabilities as an inclusive setting, see Section 1: PreKindergarten Exceptional.

GENERAL INFORMATION

Course Number: 5100580

Course Path: Section: Grades PreK to 12 Education Courses > **Grade Group:** Grades PreK to 5 Education Courses > **Subject:** Prekindergarten > **SubSubject:** General >

Abbreviated Title: VPK-SCH YEAR PROG

Course Length: Year (Y)

Course Status: Draft - Course Pending Approval

Grade Level(s): PreK

Voluntary Prekindergarten Education- summer program (#5100590) 2022 - And Beyond

Course Standards

Name	Description
MA.K12.MTR.1.1:	Mathematicians who participate in effortful learning both individually and with others: • Analyze the problem in a way that makes sense given the task. • Ask questions that will help with solving the task. • Build perseverance by modifying methods as needed while solving a challenging task. • Stay engaged and maintain a positive mindset when working to solve tasks. • Help and support each other when attempting a new method or approach. **Clarifications:** Teachers who encourage students to participate actively in effortful learning both individually and with others: • Cultivate a community of growth mindset learners. • Foster perseverance in students by choosing tasks that are challenging. • Develop students' ability to analyze and problem solve. • Recognize students' effort when solving challenging problems.
MA.K12.MTR.2.1:	Demonstrate understanding by representing problems in multiple ways. Mathematicians who demonstrate understanding by representing problems in multiple ways: • Build understanding through modeling and using manipulatives. • Represent solutions to problems in multiple ways using objects, drawings, tables, graphs and equations. • Progress from modeling problems with objects and drawings to using algorithms and equations. • Express connections between concepts and representations. • Choose a representation based on the given context or purpose. **Clarifications:** Teachers who encourage students to demonstrate understanding by representing problems in multiple ways: • Help students make connections between concepts and representations. • Provide opportunities for students to use manipulatives when investigating concepts. • Guide students from concrete to pictorial to abstract representations as understanding progresses. • Show students that various representations can have different purposes and can be useful in different situations.
MA.K12.MTR.3.1:	Complete tasks with mathematical fluency. Mathematicians who complete tasks with mathematical fluency: • Select efficient and appropriate methods for solving problems within the given context. • Maintain flexibility and accuracy while performing procedures and mental calculations. • Complete tasks accurately and with confidence. • Adapt procedures to apply them to a new context. • Use feedback to improve efficiency when performing calculations. **Clarifications:** Teachers who encourage students to complete tasks with mathematical fluency: • Provide students with the flexibility to solve problems by selecting a procedure that allows them to solve efficiently and accurately. • Offer multiple opportunities for students to practice efficient and generalizable methods. • Provide opportunities for students to reflect on the method they used and determine if a more efficient method could have been used.
MA.K12.MTR.4.1:	Engage in discussions that reflect on the mathematical thinking of self and others. Mathematicians who engage in discussions that reflect on the mathematical thinking of self and others: • Communicate mathematical ideas, vocabulary and methods effectively. • Analyze the mathematical thinking of others. • Compare the efficiency of a method to those expressed by others. • Recognize errors and suggest how to correctly solve the task. • Justify results by explaining methods and processes. • Construct possible arguments based on evidence. **Clarifications:** Teachers who encourage students to engage in discussions that reflect on the mathematical thinking of self and others: • Establish a culture in which students ask questions of the teacher and their peers, and error is an opportunity for learning. • Create opportunities for students to discuss their thinking with peers. • Select, sequence and present student work to advance and deepen understanding of correct and increasingly efficient methods. • Develop students' ability to justify methods and compare their responses to the responses of their peers.
	Use patterns and structure to help understand and connect mathematical concepts. Mathematicians who use patterns and structure to help understand and connect mathematical concepts: • Focus on relevant details within a problem.

MA.K12.MTR.5.1:	• Create plans and procedures to logically order events, steps or ideas to solve problems. • Decompose a complex problem into manageable parts. • Relate previously learned concepts to new concepts. • Look for similarities among problems. • Connect solutions of problems to more complicated large-scale situations. **Clarifications:** Teachers who encourage students to use patterns and structure to help understand and connect mathematical concepts: • Help students recognize the patterns in the world around them and connect these patterns to mathematical concepts. • Support students to develop generalizations based on the similarities found among problems. • Provide opportunities for students to create plans and procedures to solve problems. • Develop students' ability to construct relationships between their current understanding and more sophisticated ways of thinking.
MA.K12.MTR.6.1:	Assess the reasonableness of solutions. Mathematicians who assess the reasonableness of solutions: • Estimate to discover possible solutions. • Use benchmark quantities to determine if a solution makes sense. • Check calculations when solving problems. • Verify possible solutions by explaining the methods used. • Evaluate results based on the given context. **Clarifications:** Teachers who encourage students to assess the reasonableness of solutions: • Have students estimate or predict solutions prior to solving. • Prompt students to continually ask, "Does this solution make sense? How do you know?" • Reinforce that students check their work as they progress within and after a task. • Strengthen students' ability to verify solutions through justifications.
MA.K12.MTR.7.1:	Apply mathematics to real-world contexts. Mathematicians who apply mathematics to real-world contexts: • Connect mathematical concepts to everyday experiences. • Use models and methods to understand, represent and solve problems. • Perform investigations to gather data or determine if a method is appropriate. • Redesign models and methods to improve accuracy or efficiency. **Clarifications:** Teachers who encourage students to apply mathematics to real-world contexts: • Provide opportunities for students to create models, both concrete and abstract, and perform investigations. • Challenge students to question the accuracy of their models and methods. • Support students as they validate conclusions by comparing them to the given situation. • Indicate how various concepts can be applied to other disciplines.
ELA.K12.EE.1.1:	Cite evidence to explain and justify reasoning. **Clarifications:** K-1 Students include textual evidence in their oral communication with guidance and support from adults. The evidence can consist of details from the text without naming the text. During 1st grade, students learn how to incorporate the evidence in their writing. 2-3 Students include relevant textual evidence in their written and oral communication. Students should name the text when they refer to it. In 3rd grade, students should use a combination of direct and indirect citations. 4-5 Students continue with previous skills and reference comments made by speakers and peers. Students cite texts that they've directly quoted, paraphrased, or used for information. When writing, students will use the form of citation dictated by the instructor or the style guide referenced by the instructor. 6-8 Students continue with previous skills and use a style guide to create a proper citation. 9-12 Students continue with previous skills and should be aware of existing style guides and the ways in which they differ.
ELA.K12.EE.2.1:	Read and comprehend grade-level complex texts proficiently. **Clarifications:** See Text Complexity for grade-level complexity bands and a text complexity rubric.
ELA.K12.EE.3.1:	Make inferences to support comprehension. **Clarifications:** Students will make inferences before the words infer or inference are introduced. Kindergarten students will answer questions like "Why is the girl smiling?" or make predictions about what will happen based on the title page. Students will use the terms and apply them in 2nd grade and beyond.
ELA.K12.EE.4.1:	Use appropriate collaborative techniques and active listening skills when engaging in discussions in a variety of situations. **Clarifications:** In kindergarten, students learn to listen to one another respectfully. In grades 1-2, students build upon these skills by justifying what they are thinking. For example: "I think _____ because _____." The collaborative conversations are becoming academic conversations. In grades 3-12, students engage in academic conversations discussing claims and justifying their reasoning, refining and applying skills. Students build on ideas, propel the conversation, and support claims and counterclaims with evidence.
ELA.K12.EE.5.1:	Use the accepted rules governing a specific format to create quality work. **Clarifications:** Students will incorporate skills learned into work products to produce quality work. For students to incorporate these skills appropriately, they

	must receive instruction. A 3rd grade student creating a poster board display must have instruction in how to effectively present information to do quality work.
ELA.K12.EE.6.1:	Use appropriate voice and tone when speaking or writing. **Clarifications:** In kindergarten and 1st grade, students learn the difference between formal and informal language. For example, the way we talk to our friends differs from the way we speak to adults. In 2nd grade and beyond, students practice appropriate social and academic language to discuss texts.

General Course Information and Notes

QUALIFICATIONS

Child Development Associate (or equivalent) OR bachelors degree (or higher) in elementary education is required.

For Child Development Associate (CDA) or CDA equivalent, see Section 1: PreKindergarten Basic Definitions. If program serves children with disabilities as an inclusive setting, see Section 1: PreKindergarten Exceptional.

GENERAL INFORMATION

Course Number: 5100590

Course Path: Section: Grades PreK to 12 Education Courses > **Grade Group:** Grades PreK to 5 Education Courses > **Subject:** Prekindergarten > **SubSubject:** General >

Abbreviated Title: VPK-SUMMER PROG

Course Length: Year (Y)

Course Status: Draft - Course Pending Approval

Grade Level(s): PreK

M/J Research 1 (#1700000) 2022 - And Beyond

Course Standards

Name	Description
MA.K12.MTR.1.1:	Mathematicians who participate in effortful learning both individually and with others: • Analyze the problem in a way that makes sense given the task. • Ask questions that will help with solving the task. • Build perseverance by modifying methods as needed while solving a challenging task. • Stay engaged and maintain a positive mindset when working to solve tasks. • Help and support each other when attempting a new method or approach. **Clarifications:** Teachers who encourage students to participate actively in effortful learning both individually and with others: • Cultivate a community of growth mindset learners. • Foster perseverance in students by choosing tasks that are challenging. • Develop students' ability to analyze and problem solve. • Recognize students' effort when solving challenging problems.
MA.K12.MTR.2.1:	Demonstrate understanding by representing problems in multiple ways. Mathematicians who demonstrate understanding by representing problems in multiple ways: • Build understanding through modeling and using manipulatives. • Represent solutions to problems in multiple ways using objects, drawings, tables, graphs and equations. • Progress from modeling problems with objects and drawings to using algorithms and equations. • Express connections between concepts and representations. • Choose a representation based on the given context or purpose. **Clarifications:** Teachers who encourage students to demonstrate understanding by representing problems in multiple ways: • Help students make connections between concepts and representations. • Provide opportunities for students to use manipulatives when investigating concepts. • Guide students from concrete to pictorial to abstract representations as understanding progresses. • Show students that various representations can have different purposes and can be useful in different situations.
MA.K12.MTR.3.1:	Complete tasks with mathematical fluency. Mathematicians who complete tasks with mathematical fluency: • Select efficient and appropriate methods for solving problems within the given context. • Maintain flexibility and accuracy while performing procedures and mental calculations. • Complete tasks accurately and with confidence. • Adapt procedures to apply them to a new context. • Use feedback to improve efficiency when performing calculations. **Clarifications:** Teachers who encourage students to complete tasks with mathematical fluency: • Provide students with the flexibility to solve problems by selecting a procedure that allows them to solve efficiently and accurately. • Offer multiple opportunities for students to practice efficient and generalizable methods. • Provide opportunities for students to reflect on the method they used and determine if a more efficient method could have been used.
MA.K12.MTR.4.1:	Engage in discussions that reflect on the mathematical thinking of self and others. Mathematicians who engage in discussions that reflect on the mathematical thinking of self and others: • Communicate mathematical ideas, vocabulary and methods effectively. • Analyze the mathematical thinking of others. • Compare the efficiency of a method to those expressed by others. • Recognize errors and suggest how to correctly solve the task. • Justify results by explaining methods and processes. • Construct possible arguments based on evidence. **Clarifications:** Teachers who encourage students to engage in discussions that reflect on the mathematical thinking of self and others: • Establish a culture in which students ask questions of the teacher and their peers, and error is an opportunity for learning. • Create opportunities for students to discuss their thinking with peers. • Select, sequence and present student work to advance and deepen understanding of correct and increasingly efficient methods. • Develop students' ability to justify methods and compare their responses to the responses of their peers.
	Use patterns and structure to help understand and connect mathematical concepts. Mathematicians who use patterns and structure to help understand and connect mathematical concepts: • Focus on relevant details within a problem. • Create plans and procedures to logically order events, steps or ideas to solve problems. • Decompose a complex problem into manageable parts. • Relate previously learned concepts to new concepts.

MA.K12.MTR.5.1:	• Look for similarities among problems. • Connect solutions of problems to more complicated large-scale situations. **Clarifications:** Teachers who encourage students to use patterns and structure to help understand and connect mathematical concepts: • Help students recognize the patterns in the world around them and connect these patterns to mathematical concepts. • Support students to develop generalizations based on the similarities found among problems. • Provide opportunities for students to create plans and procedures to solve problems. • Develop students' ability to construct relationships between their current understanding and more sophisticated ways of thinking.
MA.K12.MTR.6.1:	Assess the reasonableness of solutions. Mathematicians who assess the reasonableness of solutions: • Estimate to discover possible solutions. • Use benchmark quantities to determine if a solution makes sense. • Check calculations when solving problems. • Verify possible solutions by explaining the methods used. • Evaluate results based on the given context. **Clarifications:** Teachers who encourage students to assess the reasonableness of solutions: • Have students estimate or predict solutions prior to solving. • Prompt students to continually ask, "Does this solution make sense? How do you know?" • Reinforce that students check their work as they progress within and after a task. • Strengthen students' ability to verify solutions through justifications.
MA.K12.MTR.7.1:	Apply mathematics to real-world contexts. Mathematicians who apply mathematics to real-world contexts: • Connect mathematical concepts to everyday experiences. • Use models and methods to understand, represent and solve problems. • Perform investigations to gather data or determine if a method is appropriate. • Redesign models and methods to improve accuracy or efficiency. **Clarifications:** Teachers who encourage students to apply mathematics to real-world contexts: • Provide opportunities for students to create models, both concrete and abstract, and perform investigations. • Challenge students to question the accuracy of their models and methods. • Support students as they validate conclusions by comparing them to the given situation. • Indicate how various concepts can be applied to other disciplines.
ELA.K12.EE.1.1:	Cite evidence to explain and justify reasoning. **Clarifications:** K-1 Students include textual evidence in their oral communication with guidance and support from adults. The evidence can consist of details from the text without naming the text. During 1st grade, students learn how to incorporate the evidence in their writing. 2-3 Students include relevant textual evidence in their written and oral communication. Students should name the text when they refer to it. In 3rd grade, students should use a combination of direct and indirect citations. 4-5 Students continue with previous skills and reference comments made by speakers and peers. Students cite texts that they've directly quoted, paraphrased, or used for information. When writing, students will use the form of citation dictated by the instructor or the style guide referenced by the instructor. 6-8 Students continue with previous skills and use a style guide to create a proper citation. 9-12 Students continue with previous skills and should be aware of existing style guides and the ways in which they differ.
ELA.K12.EE.2.1:	Read and comprehend grade-level complex texts proficiently. **Clarifications:** See Text Complexity for grade-level complexity bands and a text complexity rubric.
ELA.K12.EE.3.1:	Make inferences to support comprehension. **Clarifications:** Students will make inferences before the words infer or inference are introduced. Kindergarten students will answer questions like "Why is the girl smiling?" or make predictions about what will happen based on the title page. Students will use the terms and apply them in 2nd grade and beyond.
ELA.K12.EE.4.1:	Use appropriate collaborative techniques and active listening skills when engaging in discussions in a variety of situations. **Clarifications:** In kindergarten, students learn to listen to one another respectfully. In grades 1-2, students build upon these skills by justifying what they are thinking. For example: "I think _____ because _____." The collaborative conversations are becoming academic conversations. In grades 3-12, students engage in academic conversations discussing claims and justifying their reasoning, refining and applying skills. Students build on ideas, propel the conversation, and support claims and counterclaims with evidence.
ELA.K12.EE.5.1:	Use the accepted rules governing a specific format to create quality work. **Clarifications:** Students will incorporate skills learned into work products to produce quality work. For students to incorporate these skills appropriately, they must receive instruction. A 3rd grade student creating a poster board display must have instruction in how to effectively present information to do quality work.
	Use appropriate voice and tone when speaking or writing.

ELA.K12.EE.6.1:	**Clarifications:** In kindergarten and 1st grade, students learn the difference between formal and informal language. For example, the way we talk to our friends differs from the way we speak to adults. In 2nd grade and beyond, students practice appropriate social and academic language to discuss texts.
SS.6.W.1.4:	Describe the methods of historical inquiry and how history relates to the other social sciences. **Clarifications:** Examples are archaeology, geography, political science, economics.
SS.6.W.1.5:	Describe the roles of historians and recognize varying historical interpretations (historiography).
ELD.K12.ELL.SI.1:	English language learners communicate for social and instructional purposes within the school setting.
SC.6.N.1.1:	Define a problem from the sixth grade curriculum, use appropriate reference materials to support scientific understanding, plan and carry out scientific investigation of various types, such as systematic observations or experiments, identify variables, collect and organize data, interpret data in charts, tables, and graphics, analyze information, make predictions, and defend conclusions.

General Course Information and Notes

GENERAL NOTES

The purpose of this course is to enable students to develop basic knowledge and skills in the research process with emphasis on determining and refining research questions.

The content should include, but not be limited to, the following:
-research process
-research topics
-research questions and hypotheses
-definition, analysis, and evaluation of research questions
-review of literature and other resources
-formulation of hypotheses
-report formats, styles, and content
-directed investigations
-critical analysis of research
-a major research project, preferably cross-disciplinary

Florida's Benchmarks for Excellent Student Thinking (B.E.S.T.) Standards
This course includes Florida's B.E.S.T. ELA Expectations (EE) and Mathematical Thinking and Reasoning Standards (MTRs) for students. Florida educators should intentionally embed these standards within the content and their instruction as applicable. For guidance on the implementation of the EEs and MTRs, please visit cpalms.org/Standards/BEST_Standards.aspx and select the appropriate B.E.S.T. Standards package.

English Language Development ELD Standards Special Notes Section:
Teachers are required to provide listening, speaking, reading and writing instruction that allows English language learners (ELL) to communicate for social and instructional purposes within the school setting. For the given level of English language proficiency and with visual, graphic, or interactive support, students will interact with grade level words, expressions, sentences and discourse to process or produce language necessary for academic success. The ELD standard should specify a relevant content area concept or topic of study chosen by curriculum developers and teachers which maximizes an ELL's need for communication and social skills. To access an ELL supporting document which delineates performance definitions and descriptors, please click on the following link: cpalms.org/uploads/docs/standards/eld/SI.pdf

QUALIFICATIONS

As well as any certification requirements listed on the course description, the following qualifications may also be acceptable for the course:

Any field when certification reflects a bachelor or higher degree.

GENERAL INFORMATION

Course Number: 1700000

Course Path: Section: Grades PreK to 12 Education Courses > **Grade Group:** Grades 6 to 8 Education Courses > **Subject:** Research and Critical Thinking > **SubSubject:** General >
Abbreviated Title: M/J RESEARCH 1
Course Length: Year (Y)
Course Level: 2

Course Status: Draft - Course Pending Approval
Grade Level(s): 6,7,8

M/J Research 2 (#1700010) 2022 - And Beyond

Course Standards

Name	Description
MA.K12.MTR.1.1:	Mathematicians who participate in effortful learning both individually and with others: • Analyze the problem in a way that makes sense given the task. • Ask questions that will help with solving the task. • Build perseverance by modifying methods as needed while solving a challenging task. • Stay engaged and maintain a positive mindset when working to solve tasks. • Help and support each other when attempting a new method or approach. **Clarifications:** Teachers who encourage students to participate actively in effortful learning both individually and with others: • Cultivate a community of growth mindset learners. • Foster perseverance in students by choosing tasks that are challenging. • Develop students' ability to analyze and problem solve. • Recognize students' effort when solving challenging problems.
MA.K12.MTR.2.1:	Demonstrate understanding by representing problems in multiple ways. Mathematicians who demonstrate understanding by representing problems in multiple ways: • Build understanding through modeling and using manipulatives. • Represent solutions to problems in multiple ways using objects, drawings, tables, graphs and equations. • Progress from modeling problems with objects and drawings to using algorithms and equations. • Express connections between concepts and representations. • Choose a representation based on the given context or purpose. **Clarifications:** Teachers who encourage students to demonstrate understanding by representing problems in multiple ways: • Help students make connections between concepts and representations. • Provide opportunities for students to use manipulatives when investigating concepts. • Guide students from concrete to pictorial to abstract representations as understanding progresses. • Show students that various representations can have different purposes and can be useful in different situations.
MA.K12.MTR.3.1:	Complete tasks with mathematical fluency. Mathematicians who complete tasks with mathematical fluency: • Select efficient and appropriate methods for solving problems within the given context. • Maintain flexibility and accuracy while performing procedures and mental calculations. • Complete tasks accurately and with confidence. • Adapt procedures to apply them to a new context. • Use feedback to improve efficiency when performing calculations. **Clarifications:** Teachers who encourage students to complete tasks with mathematical fluency: • Provide students with the flexibility to solve problems by selecting a procedure that allows them to solve efficiently and accurately. • Offer multiple opportunities for students to practice efficient and generalizable methods. • Provide opportunities for students to reflect on the method they used and determine if a more efficient method could have been used.
MA.K12.MTR.4.1:	Engage in discussions that reflect on the mathematical thinking of self and others. Mathematicians who engage in discussions that reflect on the mathematical thinking of self and others: • Communicate mathematical ideas, vocabulary and methods effectively. • Analyze the mathematical thinking of others. • Compare the efficiency of a method to those expressed by others. • Recognize errors and suggest how to correctly solve the task. • Justify results by explaining methods and processes. • Construct possible arguments based on evidence. **Clarifications:** Teachers who encourage students to engage in discussions that reflect on the mathematical thinking of self and others: • Establish a culture in which students ask questions of the teacher and their peers, and error is an opportunity for learning. • Create opportunities for students to discuss their thinking with peers. • Select, sequence and present student work to advance and deepen understanding of correct and increasingly efficient methods. • Develop students' ability to justify methods and compare their responses to the responses of their peers.
	Use patterns and structure to help understand and connect mathematical concepts. Mathematicians who use patterns and structure to help understand and connect mathematical concepts: • Focus on relevant details within a problem. • Create plans and procedures to logically order events, steps or ideas to solve problems. • Decompose a complex problem into manageable parts. • Relate previously learned concepts to new concepts.

MA.K12.MTR.5.1:	• Look for similarities among problems. • Connect solutions of problems to more complicated large-scale situations. **Clarifications:** Teachers who encourage students to use patterns and structure to help understand and connect mathematical concepts: • Help students recognize the patterns in the world around them and connect these patterns to mathematical concepts. • Support students to develop generalizations based on the similarities found among problems. • Provide opportunities for students to create plans and procedures to solve problems. • Develop students' ability to construct relationships between their current understanding and more sophisticated ways of thinking.
MA.K12.MTR.6.1:	Assess the reasonableness of solutions. Mathematicians who assess the reasonableness of solutions: • Estimate to discover possible solutions. • Use benchmark quantities to determine if a solution makes sense. • Check calculations when solving problems. • Verify possible solutions by explaining the methods used. • Evaluate results based on the given context. **Clarifications:** Teachers who encourage students to assess the reasonableness of solutions: • Have students estimate or predict solutions prior to solving. • Prompt students to continually ask, "Does this solution make sense? How do you know?" • Reinforce that students check their work as they progress within and after a task. • Strengthen students' ability to verify solutions through justifications.
MA.K12.MTR.7.1:	Apply mathematics to real-world contexts. Mathematicians who apply mathematics to real-world contexts: • Connect mathematical concepts to everyday experiences. • Use models and methods to understand, represent and solve problems. • Perform investigations to gather data or determine if a method is appropriate. • Redesign models and methods to improve accuracy or efficiency. **Clarifications:** Teachers who encourage students to apply mathematics to real-world contexts: • Provide opportunities for students to create models, both concrete and abstract, and perform investigations. • Challenge students to question the accuracy of their models and methods. • Support students as they validate conclusions by comparing them to the given situation. • Indicate how various concepts can be applied to other disciplines.
ELA.K12.EE.1.1:	Cite evidence to explain and justify reasoning. **Clarifications:** K-1 Students include textual evidence in their oral communication with guidance and support from adults. The evidence can consist of details from the text without naming the text. During 1st grade, students learn how to incorporate the evidence in their writing. 2-3 Students include relevant textual evidence in their written and oral communication. Students should name the text when they refer to it. In 3rd grade, students should use a combination of direct and indirect citations. 4-5 Students continue with previous skills and reference comments made by speakers and peers. Students cite texts that they've directly quoted, paraphrased, or used for information. When writing, students will use the form of citation dictated by the instructor or the style guide referenced by the instructor. 6-8 Students continue with previous skills and use a style guide to create a proper citation. 9-12 Students continue with previous skills and should be aware of existing style guides and the ways in which they differ.
ELA.K12.EE.2.1:	Read and comprehend grade-level complex texts proficiently. **Clarifications:** See Text Complexity for grade-level complexity bands and a text complexity rubric.
ELA.K12.EE.3.1:	Make inferences to support comprehension. **Clarifications:** Students will make inferences before the words infer or inference are introduced. Kindergarten students will answer questions like "Why is the girl smiling?" or make predictions about what will happen based on the title page. Students will use the terms and apply them in 2nd grade and beyond.
ELA.K12.EE.4.1:	Use appropriate collaborative techniques and active listening skills when engaging in discussions in a variety of situations. **Clarifications:** In kindergarten, students learn to listen to one another respectfully. In grades 1-2, students build upon these skills by justifying what they are thinking. For example: "I think _____ because _____." The collaborative conversations are becoming academic conversations. In grades 3-12, students engage in academic conversations discussing claims and justifying their reasoning, refining and applying skills. Students build on ideas, propel the conversation, and support claims and counterclaims with evidence.
ELA.K12.EE.5.1:	Use the accepted rules governing a specific format to create quality work. **Clarifications:** Students will incorporate skills learned into work products to produce quality work. For students to incorporate these skills appropriately, they must receive instruction. A 3rd grade student creating a poster board display must have instruction in how to effectively present information to do quality work.
	Use appropriate voice and tone when speaking or writing.

ELA.K12.EE.6.1:	**Clarifications:** In kindergarten and 1st grade, students learn the difference between formal and informal language. For example, the way we talk to our friends differs from the way we speak to adults. In 2nd grade and beyond, students practice appropriate social and academic language to discuss texts.
ELD.K12.ELL.SI.1:	English language learners communicate for social and instructional purposes within the school setting.

General Course Information and Notes

GENERAL NOTES

The purpose of this course is to enable students to develop proficient knowledge and skills in the research process with emphasis on appropriate research design.

The content should include, but not be limited to, the following:

- research process
- experimental, descriptive, and historical research
- legal and ethical issues in research-research questions and hypotheses
- review of literature and other resources-report formats, styles, and content-investigations
- critical analysis of research
- a major research project, preferably cross-disciplinary

Florida's Benchmarks for Excellent Student Thinking (B.E.S.T.) Standards
This course includes Florida's B.E.S.T. ELA Expectations (EE) and Mathematical Thinking and Reasoning Standards (MTRs) for students. Florida educators should intentionally embed these standards within the content and their instruction as applicable. For guidance on the implementation of the EEs and MTRs, please visit cpalms.org/Standards/BEST_Standards.aspx and select the appropriate B.E.S.T. Standards package.

English Language Development ELD Standards Special Notes Section:
Teachers are required to provide listening, speaking, reading and writing instruction that allows English language learners (ELL) to communicate for social and instructional purposes within the school setting. For the given level of English language proficiency and with visual, graphic, or interactive support, students will interact with grade level words, expressions, sentences and discourse to process or produce language necessary for academic success. The ELD standard should specify a relevant content area concept or topic of study chosen by curriculum developers and teachers which maximizes an ELL's need for communication and social skills. To access an ELL supporting document which delineates performance definitions and descriptors, please click on the following link: cpalms.org/uploads/docs/standards/eld/SI.pdf

QUALIFICATIONS

As well as any certification requirements listed on the course description, the following qualifications may also be acceptable for the course:

Any field when certification reflects a bachelor or higher degree.

GENERAL INFORMATION

Course Number: 1700010

Course Path: Section: Grades PreK to 12 Education Courses > **Grade Group:** Grades 6 to 8 Education Courses > **Subject:** Research and Critical Thinking > **SubSubject:** General >
Abbreviated Title: M/J RESEARCH 2
Course Length: Year (Y)
Course Level: 2

Course Status: Draft - Course Pending Approval

Grade Level(s): 6,7,8

M/J Research 3 (#1700020) 2022 - And Beyond

Course Standards

Name	Description
MA.K12.MTR.1.1:	Mathematicians who participate in effortful learning both individually and with others: • Analyze the problem in a way that makes sense given the task. • Ask questions that will help with solving the task. • Build perseverance by modifying methods as needed while solving a challenging task. • Stay engaged and maintain a positive mindset when working to solve tasks. • Help and support each other when attempting a new method or approach. **Clarifications:** Teachers who encourage students to participate actively in effortful learning both individually and with others: • Cultivate a community of growth mindset learners. • Foster perseverance in students by choosing tasks that are challenging. • Develop students' ability to analyze and problem solve. • Recognize students' effort when solving challenging problems.
MA.K12.MTR.2.1:	Demonstrate understanding by representing problems in multiple ways. Mathematicians who demonstrate understanding by representing problems in multiple ways: • Build understanding through modeling and using manipulatives. • Represent solutions to problems in multiple ways using objects, drawings, tables, graphs and equations. • Progress from modeling problems with objects and drawings to using algorithms and equations. • Express connections between concepts and representations. • Choose a representation based on the given context or purpose. **Clarifications:** Teachers who encourage students to demonstrate understanding by representing problems in multiple ways: • Help students make connections between concepts and representations. • Provide opportunities for students to use manipulatives when investigating concepts. • Guide students from concrete to pictorial to abstract representations as understanding progresses. • Show students that various representations can have different purposes and can be useful in different situations.
MA.K12.MTR.3.1:	Complete tasks with mathematical fluency. Mathematicians who complete tasks with mathematical fluency: • Select efficient and appropriate methods for solving problems within the given context. • Maintain flexibility and accuracy while performing procedures and mental calculations. • Complete tasks accurately and with confidence. • Adapt procedures to apply them to a new context. • Use feedback to improve efficiency when performing calculations. **Clarifications:** Teachers who encourage students to complete tasks with mathematical fluency: • Provide students with the flexibility to solve problems by selecting a procedure that allows them to solve efficiently and accurately. • Offer multiple opportunities for students to practice efficient and generalizable methods. • Provide opportunities for students to reflect on the method they used and determine if a more efficient method could have been used.
MA.K12.MTR.4.1:	Engage in discussions that reflect on the mathematical thinking of self and others. Mathematicians who engage in discussions that reflect on the mathematical thinking of self and others: • Communicate mathematical ideas, vocabulary and methods effectively. • Analyze the mathematical thinking of others. • Compare the efficiency of a method to those expressed by others. • Recognize errors and suggest how to correctly solve the task. • Justify results by explaining methods and processes. • Construct possible arguments based on evidence. **Clarifications:** Teachers who encourage students to engage in discussions that reflect on the mathematical thinking of self and others: • Establish a culture in which students ask questions of the teacher and their peers, and error is an opportunity for learning. • Create opportunities for students to discuss their thinking with peers. • Select, sequence and present student work to advance and deepen understanding of correct and increasingly efficient methods. • Develop students' ability to justify methods and compare their responses to the responses of their peers.
	Use patterns and structure to help understand and connect mathematical concepts. Mathematicians who use patterns and structure to help understand and connect mathematical concepts: • Focus on relevant details within a problem. • Create plans and procedures to logically order events, steps or ideas to solve problems. • Decompose a complex problem into manageable parts. • Relate previously learned concepts to new concepts.

MA.K12.MTR.5.1:	• Look for similarities among problems. • Connect solutions of problems to more complicated large-scale situations. **Clarifications:** Teachers who encourage students to use patterns and structure to help understand and connect mathematical concepts: • Help students recognize the patterns in the world around them and connect these patterns to mathematical concepts. • Support students to develop generalizations based on the similarities found among problems. • Provide opportunities for students to create plans and procedures to solve problems. • Develop students' ability to construct relationships between their current understanding and more sophisticated ways of thinking.
MA.K12.MTR.6.1:	Assess the reasonableness of solutions. Mathematicians who assess the reasonableness of solutions: • Estimate to discover possible solutions. • Use benchmark quantities to determine if a solution makes sense. • Check calculations when solving problems. • Verify possible solutions by explaining the methods used. • Evaluate results based on the given context. **Clarifications:** Teachers who encourage students to assess the reasonableness of solutions: • Have students estimate or predict solutions prior to solving. • Prompt students to continually ask, "Does this solution make sense? How do you know?" • Reinforce that students check their work as they progress within and after a task. • Strengthen students' ability to verify solutions through justifications.
MA.K12.MTR.7.1:	Apply mathematics to real-world contexts. Mathematicians who apply mathematics to real-world contexts: • Connect mathematical concepts to everyday experiences. • Use models and methods to understand, represent and solve problems. • Perform investigations to gather data or determine if a method is appropriate. • Redesign models and methods to improve accuracy or efficiency. **Clarifications:** Teachers who encourage students to apply mathematics to real-world contexts: • Provide opportunities for students to create models, both concrete and abstract, and perform investigations. • Challenge students to question the accuracy of their models and methods. • Support students as they validate conclusions by comparing them to the given situation. • Indicate how various concepts can be applied to other disciplines.
ELA.K12.EE.1.1:	Cite evidence to explain and justify reasoning. **Clarifications:** K-1 Students include textual evidence in their oral communication with guidance and support from adults. The evidence can consist of details from the text without naming the text. During 1st grade, students learn how to incorporate the evidence in their writing. 2-3 Students include relevant textual evidence in their written and oral communication. Students should name the text when they refer to it. In 3rd grade, students should use a combination of direct and indirect citations. 4-5 Students continue with previous skills and reference comments made by speakers and peers. Students cite texts that they've directly quoted, paraphrased, or used for information. When writing, students will use the form of citation dictated by the instructor or the style guide referenced by the instructor. 6-8 Students continue with previous skills and use a style guide to create a proper citation. 9-12 Students continue with previous skills and should be aware of existing style guides and the ways in which they differ.
ELA.K12.EE.2.1:	Read and comprehend grade-level complex texts proficiently. **Clarifications:** See Text Complexity for grade-level complexity bands and a text complexity rubric.
ELA.K12.EE.3.1:	Make inferences to support comprehension. **Clarifications:** Students will make inferences before the words infer or inference are introduced. Kindergarten students will answer questions like "Why is the girl smiling?" or make predictions about what will happen based on the title page. Students will use the terms and apply them in 2nd grade and beyond.
ELA.K12.EE.4.1:	Use appropriate collaborative techniques and active listening skills when engaging in discussions in a variety of situations. **Clarifications:** In kindergarten, students learn to listen to one another respectfully. In grades 1-2, students build upon these skills by justifying what they are thinking. For example: "I think _____ because _____." The collaborative conversations are becoming academic conversations. In grades 3-12, students engage in academic conversations discussing claims and justifying their reasoning, refining and applying skills. Students build on ideas, propel the conversation, and support claims and counterclaims with evidence.
ELA.K12.EE.5.1:	Use the accepted rules governing a specific format to create quality work. **Clarifications:** Students will incorporate skills learned into work products to produce quality work. For students to incorporate these skills appropriately, they must receive instruction. A 3rd grade student creating a poster board display must have instruction in how to effectively present information to do quality work.
	Use appropriate voice and tone when speaking or writing.

ELA.K12.EE.6.1:	**Clarifications:** In kindergarten and 1st grade, students learn the difference between formal and informal language. For example, the way we talk to our friends differs from the way we speak to adults. In 2nd grade and beyond, students practice appropriate social and academic language to discuss texts.
SC.8.N.1.1:	Define a problem from the eighth grade curriculum using appropriate reference materials to support scientific understanding, plan and carry out scientific investigations of various types, such as systematic observations or experiments, identify variables, collect and organize data, interpret data in charts, tables, and graphics, analyze information, make predictions, and defend conclusions.
SC.8.N.1.4:	Explain how hypotheses are valuable if they lead to further investigations, even if they turn out not to be supported by the data.
SC.8.N.1.6:	Understand that scientific investigations involve the collection of relevant empirical evidence, the use of logical reasoning, and the application of imagination in devising hypotheses, predictions, explanations and models to make sense of the collected evidence.
SS.8.A.1.1:	Provide supporting details for an answer from text, interview for oral history, check validity of information from research/text, and identify strong vs. weak arguments. **Clarifications:** Students should be encouraged to utilize FINDS (Focus, Investigage, Note, Develop, Score), Florida's research process model accessible at: fldoe.org/bii/Library_Media/pdf/12TotalFINDS.pdf.
SS.8.A.1.4:	Differentiate fact from opinion, utilize appropriate historical research and fiction/nonfiction support materials.
ELD.K12.ELL.SI.1:	English language learners communicate for social and instructional purposes within the school setting.

General Course Information and Notes

GENERAL NOTES

The purpose of this course is to enable students to develop advanced knowledge and skills in the research process with emphasis on data collection and analysis.

The content should include, but not be limited to, the following:

- research process
- research questions and hypotheses
- review of literature and other resources
- legal and ethical issues in research
- research design
- data collection, analysis, and statistics
- interpretation of results
- application of findings
- report formats, styles, and content
- investigations
- critical analysis of research
- a major research project, preferably cross-curricular

Florida's Benchmarks for Excellent Student Thinking (B.E.S.T.) Standards
This course includes Florida's B.E.S.T. ELA Expectations (EE) and Mathematical Thinking and Reasoning Standards (MTRs) for students. Florida educators should intentionally embed these standards within the content and their instruction as applicable. For guidance on the implementation of the EEs and MTRs, please visit cpalms.org/Standards/BEST_Standards.aspx and select the appropriate B.E.S.T. Standards package.

English Language Development ELD Standards Special Notes Section:
Teachers are required to provide listening, speaking, reading and writing instruction that allows English language learners (ELL) to communicate for social and instructional purposes within the school setting. For the given level of English language proficiency and with visual, graphic, or interactive support, students will interact with grade level words, expressions, sentences and discourse to process or produce language necessary for academic success. The ELD standard should specify a relevant content area concept or topic of study chosen by curriculum developers and teachers which maximizes an ELL's need for communication and social skills. To access an ELL supporting document which delineates performance definitions and descriptors, please click on the following link: cpalms.org/uploads/docs/standards/eld/SI.pdf

QUALIFICATIONS

As well as any certification requirements listed on the course description, the following qualifications may also be acceptable for the course:

Any field when certification reflects a bachelor or higher degree.

GENERAL INFORMATION

Course Number: 1700020

Course Path: Section: Grades PreK to 12 Education Courses > **Grade Group:** Grades 6 to 8 Education Courses > **Subject:** Research and Critical Thinking > **SubSubject:** General >
Abbreviated Title: M/J RESEARCH 3
Course Length: Year (Y)
Course Level: 2

Course Status: Draft - Course Pending Approval
Grade Level(s): 6,7,8

M/J Career Research and Decision Making (#1700060) 2022 - And Beyond

Course Standards

Name	Description
MA.K12.MTR.1.1:	Mathematicians who participate in effortful learning both individually and with others: • Analyze the problem in a way that makes sense given the task. • Ask questions that will help with solving the task. • Build perseverance by modifying methods as needed while solving a challenging task. • Stay engaged and maintain a positive mindset when working to solve tasks. • Help and support each other when attempting a new method or approach. **Clarifications:** Teachers who encourage students to participate actively in effortful learning both individually and with others: • Cultivate a community of growth mindset learners. • Foster perseverance in students by choosing tasks that are challenging. • Develop students' ability to analyze and problem solve. • Recognize students' effort when solving challenging problems.
MA.K12.MTR.2.1:	Demonstrate understanding by representing problems in multiple ways. Mathematicians who demonstrate understanding by representing problems in multiple ways: • Build understanding through modeling and using manipulatives. • Represent solutions to problems in multiple ways using objects, drawings, tables, graphs and equations. • Progress from modeling problems with objects and drawings to using algorithms and equations. • Express connections between concepts and representations. • Choose a representation based on the given context or purpose. **Clarifications:** Teachers who encourage students to demonstrate understanding by representing problems in multiple ways: • Help students make connections between concepts and representations. • Provide opportunities for students to use manipulatives when investigating concepts. • Guide students from concrete to pictorial to abstract representations as understanding progresses. • Show students that various representations can have different purposes and can be useful in different situations.
MA.K12.MTR.3.1:	Complete tasks with mathematical fluency. Mathematicians who complete tasks with mathematical fluency: • Select efficient and appropriate methods for solving problems within the given context. • Maintain flexibility and accuracy while performing procedures and mental calculations. • Complete tasks accurately and with confidence. • Adapt procedures to apply them to a new context. • Use feedback to improve efficiency when performing calculations. **Clarifications:** Teachers who encourage students to complete tasks with mathematical fluency: • Provide students with the flexibility to solve problems by selecting a procedure that allows them to solve efficiently and accurately. • Offer multiple opportunities for students to practice efficient and generalizable methods. • Provide opportunities for students to reflect on the method they used and determine if a more efficient method could have been used.
MA.K12.MTR.4.1:	Engage in discussions that reflect on the mathematical thinking of self and others. Mathematicians who engage in discussions that reflect on the mathematical thinking of self and others: • Communicate mathematical ideas, vocabulary and methods effectively. • Analyze the mathematical thinking of others. • Compare the efficiency of a method to those expressed by others. • Recognize errors and suggest how to correctly solve the task. • Justify results by explaining methods and processes. • Construct possible arguments based on evidence. **Clarifications:** Teachers who encourage students to engage in discussions that reflect on the mathematical thinking of self and others: • Establish a culture in which students ask questions of the teacher and their peers, and error is an opportunity for learning. • Create opportunities for students to discuss their thinking with peers. • Select, sequence and present student work to advance and deepen understanding of correct and increasingly efficient methods. • Develop students' ability to justify methods and compare their responses to the responses of their peers.
	Use patterns and structure to help understand and connect mathematical concepts. Mathematicians who use patterns and structure to help understand and connect mathematical concepts: • Focus on relevant details within a problem.

MA.K12.MTR.5.1:	• Create plans and procedures to logically order events, steps or ideas to solve problems. • Decompose a complex problem into manageable parts. • Relate previously learned concepts to new concepts. • Look for similarities among problems. • Connect solutions of problems to more complicated large-scale situations. **Clarifications:** Teachers who encourage students to use patterns and structure to help understand and connect mathematical concepts: • Help students recognize the patterns in the world around them and connect these patterns to mathematical concepts. • Support students to develop generalizations based on the similarities found among problems. • Provide opportunities for students to create plans and procedures to solve problems. • Develop students' ability to construct relationships between their current understanding and more sophisticated ways of thinking.
MA.K12.MTR.6.1:	Assess the reasonableness of solutions. Mathematicians who assess the reasonableness of solutions: • Estimate to discover possible solutions. • Use benchmark quantities to determine if a solution makes sense. • Check calculations when solving problems. • Verify possible solutions by explaining the methods used. • Evaluate results based on the given context. **Clarifications:** Teachers who encourage students to assess the reasonableness of solutions: • Have students estimate or predict solutions prior to solving. • Prompt students to continually ask, "Does this solution make sense? How do you know?" • Reinforce that students check their work as they progress within and after a task. • Strengthen students' ability to verify solutions through justifications.
MA.K12.MTR.7.1:	Apply mathematics to real-world contexts. Mathematicians who apply mathematics to real-world contexts: • Connect mathematical concepts to everyday experiences. • Use models and methods to understand, represent and solve problems. • Perform investigations to gather data or determine if a method is appropriate. • Redesign models and methods to improve accuracy or efficiency. **Clarifications:** Teachers who encourage students to apply mathematics to real-world contexts: • Provide opportunities for students to create models, both concrete and abstract, and perform investigations. • Challenge students to question the accuracy of their models and methods. • Support students as they validate conclusions by comparing them to the given situation. • Indicate how various concepts can be applied to other disciplines.
ELA.K12.EE.1.1:	Cite evidence to explain and justify reasoning. **Clarifications:** K-1 Students include textual evidence in their oral communication with guidance and support from adults. The evidence can consist of details from the text without naming the text. During 1st grade, students learn how to incorporate the evidence in their writing. 2-3 Students include relevant textual evidence in their written and oral communication. Students should name the text when they refer to it. In 3rd grade, students should use a combination of direct and indirect citations. 4-5 Students continue with previous skills and reference comments made by speakers and peers. Students cite texts that they've directly quoted, paraphrased, or used for information. When writing, students will use the form of citation dictated by the instructor or the style guide referenced by the instructor. 6-8 Students continue with previous skills and use a style guide to create a proper citation. 9-12 Students continue with previous skills and should be aware of existing style guides and the ways in which they differ.
ELA.K12.EE.2.1:	Read and comprehend grade-level complex texts proficiently. **Clarifications:** See Text Complexity for grade-level complexity bands and a text complexity rubric.
ELA.K12.EE.3.1:	Make inferences to support comprehension. **Clarifications:** Students will make inferences before the words infer or inference are introduced. Kindergarten students will answer questions like "Why is the girl smiling?" or make predictions about what will happen based on the title page. Students will use the terms and apply them in 2nd grade and beyond.
ELA.K12.EE.4.1:	Use appropriate collaborative techniques and active listening skills when engaging in discussions in a variety of situations. **Clarifications:** In kindergarten, students learn to listen to one another respectfully. In grades 1-2, students build upon these skills by justifying what they are thinking. For example: "I think _____ because _____." The collaborative conversations are becoming academic conversations. In grades 3-12, students engage in academic conversations discussing claims and justifying their reasoning, refining and applying skills. Students build on ideas, propel the conversation, and support claims and counterclaims with evidence.
ELA.K12.EE.5.1:	Use the accepted rules governing a specific format to create quality work. **Clarifications:** Students will incorporate skills learned into work products to produce quality work. For students to incorporate these skills appropriately, they

	must receive instruction. A 3rd grade student creating a poster board display must have instruction in how to effectively present information to do quality work.
ELA.K12.EE.6.1:	Use appropriate voice and tone when speaking or writing. **Clarifications:** In kindergarten and 1st grade, students learn the difference between formal and informal language. For example, the way we talk to our friends differs from the way we speak to adults. In 2nd grade and beyond, students practice appropriate social and academic language to discuss texts.
HE.6.B.4.3:	Demonstrate effective conflict-management and/or resolution strategies. **Clarifications:** Talk to an adult, anger management, and conflict mediation.
HE.6.B.5.2:	Choose healthy alternatives over unhealthy alternatives when making a decision. **Clarifications:** Not smoking, limiting sedentary activity, and practicing good character.
HE.7.B.4.3:	Articulate the possible causes of conflict among youth in schools and communities. **Clarifications:** Ethnic prejudice and diversity, substance use, group dynamics, relationship issues/dating violence, gossip/rumors, and sexual identity.
HE.7.B.5.2:	Select healthy alternatives over unhealthy alternatives when making a decision. **Clarifications:** Proper prescription-drug use, using safety equipment, Internet safety, and managing stress.
HE.8.B.4.3:	Examine the possible causes of conflict among youth in schools and communities. **Clarifications:** Relationships, territory, jealousy, and gossip/rumors.
HE.8.B.5.2:	Categorize healthy and unhealthy alternatives to health-related issues or problems. **Clarifications:** (Alcohol consumption, sleep requirements, physical activity, and time management.)
ELD.K12.ELL.SI.1:	English language learners communicate for social and instructional purposes within the school setting.

General Course Information and Notes

GENERAL NOTES

The purpose of this course is to provide students with the opportunity to gain the knowledge and skills necessary to become health literate and practice responsible behaviors to promote healthy living. This comprehensive course focuses on making wise personal decisions and respecting and promoting the health of others.

The content should include, but is not limited to:

- Mental and emotional health (personal health care, screenings, counseling, negotiation skills, bullying, grief, loss and depression)
- Prevention and control of disease (non-communicable, sexually transmitted diseases, STDs, and HIV/AIDS)
- Consumer health (risk reduction behaviors, policies/laws, medical resources, and conflict resolution)
- Family life (risk reduction behaviors, cultures, daily routines and rules)
- Personal health (adolescence, communication skills, wellness, coping skills, social relationships and reproductive health)
- Nutrition (weight management, fitness plan, eating disorders, and BMI)
- Internet safety (security, threats, media, cyber-bullying parental controls, and monitoring)
- Injury prevention and safety (rules, bullying, water safety, weapons safety, and first aid/CPR/AED)
- Substance use and abuse (harmful effects of alcohol, tobacco, other drugs, and over-the-counter drugs)
- Community health (local health organizations, technology, resources, and services)
- Environmental health (adverse health effects, chemicals toxins and pollutants)
- Consumer health (advertising, media influence, products and services)
- Teen dating violence (dating, abuse and violence)

Instructional Practices: Teaching from a well-written, grade-level textbook enhances students' content area knowledge and also strengthens their ability to comprehend longer, complex reading passages on any topic for any reason. Using the following instructional practices also helps student learning:

1. Reading assignments from longer text passages as well as shorter ones when text is extremely complex.
2. Making close reading and rereading of texts central to lessons.
3. Asking high-level, text-specific questions and requiring high-level, complex tasks and assignments.
4. Requiring students to support answers with evidence from the text.
5. Providing extensive text-based research and writing opportunities (claims and evidence).

Any student whose parent makes written request to the school principal shall be exempted from the teaching of reproductive health or any disease, including HIV/AIDS, its symptoms, development, and treatment. A student so exempted may not be penalized by reason of that exemption.

Career and Education Planning – Per section 1003.4156, Florida Statutes, the Career and Education Planning course must result in a completed, personalized academic and career plan for the student, that may be revised as the student progresses through middle and high school; must emphasize the importance of entrepreneurship and employability skills; and must include information from the Department of Economic Opportunity's economic security report as described in Section 445.07, Florida Statutes. The required, personalized academic and career plan must inform students of high school graduation requirements, including diploma designations (Section 1003.4285, Florida Statutes); requirements for a Florida Bright Futures Scholarship; state university and Florida College System institution admission requirements; and, available opportunities to earn college credit in high school utilizing acceleration mechanisms. For additional information on the Middle School Career and Education Planning courses, visit fldoe.org/academics/college-career-planning/educators-toolkit/index.stml.

Career and Education Planning Course Standards – Students will:

1.0 Describe the influences that societal, economic, and technological changes have on employment trends and future training.

2.0 Develop skills to locate, evaluate, and interpret career information.

3.0 Identify and demonstrate processes for making short and long term goals.

4.0 Demonstrate employability skills such as working in a group, problem-solving and organizational skills, and the importance of entrepreneurship.

5.0 Understand the relationship between educational achievement and career choices/postsecondary options.

6.0 Identify a career cluster and related pathways through an interest assessment that match career and education goals.

7.0 Develop a career and education plan that includes short and long-term goals, high school program of study, and postsecondary/career goals.

8.0 Demonstrate knowledge of technology and its application in career fields/clusters.

Florida's Benchmarks for Excellent Student Thinking (B.E.S.T.) Standards
This course includes Florida's B.E.S.T. ELA Expectations (EE) and Mathematical Thinking and Reasoning Standards (MTRs) for students. Florida educators should intentionally embed these standards within the content and their instruction as applicable. For guidance on the implementation of the EEs and MTRs, please visit cpalms.org/Standards/BEST_Standards.aspx and select the appropriate B.E.S.T. Standards package.

English Language Development ELD Standards Special Notes Section:
Teachers are required to provide listening, speaking, reading and writing instruction that allows English language learners (ELL) to communicate for social and instructional purposes within the school setting. For the given level of English language proficiency and with visual, graphic, or interactive support, students will interact with grade level words, expressions, sentences and discourse to process or produce language necessary for academic success. The ELD standard should specify a relevant content area concept or topic of study chosen by curriculum developers and teachers which maximizes an ELL's need for communication and social skills. To access an ELL supporting document which delineates performance definitions and descriptors, please click on the following link: cpalms.org/uploads/docs/standards/eld/SI.pdf

QUALIFICATIONS

As well as any certification requirements listed on the course description, the following qualifications may also be acceptable for the course:

Any field when certification reflects a bachelor or higher degree.

GENERAL INFORMATION

Course Number: 1700060

Course Path: Section: Grades PreK to 12 Education Courses > **Grade Group:** Grades 6 to 8 Education Courses > **Subject:** Research and Critical Thinking > **SubSubject:** General >
Abbreviated Title: M/J CAREER RES & DEC
Course Length: Semester (S)
Course Level: 2

Course Status: Draft - Course Pending Approval

Grade Level(s): 6,7,8

M/J Critical Thinking, Problem Solving, and Learning Strategies (#1700100) 2022 - And Beyond

Course Standards

Name	Description
MA.K12.MTR.1.1:	Mathematicians who participate in effortful learning both individually and with others: • Analyze the problem in a way that makes sense given the task. • Ask questions that will help with solving the task. • Build perseverance by modifying methods as needed while solving a challenging task. • Stay engaged and maintain a positive mindset when working to solve tasks. • Help and support each other when attempting a new method or approach. **Clarifications:** Teachers who encourage students to participate actively in effortful learning both individually and with others: • Cultivate a community of growth mindset learners. • Foster perseverance in students by choosing tasks that are challenging. • Develop students' ability to analyze and problem solve. • Recognize students' effort when solving challenging problems.
MA.K12.MTR.2.1:	Demonstrate understanding by representing problems in multiple ways. Mathematicians who demonstrate understanding by representing problems in multiple ways: • Build understanding through modeling and using manipulatives. • Represent solutions to problems in multiple ways using objects, drawings, tables, graphs and equations. • Progress from modeling problems with objects and drawings to using algorithms and equations. • Express connections between concepts and representations. • Choose a representation based on the given context or purpose. **Clarifications:** Teachers who encourage students to demonstrate understanding by representing problems in multiple ways: • Help students make connections between concepts and representations. • Provide opportunities for students to use manipulatives when investigating concepts. • Guide students from concrete to pictorial to abstract representations as understanding progresses. • Show students that various representations can have different purposes and can be useful in different situations.
MA.K12.MTR.3.1:	Complete tasks with mathematical fluency. Mathematicians who complete tasks with mathematical fluency: • Select efficient and appropriate methods for solving problems within the given context. • Maintain flexibility and accuracy while performing procedures and mental calculations. • Complete tasks accurately and with confidence. • Adapt procedures to apply them to a new context. • Use feedback to improve efficiency when performing calculations. **Clarifications:** Teachers who encourage students to complete tasks with mathematical fluency: • Provide students with the flexibility to solve problems by selecting a procedure that allows them to solve efficiently and accurately. • Offer multiple opportunities for students to practice efficient and generalizable methods. • Provide opportunities for students to reflect on the method they used and determine if a more efficient method could have been used.
MA.K12.MTR.4.1:	Engage in discussions that reflect on the mathematical thinking of self and others. Mathematicians who engage in discussions that reflect on the mathematical thinking of self and others: • Communicate mathematical ideas, vocabulary and methods effectively. • Analyze the mathematical thinking of others. • Compare the efficiency of a method to those expressed by others. • Recognize errors and suggest how to correctly solve the task. • Justify results by explaining methods and processes. • Construct possible arguments based on evidence. **Clarifications:** Teachers who encourage students to engage in discussions that reflect on the mathematical thinking of self and others: • Establish a culture in which students ask questions of the teacher and their peers, and error is an opportunity for learning. • Create opportunities for students to discuss their thinking with peers. • Select, sequence and present student work to advance and deepen understanding of correct and increasingly efficient methods. • Develop students' ability to justify methods and compare their responses to the responses of their peers.
	Use patterns and structure to help understand and connect mathematical concepts. Mathematicians who use patterns and structure to help understand and connect mathematical concepts: • Focus on relevant details within a problem.

MA.K12.MTR.5.1:	• Create plans and procedures to logically order events, steps or ideas to solve problems. • Decompose a complex problem into manageable parts. • Relate previously learned concepts to new concepts. • Look for similarities among problems. • Connect solutions of problems to more complicated large-scale situations. **Clarifications:** Teachers who encourage students to use patterns and structure to help understand and connect mathematical concepts: • Help students recognize the patterns in the world around them and connect these patterns to mathematical concepts. • Support students to develop generalizations based on the similarities found among problems. • Provide opportunities for students to create plans and procedures to solve problems. • Develop students' ability to construct relationships between their current understanding and more sophisticated ways of thinking.
MA.K12.MTR.6.1:	Assess the reasonableness of solutions. Mathematicians who assess the reasonableness of solutions: • Estimate to discover possible solutions. • Use benchmark quantities to determine if a solution makes sense. • Check calculations when solving problems. • Verify possible solutions by explaining the methods used. • Evaluate results based on the given context. **Clarifications:** Teachers who encourage students to assess the reasonableness of solutions: • Have students estimate or predict solutions prior to solving. • Prompt students to continually ask, "Does this solution make sense? How do you know?" • Reinforce that students check their work as they progress within and after a task. • Strengthen students' ability to verify solutions through justifications.
MA.K12.MTR.7.1:	Apply mathematics to real-world contexts. Mathematicians who apply mathematics to real-world contexts: • Connect mathematical concepts to everyday experiences. • Use models and methods to understand, represent and solve problems. • Perform investigations to gather data or determine if a method is appropriate. • Redesign models and methods to improve accuracy or efficiency. **Clarifications:** Teachers who encourage students to apply mathematics to real-world contexts: • Provide opportunities for students to create models, both concrete and abstract, and perform investigations. • Challenge students to question the accuracy of their models and methods. • Support students as they validate conclusions by comparing them to the given situation. • Indicate how various concepts can be applied to other disciplines.
ELA.K12.EE.1.1:	Cite evidence to explain and justify reasoning. **Clarifications:** K-1 Students include textual evidence in their oral communication with guidance and support from adults. The evidence can consist of details from the text without naming the text. During 1st grade, students learn how to incorporate the evidence in their writing. 2-3 Students include relevant textual evidence in their written and oral communication. Students should name the text when they refer to it. In 3rd grade, students should use a combination of direct and indirect citations. 4-5 Students continue with previous skills and reference comments made by speakers and peers. Students cite texts that they've directly quoted, paraphrased, or used for information. When writing, students will use the form of citation dictated by the instructor or the style guide referenced by the instructor. 6-8 Students continue with previous skills and use a style guide to create a proper citation. 9-12 Students continue with previous skills and should be aware of existing style guides and the ways in which they differ.
ELA.K12.EE.2.1:	Read and comprehend grade-level complex texts proficiently. **Clarifications:** See Text Complexity for grade-level complexity bands and a text complexity rubric.
ELA.K12.EE.3.1:	Make inferences to support comprehension. **Clarifications:** Students will make inferences before the words infer or inference are introduced. Kindergarten students will answer questions like "Why is the girl smiling?" or make predictions about what will happen based on the title page. Students will use the terms and apply them in 2nd grade and beyond.
ELA.K12.EE.4.1:	Use appropriate collaborative techniques and active listening skills when engaging in discussions in a variety of situations. **Clarifications:** In kindergarten, students learn to listen to one another respectfully. In grades 1-2, students build upon these skills by justifying what they are thinking. For example: "I think _____ because _____." The collaborative conversations are becoming academic conversations. In grades 3-12, students engage in academic conversations discussing claims and justifying their reasoning, refining and applying skills. Students build on ideas, propel the conversation, and support claims and counterclaims with evidence.
ELA.K12.EE.5.1:	Use the accepted rules governing a specific format to create quality work. **Clarifications:** Students will incorporate skills learned into work products to produce quality work. For students to incorporate these skills appropriately, they

	must receive instruction. A 3rd grade student creating a poster board display must have instruction in how to effectively present information to do quality work.
ELA.K12.EE.6.1:	Use appropriate voice and tone when speaking or writing. **Clarifications:** In kindergarten and 1st grade, students learn the difference between formal and informal language. For example, the way we talk to our friends differs from the way we speak to adults. In 2nd grade and beyond, students practice appropriate social and academic language to discuss texts.
SC.7.N.1.1:	Define a problem from the seventh grade curriculum, use appropriate reference materials to support scientific understanding, plan and carry out scientific investigation of various types, such as systematic observations or experiments, identify variables, collect and organize data, interpret data in charts, tables, and graphics, analyze information, make predictions, and defend conclusions.
SC.7.N.1.4:	Identify test variables (independent variables) and outcome variables (dependent variables) in an experiment.
SC.7.N.1.7:	Explain that scientific knowledge is the result of a great deal of debate and confirmation within the science community.
ELD.K12.ELL.SI.1:	English language learners communicate for social and instructional purposes within the school setting.

General Course Information and Notes

GENERAL NOTES

The purpose of this course is to enable students to develop learning strategies, critical-thinking skills, and problem-solving skills to enhance their performance in academic and nonacademic endeavors.

The content should include, but not be limited to, the following:

- strategies for acquiring, storing, and retrieving information
- strategies for oral and written communication
- critical-thinking operations, processes, and enabling skills
- problem-solving skills and strategies
- strategies for linking new information with prior knowledge

Florida's Benchmarks for Excellent Student Thinking (B.E.S.T.) Standards
This course includes Florida's B.E.S.T. ELA Expectations (EE) and Mathematical Thinking and Reasoning Standards (MTRs) for students. Florida educators should intentionally embed these standards within the content and their instruction as applicable. For guidance on the implementation of the EEs and MTRs, please visit cpalms.org/Standards/BEST_Standards.aspx and select the appropriate B.E.S.T. Standards package.

English Language Development ELD Standards Special Notes Section:
Teachers are required to provide listening, speaking, reading and writing instruction that allows English language learners (ELL) to communicate for social and instructional purposes within the school setting. For the given level of English language proficiency and with visual, graphic, or interactive support, students will interact with grade level words, expressions, sentences and discourse to process or produce language necessary for academic success. The ELD standard should specify a relevant content area concept or topic of study chosen by curriculum developers and teachers which maximizes an ELL's need for communication and social skills. To access an ELL supporting document which delineates performance definitions and descriptors, please click on the following link: cpalms.org/uploads/docs/standards/eld/SI.pdf

QUALIFICATIONS

As well as any certification requirements listed on the course description, the following qualifications may also be acceptable for the course:

Any academic coverage (any coverage classified as an academic coverage in Rules 6A-4.0101 through 6A-4.0343, Florida Administrative Code).

GENERAL INFORMATION

Course Number: 1700100

Course Path: Section: Grades PreK to 12 Education Courses > **Grade Group:** Grades 6 to 8 Education Courses > **Subject:** Research and Critical Thinking > **SubSubject:** General >
Abbreviated Title: M/J CRIT THINK
Course Length: Year (Y)
Course Level: 2

Course Status: Draft - Course Pending Approval

Grade Level(s): 6,7,8

M/J AVID 6th (#1700110) 2022 - And Beyond

Course Standards

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	Use appropriate voice and tone when speaking or writing.

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ELD.K12.ELL.SI.1:	English language learners communicate for social and instructional purposes within the school setting.

General Course Information and Notes

VERSION DESCRIPTION

Major Concepts/Content: Advancement Via Individual Determination (AVID) is an academic elective course that prepares students for college readiness and success, and it is scheduled during the regular school day as a year-long course. Each week, students receive instruction that utilizes a rigorous college-preparatory curriculum provided by AVID Center, tutor-facilitated study groups, motivational activities, and academic success skills. In AVID, students participate in activities that incorporate strategies focused on writing, inquiry, collaboration, organization, and reading to support their academic growth. Additionally, students engage in activities centered around exploring college and career opportunities and their own agency.

Some students may have previous experience with AVID Elementary, and some students will be experiencing AVID for the first time. The 6th grade AVID elective course is an introduction to the AVID philosophy. Students will develop an awareness of the values accompanying academic goals and success. The course will focus on building students' self-confidence and communication skills in working with peers and adults. Students will be exposed to reading strategies that will assist them in building vocabulary and understanding a variety of texts and will also focus on pre-writing techniques, summary writing, and structural components of note-taking. Students will increase college and career awareness through guest-speaker presentations, field-trip opportunities, and research.

AVID curriculum books used:

AVID College and Careers

AVID Critical Thinking and Engagement

AVID Reading for Disciplinary Literacy

AVID Secondary Implementation Resource

AVID Tutorial Guide

AVID Writing for Disciplinary Literacy

Supplemental materials course include the following:

AVID Weekly®, *Supporting Math in the AVID Elective*, *Write Path* content-area books, focused note-taking resources, and my.avid.org Curriculum Book Webpages

STUDENT OUTCOMES

Student Agency (SA)

- Student Empowerment
- Leadership of Others

Rigorous Academic Preparedness (AP)

- Writing
- Inquiry
- Collaboration
- Organization
- Reading

Opportunity Knowledge (OK)

- Advancing College Preparedness
- Building Career Knowledge

STUDENT AGENCY (6.SA)

Student Empowerment

1. (a) Determine personal interest for extracurricular and community service activities within the school and community
   (b) Gain awareness of extracurricular and community service activities within the school and community
2. Evaluate the impact of decisions on others
3. Explore the importance of healthy, balanced lifestyles, including aspects such as good sleeping, eating, and exercise habits
4. Establish understanding of concepts and content-specific vocabulary related to personal finance
5. (a) Identify the characteristics of positive, health relationships
   (b) Explore individual peer relationships and identify those that are positive and healthy
6. Gain awareness of motivators that positively impact performance
7. Self-monitor to diagnose areas of need (e.g., academic, personal, social-emotional)
8. (a) Gain awareness of skills that increase mental flexibility
   (b) Explore the relationship between grit and perseverance
9. (a) Identify strategies and skills that promote self-awareness
   (b) Identify individual strengths and areas of challenge related to academic skills and performance
10. Determine key points from learning experiences

Leadership of Others

1. Identify traits connected to personal integrity and ethics
2. (a) Identify leadership opportunities and positions in the school and community

(b) Determine formal and informal leadership opportunities that could be pursued
3. (a) Select tools to analyze a conflict and identify a positive solution
(b) Classify passive, assertive, and aggressive statements

RIGOROUS ACADEMIC PREPAREDNESS (6.AP)

Writing

1. (a) Develop writing skills related to argumentative and narrative modes of writing
(b) Plan and structure writing based on the mode (descriptive, narrative, expository, argumentative)
(c) Draft initial writing
2. Analyze a writing task by identifying key vocabulary and audience
3. Gather and analyze feedback from peers and instructors
4. (a) Edit drafts for grammar, mechanics, and spelling
(b) Analyze the organizational structure of writing
5. Publish writing to a small group audience within the classroom, such as a formal written paper
6. (a) Take notes with an emphasis on identifying and recording the note-taking objective and /or Essential Question
(b) Take notes with an emphasis on setting up notes, including all required components
7. Summarize by pulling together the most important information related to the objective and/or Essential Question

Inquiry

1. Create questions based on Costa's Levels of Thinking
2. Identify misunderstood concepts or problems
3. Determine the steps/process that led to a solution
4. Reflect on learning to make connections between new learning and previous learning
5. Reflect on learning strategies that were employed and whether those strategies were effective
6. (a) Identify processes that are used
(b) Reflect on a process that was used and whether that process was effective
7. Analyze a research prompt
8. (a) Locate sources that are relevant to the topic and support the purpose of the research assignment
(b) Distinguish between primary and secondary sources
9. Plan and structure the writing based on the research prompt
10. Integrate quotations and references to texts, using proper citations
11. Publish research to a small group audience within the classroom, such as a formal written paper

Collaboration

1. Establish norms and expectations around shared responsibility among group members
2. Establish norms and expectations around appreciating diversity among group members
3. Develop a foundational familiarity and comfort with classmates
4. Identify respectful and disrespectful actions of self and others
5. Check group members' level of understanding
6. Utilize technology to collaborate with classmates
7. (a) Apply basic understanding of effective public speaking
(b) Incorporate visual aids and/or technology when appropriate
8. Describe the characteristics of effective listening, such as eye contact and mirroring
9. Monitor word choice when speaking
10. Identify formal and informal language registers

Organization

1. (a) Begin implementing organizational tools (e.g., binders/eBinders, portfolios, or digital folders) that support academic success
(b) Create an activity log or tracking system for community extracurricular activities and hours
2. (a) Explore a variety of organizational formats for calendaring/planning
(b) Determine how to use time effectively
(c) Assess complex assignments and break them into smaller tasks
3. Set personal, academic and career goals
4. Monitor progress toward goals
5. Utilize visual frameworks to organize information

Reading

1. Determine the characteristics of a high-quality text in relation to the reading purpose
2. (a) Preview text features
(b) Identify prior knowledge that may be relevant to the reading
3. Assess knowledge of academic and content-specific vocabulary words
4. (a) Mark the text to accomplish the reading purpose
(b) Identify the key components of a text related to the reading purpose
5. Extend beyond the text by applying key learning

OPPORTUNITY KNOWLEDGE (6.OK)

Advancing College Preparedness

1. Identify personal interests and skills related to future college aspirations, such as through an interest inventory
2. (a) Know how to determine a GPA

(b) Develop familiarity with college terminology
(c) Classify the various types of college

3. Understand scholarships and the role they play in financing college
4. Articulate the importance of long-term academic plans as a part of goal setting an achievement
5. (a) Identify what is meant by match schools, reach schools, and safety schools in order to determine the best academic fit during the selection process
   (b) Understand the different college entrance exams: PSAT, PreACT, SAT, ACT

Building Career Knowledge

1. Identify personal interests and skills related to future career aspirations
2. (a) Increase familiarity with career terminology
   (b) Distinguish between jobs, careers, and career fields
3. (a) Establish initial knowledge around the characteristics that contribute to academic, social, and financial fit
   (b) Explore the net cost of attending college to inform decisions and budget plans
4. Request assistance in selecting career elective courses and pathways that match interest and goals

GENERAL NOTES

Trained AVID Elective teachers may visit avid.org, and log into their MyAVID account using their AVID username and password; then follow my.avid.org/file_sharing/default.aspx?id=24544 to access the AVID Weeks at a Glance curriculum and resources for grades 6-12.

Florida's Benchmarks for Excellent Student Thinking (B.E.S.T.) Standards
This course includes Florida's B.E.S.T. ELA Expectations (EE) and Mathematical Thinking and Reasoning Standards (MTRs) for students. Florida educators should intentionally embed these standards within the content and their instruction as applicable. For guidance on the implementation of the EEs and MTRs, please visit cpalms.org/Standards/BEST_Standards.aspx and select the appropriate B.E.S.T. Standards package.

English Language Development ELD Standards Special Notes Section:

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VERSION REQUIREMENTS

These requirements include, but are not limited to, the Florida Standards that are most relevant to this course. Standards correlated with a specific course requirement may also be addressed by other course requirements as appropriate. Some requirements in this course are not addressed in the Florida Standards. Other subject areas and content may be used to fulfill course requirements. This course includes an agreement related to minimum standards for behavior, attendance, and participation.

QUALIFICATIONS

As well as any certification requirements listed on the course description, the following qualifications may also be acceptable for the course:

Any field when certification reflects a bachelor or higher degree. Teachers must receive training from AVID Center to teach this course.

GENERAL INFORMATION

Course Number: 1700110

Course Path: Section: Grades PreK to 12 Education Courses > **Grade Group:** Grades 6 to 8 Education Courses > **Subject:** Research and Critical Thinking > **SubSubject:** General >
Abbreviated Title: M/J AVID 6TH
Course Length: Year (Y)

Course Type: Elective Course

Course Level: 2

Course Status: Draft - Course Pending Approval

Grade Level(s): 6

M/J AVID 6th & Career Planning (#1700115) 2022 - And Beyond

Course Standards

Name	Description
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MA.K12.MTR.4.1:	Engage in discussions that reflect on the mathematical thinking of self and others. Mathematicians who engage in discussions that reflect on the mathematical thinking of self and others: • Communicate mathematical ideas, vocabulary and methods effectively. • Analyze the mathematical thinking of others. • Compare the efficiency of a method to those expressed by others. • Recognize errors and suggest how to correctly solve the task. • Justify results by explaining methods and processes. • Construct possible arguments based on evidence. **Clarifications:** Teachers who encourage students to engage in discussions that reflect on the mathematical thinking of self and others: • Establish a culture in which students ask questions of the teacher and their peers, and error is an opportunity for learning. • Create opportunities for students to discuss their thinking with peers. • Select, sequence and present student work to advance and deepen understanding of correct and increasingly efficient methods. • Develop students' ability to justify methods and compare their responses to the responses of their peers.
	Use patterns and structure to help understand and connect mathematical concepts. Mathematicians who use patterns and structure to help understand and connect mathematical concepts: • Focus on relevant details within a problem. • Create plans and procedures to logically order events, steps or ideas to solve problems. • Decompose a complex problem into manageable parts. • Relate previously learned concepts to new concepts.

MA.K12.MTR.5.1:	• Look for similarities among problems. • Connect solutions of problems to more complicated large-scale situations. **Clarifications:** Teachers who encourage students to use patterns and structure to help understand and connect mathematical concepts: • Help students recognize the patterns in the world around them and connect these patterns to mathematical concepts. • Support students to develop generalizations based on the similarities found among problems. • Provide opportunities for students to create plans and procedures to solve problems. • Develop students' ability to construct relationships between their current understanding and more sophisticated ways of thinking.
MA.K12.MTR.6.1:	Assess the reasonableness of solutions. Mathematicians who assess the reasonableness of solutions: • Estimate to discover possible solutions. • Use benchmark quantities to determine if a solution makes sense. • Check calculations when solving problems. • Verify possible solutions by explaining the methods used. • Evaluate results based on the given context. **Clarifications:** Teachers who encourage students to assess the reasonableness of solutions: • Have students estimate or predict solutions prior to solving. • Prompt students to continually ask, "Does this solution make sense? How do you know?" • Reinforce that students check their work as they progress within and after a task. • Strengthen students' ability to verify solutions through justifications.
MA.K12.MTR.7.1:	Apply mathematics to real-world contexts. Mathematicians who apply mathematics to real-world contexts: • Connect mathematical concepts to everyday experiences. • Use models and methods to understand, represent and solve problems. • Perform investigations to gather data or determine if a method is appropriate. • Redesign models and methods to improve accuracy or efficiency. **Clarifications:** Teachers who encourage students to apply mathematics to real-world contexts: • Provide opportunities for students to create models, both concrete and abstract, and perform investigations. • Challenge students to question the accuracy of their models and methods. • Support students as they validate conclusions by comparing them to the given situation. • Indicate how various concepts can be applied to other disciplines.
ELA.K12.EE.1.1:	Cite evidence to explain and justify reasoning. **Clarifications:** K-1 Students include textual evidence in their oral communication with guidance and support from adults. The evidence can consist of details from the text without naming the text. During 1st grade, students learn how to incorporate the evidence in their writing. 2-3 Students include relevant textual evidence in their written and oral communication. Students should name the text when they refer to it. In 3rd grade, students should use a combination of direct and indirect citations. 4-5 Students continue with previous skills and reference comments made by speakers and peers. Students cite texts that they've directly quoted, paraphrased, or used for information. When writing, students will use the form of citation dictated by the instructor or the style guide referenced by the instructor. 6-8 Students continue with previous skills and use a style guide to create a proper citation. 9-12 Students continue with previous skills and should be aware of existing style guides and the ways in which they differ.
ELA.K12.EE.2.1:	Read and comprehend grade-level complex texts proficiently. **Clarifications:** See Text Complexity for grade-level complexity bands and a text complexity rubric.
ELA.K12.EE.3.1:	Make inferences to support comprehension. **Clarifications:** Students will make inferences before the words infer or inference are introduced. Kindergarten students will answer questions like "Why is the girl smiling?" or make predictions about what will happen based on the title page. Students will use the terms and apply them in 2nd grade and beyond.
ELA.K12.EE.4.1:	Use appropriate collaborative techniques and active listening skills when engaging in discussions in a variety of situations. **Clarifications:** In kindergarten, students learn to listen to one another respectfully. In grades 1-2, students build upon these skills by justifying what they are thinking. For example: "I think _____ because _____." The collaborative conversations are becoming academic conversations. In grades 3-12, students engage in academic conversations discussing claims and justifying their reasoning, refining and applying skills. Students build on ideas, propel the conversation, and support claims and counterclaims with evidence.
ELA.K12.EE.5.1:	Use the accepted rules governing a specific format to create quality work. **Clarifications:** Students will incorporate skills learned into work products to produce quality work. For students to incorporate these skills appropriately, they must receive instruction. A 3rd grade student creating a poster board display must have instruction in how to effectively present information to do quality work.
	Use appropriate voice and tone when speaking or writing.

ELA.K12.EE.6.1:	**Clarifications:** In kindergarten and 1st grade, students learn the difference between formal and informal language. For example, the way we talk to our friends differs from the way we speak to adults. In 2nd grade and beyond, students practice appropriate social and academic language to discuss texts.
ELD.K12.ELL.SI.1:	English language learners communicate for social and instructional purposes within the school setting.

General Course Information and Notes

VERSION DESCRIPTION

Major Concepts/Content: Advancement Via Individual Determination (AVID) is an academic elective course that prepares students for college readiness and success, and it is scheduled during the regular school day as a year-long course. Each week, students receive instruction that utilizes a rigorous college-preparatory curriculum provided by AVID Center, tutor-facilitated study groups, motivational activities, and academic success skills. In AVID, students participate in activities that incorporate strategies focused on writing, inquiry, collaboration, organization, and reading to support their academic growth. Additionally, students engage in activities centered around exploring college and career opportunities and their own agency.

Some students may have previous experience with AVID Elementary, and some students will be experiencing AVID for the first time. The 6th grade AVID elective course is an introduction to the AVID philosophy. Students will develop an awareness of the values accompanying academic goals and success. The course will focus on building students' self-confidence and communication skills in working with peers and adults. Students will be exposed to reading strategies that will assist them in building vocabulary and understanding a variety of texts and will also focus on pre-writing techniques, summary writing, and structural components of note-taking. Students will increase college and career awareness through guest-speaker presentations, field-trip opportunities, and research.

AVID curriculum books used:

AVID College and Careers

AVID Critical Thinking and Engagement

AVID Reading for Disciplinary Literacy

AVID Secondary Implementation Resource

AVID Tutorial Guide

AVID Writing for Disciplinary Literacy

Supplemental materials course include the following:

AVID Weekly®, *Supporting Math in the AVID Elective*, *Write Path* content-area books, focused note-taking resources, and my.avid.org Curriculum Book Webpages

STUDENT OUTCOMES

Student Agency (SA)

- Student Empowerment
- Leadership of Others

Rigorous Academic Preparedness (AP)

- Writing
- Inquiry
- Collaboration
- Organization
- Reading

Opportunity Knowledge (OK)

- Advancing College Preparedness
- Building Career Knowledge

STUDENT AGENCY (6.SA)

Student Empowerment

1. (a) Determine personal interest for extracurricular and community service activities within the school and community
   (b) Gain awareness of extracurricular and community service activities within the school and community
2. Evaluate the impact of decisions on others
3. Explore the importance of healthy, balanced lifestyles, including aspects such as good sleeping, eating, and exercise habits
4. Establish understanding of concepts and content-specific vocabulary related to personal finance
5. (a) Identify the characteristics of positive, health relationships
   (b) Explore individual peer relationships and identify those that are positive and healthy
6. Gain awareness of motivators that positively impact performance
7. Self-monitor to diagnose areas of need (e.g., academic, personal, social-emotional)
8. (a) Gain awareness of skills that increase mental flexibility
   (b) Explore the relationship between grit and perseverance
9. (a) Identify strategies and skills that promote self-awareness
   (b) Identify individual strengths and areas of challenge related to academic skills and performance
10. Determine key points from learning experiences

Leadership of Others

1. Identify traits connected to personal integrity and ethics
2. (a) Identify leadership opportunities and positions in the school and community

(b) Determine formal and informal leadership opportunities that could be pursued
3. (a) Select tools to analyze a conflict and identify a positive solution
(b) Classify passive, assertive, and aggressive statements

RIGOROUS ACADEMIC PREPAREDNESS (6.AP)

Writing

1. (a) Develop writing skills related to argumentative and narrative modes of writing
(b) Plan and structure writing based on the mode (descriptive, narrative, expository, argumentative)
(c) Draft initial writing
2. Analyze a writing task by identifying key vocabulary and audience
3. Gather and analyze feedback from peers and instructors
4. (a) Edit drafts for grammar, mechanics, and spelling
(b) Analyze the organizational structure of writing
5. Publish writing to a small group audience within the classroom, such as a formal written paper
6. (a) Take notes with an emphasis on identifying and recording the note-taking objective and /or Essential Question
(b) Take notes with an emphasis on setting up notes, including all required components
7. Summarize by pulling together the most important information related to the objective and/or Essential Question

Inquiry

1. Create questions based on Costa's Levels of Thinking
2. Identify misunderstood concepts or problems
3. Determine the steps/process that led to a solution
4. Reflect on learning to make connections between new learning and previous learning
5. Reflect on learning strategies that were employed and whether those strategies were effective
6. (a) Identify processes that are used
(b) Reflect on a process that was used and whether that process was effective
7. Analyze a research prompt
8. (a) Locate sources that are relevant to the topic and support the purpose of the research assignment
(b) Distinguish between primary and secondary sources
9. Plan and structure the writing based on the research prompt
10. Integrate quotations and references to texts, using proper citations
11. Publish research to a small group audience within the classroom, such as a formal written paper

Collaboration

1. Establish norms and expectations around shared responsibility among group members
2. Establish norms and expectations around appreciating diversity among group members
3. Develop a foundational familiarity and comfort with classmates
4. Identify respectful and disrespectful actions of self and others
5. Check group members' level of understanding
6. Utilize technology to collaborate with classmates
7. (a) Apply basic understanding of effective public speaking
(b) Incorporate visual aids and/or technology when appropriate
8. Describe the characteristics of effective listening, such as eye contact and mirroring
9. Monitor word choice when speaking
10. Identify formal and informal language registers

Organization

1. (a) Begin implementing organizational tools (e.g., binders/eBinders, portfolios, or digital folders) that support academic success
(b) Create an activity log or tracking system for community extracurricular activities and hours
2. (a) Explore a variety of organizational formats for calendaring/planning
(b) Determine how to use time effectively
(c) Assess complex assignments and break them into smaller tasks
3. Set personal, academic and career goals
4. Monitor progress toward goals
5. Utilize visual frameworks to organize information

Reading

1. Determine the characteristics of a high-quality text in relation to the reading purpose
2. (a) Preview text features
(b) Identify prior knowledge that may be relevant to the reading
3. Assess knowledge of academic and content-specific vocabulary words
4. (a) Mark the text to accomplish the reading purpose
(b) Identify the key components of a text related to the reading purpose
5. Extend beyond the text by applying key learning

OPPORTUNITY KNOWLEDGE (6.OK)

Advancing College Preparedness

1. Identify personal interests and skills related to future college aspirations, such as through an interest inventory
2. (a) Know how to determine a GPA

(b) Develop familiarity with college terminology
(c) Classify the various types of college

3. Understand scholarships and the role they play in financing college
4. Articulate the importance of long-term academic plans as a part of goal setting an achievement
5. (a) Identify what is meant by match schools, reach schools, and safety schools in order to determine the best academic fit during the selection process
   (b) Understand the different college entrance exams: PSAT, PreACT, SAT, ACT

Building Career Knowledge

1. Identify personal interests and skills related to future career aspirations
2. (a) Increase familiarity with career terminology
   (b) Distinguish between jobs, careers, and career fields
3. (a) Establish initial knowledge around the characteristics that contribute to academic, social, and financial fit
   (b) Explore the net cost of attending college to inform decisions and budget plans
4. Request assistance in selecting career elective courses and pathways that match interest and goals

GENERAL NOTES

Trained AVID Elective teachers may visit avid.org, and log into their MyAVID account using their AVID username and password; then follow my.avid.org/file_sharing/default.aspx?id=24544 to access the AVID Weeks at a Glance curriculum and resources for grades 6-12.

Career and Education Planning – Per section 1003.4156, Florida Statutes, the Career and Education Planning course must result in a completed, personalized academic and career plan for the student, that may be revised as the student progresses through middle and high school; must emphasize the importance of entrepreneurship and employability skills; and must include information from the Department of Economic Opportunity's economic security report as described in Section 445.07, Florida Statutes. The required, personalized academic and career plan must inform students of high school graduation requirements, including diploma designations (Section 1003.4285, Florida Statutes); requirements for a Florida Bright Futures Scholarship; state university and Florida College System institution admission requirements; and, available opportunities to earn college credit in high school utilizing acceleration mechanisms. For additional information on the Middle School Career and Education Planning courses, visit fldoe.org/academics/college-career-planning/educators-toolkit/index.stml.

Career and Education Planning Course Standards – Students will:

1.0 Describe the influences that societal, economic, and technological changes have on employment trends and future training.

2.0 Develop skills to locate, evaluate, and interpret career information.

3.0 Identify and demonstrate processes for making short and long term goals.

4.0 Demonstrate employability skills such as working in a group, problem-solving and organizational skills, and the importance of entrepreneurship.

5.0 Understand the relationship between educational achievement and career choices/postsecondary options.

6.0 Identify a career cluster and related pathways through an interest assessment that match career and education goals.

7.0 Develop a career and education plan that includes short and long-term goals, high school program of study, and postsecondary/career goals.

8.0 Demonstrate knowledge of technology and its application in career fields/clusters.

Florida's Benchmarks for Excellent Student Thinking (B.E.S.T.) Standards
This course includes Florida's B.E.S.T. ELA Expectations (EE) and Mathematical Thinking and Reasoning Standards (MTRs) for students. Florida educators should intentionally embed these standards within the content and their instruction as applicable. For guidance on the implementation of the EEs and MTRs, please visit cpalms.org/Standards/BEST_Standards.aspx and select the appropriate B.E.S.T. Standards package.

English Language Development ELD Standards Special Notes Section:
Teachers are required to provide listening, speaking, reading and writing instruction that allows English language learners (ELL) to communicate for social and instructional purposes within the school setting. For the given level of English language proficiency and with visual, graphic, or interactive support, students will interact with grade level words, expressions, sentences and discourse to process or produce language necessary for academic success. The ELD standard should specify a relevant content area concept or topic of study chosen by curriculum developers and teachers which maximizes an ELL's need for communication and social skills. To access an ELL supporting document which delineates performance definitions and descriptors, please click on the following link: cpalms.org/uploads/docs/standards/eld/SI.pdf

VERSION REQUIREMENTS

These requirements include, but are not limited to, the Florida Standards that are most relevant to this course. Standards correlated with a specific course requirement may also be addressed by other course requirements as appropriate. Some requirements in this course are not addressed in the Florida Standards. Other subject areas and content may be used to fulfill course requirements. This course includes an agreement related to minimum standards for behavior, attendance, and participation.

QUALIFICATIONS

As well as any certification requirements listed on the course description, the following qualifications may also be acceptable for the course:

Any field when certification reflects a bachelor or higher degree. Teachers must receive training from AVID Center to teach this course.

GENERAL INFORMATION

Course Number: 1700115

Course Path: Section: Grades PreK to 12 Education Courses > **Grade Group:** Grades 6 to 8 Education Courses > **Subject:** Research and Critical Thinking > **SubSubject:** General >

Abbreviated Title: M/J AVID 6TH & C/P

Course Length: Year (Y)

Course Type: Elective Course

Course Level: 2

Course Status: Draft - Course Pending Approval

Grade Level(s): 6

M/J AVID 7th (#1700120) 2022 - And Beyond

Course Standards

Name	Description
MA.K12.MTR.1.1:	Mathematicians who participate in effortful learning both individually and with others: • Analyze the problem in a way that makes sense given the task. • Ask questions that will help with solving the task. • Build perseverance by modifying methods as needed while solving a challenging task. • Stay engaged and maintain a positive mindset when working to solve tasks. • Help and support each other when attempting a new method or approach. **Clarifications:** Teachers who encourage students to participate actively in effortful learning both individually and with others: • Cultivate a community of growth mindset learners. • Foster perseverance in students by choosing tasks that are challenging. • Develop students' ability to analyze and problem solve. • Recognize students' effort when solving challenging problems.
MA.K12.MTR.2.1:	Demonstrate understanding by representing problems in multiple ways. Mathematicians who demonstrate understanding by representing problems in multiple ways: • Build understanding through modeling and using manipulatives. • Represent solutions to problems in multiple ways using objects, drawings, tables, graphs and equations. • Progress from modeling problems with objects and drawings to using algorithms and equations. • Express connections between concepts and representations. • Choose a representation based on the given context or purpose. **Clarifications:** Teachers who encourage students to demonstrate understanding by representing problems in multiple ways: • Help students make connections between concepts and representations. • Provide opportunities for students to use manipulatives when investigating concepts. • Guide students from concrete to pictorial to abstract representations as understanding progresses. • Show students that various representations can have different purposes and can be useful in different situations.
MA.K12.MTR.3.1:	Complete tasks with mathematical fluency. Mathematicians who complete tasks with mathematical fluency: • Select efficient and appropriate methods for solving problems within the given context. • Maintain flexibility and accuracy while performing procedures and mental calculations. • Complete tasks accurately and with confidence. • Adapt procedures to apply them to a new context. • Use feedback to improve efficiency when performing calculations. **Clarifications:** Teachers who encourage students to complete tasks with mathematical fluency: • Provide students with the flexibility to solve problems by selecting a procedure that allows them to solve efficiently and accurately. • Offer multiple opportunities for students to practice efficient and generalizable methods. • Provide opportunities for students to reflect on the method they used and determine if a more efficient method could have been used.
MA.K12.MTR.4.1:	Engage in discussions that reflect on the mathematical thinking of self and others. Mathematicians who engage in discussions that reflect on the mathematical thinking of self and others: • Communicate mathematical ideas, vocabulary and methods effectively. • Analyze the mathematical thinking of others. • Compare the efficiency of a method to those expressed by others. • Recognize errors and suggest how to correctly solve the task. • Justify results by explaining methods and processes. • Construct possible arguments based on evidence. **Clarifications:** Teachers who encourage students to engage in discussions that reflect on the mathematical thinking of self and others: • Establish a culture in which students ask questions of the teacher and their peers, and error is an opportunity for learning. • Create opportunities for students to discuss their thinking with peers. • Select, sequence and present student work to advance and deepen understanding of correct and increasingly efficient methods. • Develop students' ability to justify methods and compare their responses to the responses of their peers.
	Use patterns and structure to help understand and connect mathematical concepts. Mathematicians who use patterns and structure to help understand and connect mathematical concepts: • Focus on relevant details within a problem. • Create plans and procedures to logically order events, steps or ideas to solve problems. • Decompose a complex problem into manageable parts. • Relate previously learned concepts to new concepts.

MA.K12.MTR.5.1:	• Look for similarities among problems. • Connect solutions of problems to more complicated large-scale situations. **Clarifications:** Teachers who encourage students to use patterns and structure to help understand and connect mathematical concepts: • Help students recognize the patterns in the world around them and connect these patterns to mathematical concepts. • Support students to develop generalizations based on the similarities found among problems. • Provide opportunities for students to create plans and procedures to solve problems. • Develop students' ability to construct relationships between their current understanding and more sophisticated ways of thinking.
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ELA.K12.EE.2.1:	Read and comprehend grade-level complex texts proficiently. **Clarifications:** See Text Complexity for grade-level complexity bands and a text complexity rubric.
ELA.K12.EE.3.1:	Make inferences to support comprehension. **Clarifications:** Students will make inferences before the words infer or inference are introduced. Kindergarten students will answer questions like "Why is the girl smiling?" or make predictions about what will happen based on the title page. Students will use the terms and apply them in 2nd grade and beyond.
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ELA.K12.EE.5.1:	Use the accepted rules governing a specific format to create quality work. **Clarifications:** Students will incorporate skills learned into work products to produce quality work. For students to incorporate these skills appropriately, they must receive instruction. A 3rd grade student creating a poster board display must have instruction in how to effectively present information to do quality work.
	Use appropriate voice and tone when speaking or writing.

ELA.K12.EE.6.1:	**Clarifications:** In kindergarten and 1st grade, students learn the difference between formal and informal language. For example, the way we talk to our friends differs from the way we speak to adults. In 2nd grade and beyond, students practice appropriate social and academic language to discuss texts.
ELD.K12.ELL.SI.1:	English language learners communicate for social and instructional purposes within the school setting.

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VERSION DESCRIPTION

Major Concepts/Content: Advancement Via Individual Determination (AVID) is an academic elective course that prepares students for college readiness and success, and it is scheduled during the regular school day as a year-long course. Each week, students receive instruction that utilizes a rigorous college-preparatory curriculum provided by AVID Center, tutor-facilitated study groups, motivational activities, and academic success skills. In AVID, students participate in activities that incorporate strategies focused on writing, inquiry, collaboration, organization, and reading to support their academic growth. Additionally, students engage in activities centered around exploring college and career opportunities and their own agency.

The 7th grade AVID elective course builds upon the foundational components of the AVID philosophy. Students will refine short- and long-term goals and, as a result, being to understand the value in taking charge of their actions. They will start working on intrapersonal and interpersonal skills as well as formal and informal speech. Students will complete self-evaluations and peer evaluations related to reading, writing, organization, and speaking. In broadening their writing practice, students will begin considering audience, purpose, and form in their writing. Students will take an active role in their learning, understanding the roles of all members in assignments and collaborative lessons. They will expand their knowledge base regarding note-taking in relation to studying and test preparation. Students will be exposed to various field trips, guest speakers, and research to increase their knowledge of college and career options.

AVID curriculum books used:

AVID College and Careers

AVID Critical Thinking and Engagement

AVID Reading for Disciplinary Literacy

AVID Secondary Implementation Resource

AVID Tutorial Guide

AVID Writing for Disciplinary Literacy

Supplemental materials course include the following:

AVID Weekly®, *Supporting Math in the AVID Elective*, *Write Path* content-area books, focused note-taking resources, and my.avid.org Curriculum Book Webpages

STUDENT OUTCOMES

Student Agency (SA)

- Student Empowerment
- Leadership of Others

Rigorous Academic Preparedness (AP)

- Writing
- Inquiry
- Collaboration
- Organization
- Reading

Opportunity Knowledge (OK)

- Advancing College Preparedness
- Building Career Knowledge

STUDENT AGENCY (7.SA)

Student Empowerment

1. Explore and experience extracurricular and community service activities within the school and community
2. Evaluate the impact of decisions on the environment
3. (a) Identify activities that assist with self-care and healthy habits
   (b) Identify areas that need attention and develop goals to address those areas
4. Increase awareness and apply basic concepts of budgeting, spending, and making responsible financial decisions
5. Develop a support network that includes peers and adults for academic and future success
6. Explore how individual motivators and self-monitoring of motivation impact academic performance
7. Seek help related to areas of need
8. Determine personal levels of grit and perseverance in relation to growth mindset
9. Establish self-awareness strategies and skills, including SLANT (Sit with proper posture, Lean forward and listen, Ask pertinent questions, Nod your head "yes" or "no," Talk with your teachers)
10. Make connections between key learning points and new contexts

Leadership of Others

1. Identify traits connected to responsibility, integrity, and ethical interactions with others
2. Pursue leadership opportunities across the school
3. (a) Identify personal conflict-management style

(b) Transform passive and aggressive statements into constructive, assertive statements

RIGOROUS ACADEMIC PREPAREDNESS (7.AP)

Writing

1. (a) Develop writing skills related to descriptive and expository modes of writing
   (b) Generate multiple ideas that support, explain, or enhance the writing topic or theme
   (c) Compose first drafts using ideas and information gathered during pre-writing
2. Analyze a writing task to determine the purpose, format/style, and audience
3. Write multiple drafts with increasing depth based on feedback and observations
4. Analyze and edit sentence structure to create interest and complexity
5. Publish writing to entire class, such as an oral presentation
6. (a) Take notes with an emphasis on recording main ideas and important information
   (b) Take notes with an emphasis on condensing information by using abbreviations/symbols/paraphrasing
7. Summarize by pulling together the most important information and personal connections related to the objective and/or Essential Question

Inquiry

1. Develop inquiry skills through focused observation and analysis
2. Identify the specific point of confusion related to a misunderstood concept or problem
3. Determine whether similar problems could be solved using the same steps/process
4. Reflect on learning to make connections between new learning and previous experiences
5. Reflect on learning strategies that were employed, whether those strategies were effective, and how methods could be adjusted in the future
6. Reflect on a process that was used, whether that process was effective, and how methods could be adjusted in the future
7. Brainstorm ideas for research topics to address a research prompt
8. Determine the relevance, validity, and reliability of information found in sources
9. Organize information, sources, and data that support the research prompt
10. Integrate quotations to support claims, citing locations and references to texts
11. Publish research to entire class, such as an oral presentation

Collaboration

1. Hold self and peers accountable for following group norms about shared responsibility
2. Summarize points of agreement and disagreement from varying perspectives
3. Deepen relational capacity with classmates through effective conflict management
4. Establish norms and expectations around respectful interactions among group members
5. Ask clarifying questions to group members to facilitate understanding
6. Utilize technology to collaborate with classmates and community members
7. (a) Distinguish between effective and ineffective language during interactions
   (b) Refine usage of nonverbal communication when speaking, including body language and eye contact
8. Demonstrate active listening skills during academic conversations
9. Utilize academic vocabulary when communicating
10. Speak effectively before small groups of peers

Organization

1. (a) Refine usage of organizational tools (e.g., binders/eBinders, portfolios, or digital folders) and systems that support academic success
   (b) Maintain an activity log or tracking system for community extracurricular activities and hours
2. (a) Utilize an organizational tool to record obligations and constraints on time
   (b) Demonstrate the process of backward mapping
3. Identify the steps necessary to accomplish goals
4. Identify reasons for why progress is or isn't being made toward accomplishing goals
5. Apply visual frameworks to organize language and comprehend key concepts

Reading

1. Assess whether a text is appropriate according to the reading purpose
2. (a) Make predictions about the text using text features
   (b) Assess relevant prior knowledge and identify gaps
3. Utilize tools to deepen understanding of vocabulary
4. Mark the text to accomplish the reading purpose through the lens of a content expert
   (b) Identify the key components of a text related to the reading purpose
5. Extend beyond the text by evaluating and synthesizing key learning

OPPORTUNITY KNOWLEDGE (7.OK)

Advancing College Preparedness

1. Define key personal attributes for academic, social, and financial fit related to college selection
2. (a) Explore the significance of GPA at different stages of the academic journey
   (b) Explore college options and terminology
3. Evaluate personal level of readiness for scholarship eligibility
4. (a) Reflect on how academic plans and course completion support progress toward desired major
   (b) Determine which courses or opportunities align with college goals and plans
   (c) Explore campus-, district-, or community-based opportunities to earn college credit in high school (dual credit, online learning, etc.)
5. (a) Explore match schools, reach schools, and safety schools in order to determine the best academic fit during the selection process

(b) Prepare for college entrance exams

Building Career Knowledge

1. Define key personal attributes for academic, social, and financial fit related to career selection
2. Explore career fields and career pathways, including what resources and opportunities are available locally
3. Investigate best-fit career fields based on academic, social, and financial fit
4. Reflect on how academic plans and course completion support progress toward desired career field

GENERAL NOTES

Special Note: Skills acquired in this course will be implemented by the student across the curriculum. M/J Advancement Via Individual Determination 7 (M/J AVID 7) is a rigorous course offered by AVID Center, and content must be provided as specified by AVID Center. Students who are successful in this course will be on the appropriate pathway to success in M/J AVID 8. Teachers must receive training from AVID Center to teach this course.

Trained AVID Elective teachers may visit avid.org, and log into their MyAVID account using their AVID username and password; then follow my.avid.org/file_sharing/default.aspx?id=24544 to access the AVID Weeks at a Glance curriculum and resources for grades 6-12.

Florida's Benchmarks for Excellent Student Thinking (B.E.S.T.) Standards
This course includes Florida's B.E.S.T. ELA Expectations (EE) and Mathematical Thinking and Reasoning Standards (MTRs) for students. Florida educators should intentionally embed these standards within the content and their instruction as applicable. For guidance on the implementation of the EEs and MTRs, please visit cpalms.org/Standards/BEST_Standards.aspx and select the appropriate B.E.S.T. Standards package.

English Language Development ELD Standards Special Notes Section:
Teachers are required to provide listening, speaking, reading and writing instruction that allows English language learners (ELL) to communicate for social and instructional purposes within the school setting. For the given level of English language proficiency and with visual, graphic, or interactive support, students will interact with grade level words, expressions, sentences and discourse to process or produce language necessary for academic success. The ELD standard should specify a relevant content area concept or topic of study chosen by curriculum developers and teachers which maximizes an ELL's need for communication and social skills. To access an ELL supporting document which delineates performance definitions and descriptors, please click on the following link: cpalms.org/uploads/docs/standards/eld/SI.pdf

VERSION REQUIREMENTS

These requirements include, but are not limited to, the Florida Standards that are most relevant to this course. Standards correlated with a specific course requirement may also be addressed by other course requirements as appropriate. Some requirements in this course are not addressed in the Florida Standards. Other subject areas and content may be used to fulfill course requirements. This course includes an agreement related to minimum standards for behavior, attendance, and participation.

QUALIFICATIONS

As well as any certification requirements listed on the course description, the following qualifications may also be acceptable for the course:

Any field when certification reflects a bachelor or higher degree.

GENERAL INFORMATION

Course Number: 1700120

Course Path: Section: Grades PreK to 12 Education Courses > **Grade Group:** Grades 6 to 8 Education Courses > **Subject:** Research and Critical Thinking > **SubSubject:** General >
Abbreviated Title: M/J AVID 7TH
Course Length: Year (Y)

Course Type: Elective Course
Course Status: Draft - Course Pending Approval
Grade Level(s): 7

Course Level: 2

M/J AVID 7th & Career Planning (#1700125) 2022 - And Beyond

Course Standards

Name	Description
MA.K12.MTR.1.1:	Mathematicians who participate in effortful learning both individually and with others: • Analyze the problem in a way that makes sense given the task. • Ask questions that will help with solving the task. • Build perseverance by modifying methods as needed while solving a challenging task. • Stay engaged and maintain a positive mindset when working to solve tasks. • Help and support each other when attempting a new method or approach. **Clarifications:** Teachers who encourage students to participate actively in effortful learning both individually and with others: • Cultivate a community of growth mindset learners. • Foster perseverance in students by choosing tasks that are challenging. • Develop students' ability to analyze and problem solve. • Recognize students' effort when solving challenging problems.
MA.K12.MTR.2.1:	Demonstrate understanding by representing problems in multiple ways. Mathematicians who demonstrate understanding by representing problems in multiple ways: • Build understanding through modeling and using manipulatives. • Represent solutions to problems in multiple ways using objects, drawings, tables, graphs and equations. • Progress from modeling problems with objects and drawings to using algorithms and equations. • Express connections between concepts and representations. • Choose a representation based on the given context or purpose. **Clarifications:** Teachers who encourage students to demonstrate understanding by representing problems in multiple ways: • Help students make connections between concepts and representations. • Provide opportunities for students to use manipulatives when investigating concepts. • Guide students from concrete to pictorial to abstract representations as understanding progresses. • Show students that various representations can have different purposes and can be useful in different situations.
MA.K12.MTR.3.1:	Complete tasks with mathematical fluency. Mathematicians who complete tasks with mathematical fluency: • Select efficient and appropriate methods for solving problems within the given context. • Maintain flexibility and accuracy while performing procedures and mental calculations. • Complete tasks accurately and with confidence. • Adapt procedures to apply them to a new context. • Use feedback to improve efficiency when performing calculations. **Clarifications:** Teachers who encourage students to complete tasks with mathematical fluency: • Provide students with the flexibility to solve problems by selecting a procedure that allows them to solve efficiently and accurately. • Offer multiple opportunities for students to practice efficient and generalizable methods. • Provide opportunities for students to reflect on the method they used and determine if a more efficient method could have been used.
MA.K12.MTR.4.1:	Engage in discussions that reflect on the mathematical thinking of self and others. Mathematicians who engage in discussions that reflect on the mathematical thinking of self and others: • Communicate mathematical ideas, vocabulary and methods effectively. • Analyze the mathematical thinking of others. • Compare the efficiency of a method to those expressed by others. • Recognize errors and suggest how to correctly solve the task. • Justify results by explaining methods and processes. • Construct possible arguments based on evidence. **Clarifications:** Teachers who encourage students to engage in discussions that reflect on the mathematical thinking of self and others: • Establish a culture in which students ask questions of the teacher and their peers, and error is an opportunity for learning. • Create opportunities for students to discuss their thinking with peers. • Select, sequence and present student work to advance and deepen understanding of correct and increasingly efficient methods. • Develop students' ability to justify methods and compare their responses to the responses of their peers.
	Use patterns and structure to help understand and connect mathematical concepts. Mathematicians who use patterns and structure to help understand and connect mathematical concepts: • Focus on relevant details within a problem. • Create plans and procedures to logically order events, steps or ideas to solve problems. • Decompose a complex problem into manageable parts.

MA.K12.MTR.5.1:	• Relate previously learned concepts to new concepts. • Look for similarities among problems. • Connect solutions of problems to more complicated large-scale situations. **Clarifications:** Teachers who encourage students to use patterns and structure to help understand and connect mathematical concepts: • Help students recognize the patterns in the world around them and connect these patterns to mathematical concepts. • Support students to develop generalizations based on the similarities found among problems. • Provide opportunities for students to create plans and procedures to solve problems. • Develop students' ability to construct relationships between their current understanding and more sophisticated ways of thinking.
MA.K12.MTR.6.1:	Assess the reasonableness of solutions. Mathematicians who assess the reasonableness of solutions: • Estimate to discover possible solutions. • Use benchmark quantities to determine if a solution makes sense. • Check calculations when solving problems. • Verify possible solutions by explaining the methods used. • Evaluate results based on the given context. **Clarifications:** Teachers who encourage students to assess the reasonableness of solutions: • Have students estimate or predict solutions prior to solving. • Prompt students to continually ask, "Does this solution make sense? How do you know?" • Reinforce that students check their work as they progress within and after a task. • Strengthen students' ability to verify solutions through justifications.
MA.K12.MTR.7.1:	Apply mathematics to real-world contexts. Mathematicians who apply mathematics to real-world contexts: • Connect mathematical concepts to everyday experiences. • Use models and methods to understand, represent and solve problems. • Perform investigations to gather data or determine if a method is appropriate. • Redesign models and methods to improve accuracy or efficiency. **Clarifications:** Teachers who encourage students to apply mathematics to real-world contexts: • Provide opportunities for students to create models, both concrete and abstract, and perform investigations. • Challenge students to question the accuracy of their models and methods. • Support students as they validate conclusions by comparing them to the given situation. • Indicate how various concepts can be applied to other disciplines.
ELA.K12.EE.1.1:	Cite evidence to explain and justify reasoning. **Clarifications:** K-1 Students include textual evidence in their oral communication with guidance and support from adults. The evidence can consist of details from the text without naming the text. During 1st grade, students learn how to incorporate the evidence in their writing. 2-3 Students include relevant textual evidence in their written and oral communication. Students should name the text when they refer to it. In 3rd grade, students should use a combination of direct and indirect citations. 4-5 Students continue with previous skills and reference comments made by speakers and peers. Students cite texts that they've directly quoted, paraphrased, or used for information. When writing, students will use the form of citation dictated by the instructor or the style guide referenced by the instructor. 6-8 Students continue with previous skills and use a style guide to create a proper citation. 9-12 Students continue with previous skills and should be aware of existing style guides and the ways in which they differ.
ELA.K12.EE.2.1:	Read and comprehend grade-level complex texts proficiently. **Clarifications:** See Text Complexity for grade-level complexity bands and a text complexity rubric.
ELA.K12.EE.3.1:	Make inferences to support comprehension. **Clarifications:** Students will make inferences before the words infer or inference are introduced. Kindergarten students will answer questions like "Why is the girl smiling?" or make predictions about what will happen based on the title page. Students will use the terms and apply them in 2nd grade and beyond.
ELA.K12.EE.4.1:	Use appropriate collaborative techniques and active listening skills when engaging in discussions in a variety of situations. **Clarifications:** In kindergarten, students learn to listen to one another respectfully. In grades 1-2, students build upon these skills by justifying what they are thinking. For example: "I think _____ because _____." The collaborative conversations are becoming academic conversations. In grades 3-12, students engage in academic conversations discussing claims and justifying their reasoning, refining and applying skills. Students build on ideas, propel the conversation, and support claims and counterclaims with evidence.
ELA.K12.EE.5.1:	Use the accepted rules governing a specific format to create quality work. **Clarifications:** Students will incorporate skills learned into work products to produce quality work. For students to incorporate these skills appropriately, they must receive instruction. A 3rd grade student creating a poster board display must have instruction in how to effectively present information to do quality work.

	Use appropriate voice and tone when speaking or writing.
ELA.K12.EE.6.1:	**Clarifications:** In kindergarten and 1st grade, students learn the difference between formal and informal language. For example, the way we talk to our friends differs from the way we speak to adults. In 2nd grade and beyond, students practice appropriate social and academic language to discuss texts.
ELD.K12.ELL.SI.1:	English language learners communicate for social and instructional purposes within the school setting.

General Course Information and Notes

VERSION DESCRIPTION

Major Concepts/Content: Advancement Via Individual Determination (AVID) is an academic elective course that prepares students for college readiness and success, and it is scheduled during the regular school day as a year-long course. Each week, students receive instruction that utilizes a rigorous college-preparatory curriculum provided by AVID Center, tutor-facilitated study groups, motivational activities, and academic success skills. In AVID, students participate in activities that incorporate strategies focused on writing, inquiry, collaboration, organization, and reading to support their academic growth. Additionally, students engage in activities centered around exploring college and career opportunities and their own agency.

The 7th grade AVID elective course builds upon the foundational components of the AVID philosophy. Students will refine short- and long-term goals and, as a result, being to understand the value in taking charge of their actions. They will start working on intrapersonal and interpersonal skills as well as formal and informal speech. Students will complete self-evaluations and peer evaluations related to reading, writing, organization, and speaking. In broadening their writing practice, students will begin considering audience, purpose, and form in their writing. Students will take an active role in their learning, understanding the roles of all members in assignments and collaborative lessons. They will expand their knowledge base regarding note-taking in relation to studying and test preparation. Students will be exposed to various field trips, guest speakers, and research to increase their knowledge of college and career options.

AVID curriculum books used:

AVID College and Careers

AVID Critical Thinking and Engagement

AVID Reading for Disciplinary Literacy

AVID Secondary Implementation Resource

AVID Tutorial Guide

AVID Writing for Disciplinary Literacy

Supplemental materials course include the following:

AVID Weekly®, *Supporting Math in the AVID Elective*, *Write Path* content-area books, focused note-taking resources, and my.avid.org Curriculum Book Webpages

STUDENT OUTCOMES

Student Agency (SA)

- Student Empowerment
- Leadership of Others

Rigorous Academic Preparedness (AP)

- Writing
- Inquiry
- Collaboration
- Organization
- Reading

Opportunity Knowledge (OK)

- Advancing College Preparedness
- Building Career Knowledge

STUDENT AGENCY (7.SA)

Student Empowerment

1. Explore and experience extracurricular and community service activities within the school and community
2. Evaluate the impact of decisions on the environment
3. (a) Identify activities that assist with self-care and healthy habits
   (b) Identify areas that need attention and develop goals to address those areas
4. Increase awareness and apply basic concepts of budgeting, spending, and making responsible financial decisions
5. Develop a support network that includes peers and adults for academic and future success
6. Explore how individual motivators and self-monitoring of motivation impact academic performance
7. Seek help related to areas of need
8. Determine personal levels of grit and perseverance in relation to growth mindset
9. Establish self-awareness strategies and skills, including SLANT (Sit with proper posture, Lean forward and listen, Ask pertinent questions, Nod your head "yes" or "no," Talk with your teachers)
10. Make connections between key learning points and new contexts

Leadership of Others

1. Identify traits connected to responsibility, integrity, and ethical interactions with others
2. Pursue leadership opportunities across the school

3. (a) Identify personal conflict-management style
   (b) Transform passive and aggressive statements into constructive, assertive statements

RIGOROUS ACADEMIC PREPAREDNESS (7.AP)

Writing

1. (a) Develop writing skills related to descriptive and expository modes of writing
   (b) Generate multiple ideas that support, explain, or enhance the writing topic or theme
   (c) Compose first drafts using ideas and information gathered during pre-writing
2. Analyze a writing task to determine the purpose, format/style, and audience
3. Write multiple drafts with increasing depth based on feedback and observations
4. Analyze and edit sentence structure to create interest and complexity
5. Publish writing to entire class, such as an oral presentation
6. (a) Take notes with an emphasis on recording main ideas and important information
   (b) Take notes with an emphasis on condensing information by using abbreviations/symbols/paraphrasing
7. Summarize by pulling together the most important information and personal connections related to the objective and/or Essential Question

Inquiry

1. Develop inquiry skills through focused observation and analysis
2. Identify the specific point of confusion related to a misunderstood concept or problem
3. Determine whether similar problems could be solved using the same steps/process
4. Reflect on learning to make connections between new learning and previous experiences
5. Reflect on learning strategies that were employed, whether those strategies were effective, and how methods could be adjusted in the future
6. Reflect on a process that was used, whether that process was effective, and how methods could be adjusted in the future
7. Brainstorm ideas for research topics to address a research prompt
8. Determine the relevance, validity, and reliability of information found in sources
9. Organize information, sources, and data that support the research prompt
10. Integrate quotations to support claims, citing locations and references to texts
11. Publish research to entire class, such as an oral presentation

Collaboration

1. Hold self and peers accountable for following group norms about shared responsibility
2. Summarize points of agreement and disagreement from varying perspectives
3. Deepen relational capacity with classmates through effective conflict management
4. Establish norms and expectations around respectful interactions among group members
5. Ask clarifying questions to group members to facilitate understanding
6. Utilize technology to collaborate with classmates and community members
7. (a) Distinguish between effective and ineffective language during interactions
   (b) Refine usage of nonverbal communication when speaking, including body language and eye contact
8. Demonstrate active listening skills during academic conversations
9. Utilize academic vocabulary when communicating
10. Speak effectively before small groups of peers

Organization

1. (a) Refine usage of organizational tools (e.g., binders/eBinders, portfolios, or digital folders) and systems that support academic success
   (b) Maintain an activity log or tracking system for community extracurricular activities and hours
2. (a) Utilize an organizational tool to record obligations and constraints on time
   (b) Demonstrate the process of backward mapping
3. Identify the steps necessary to accomplish goals
4. Identify reasons for why progress is or isn't being made toward accomplishing goals
5. Apply visual frameworks to organize language and comprehend key concepts

Reading

1. Assess whether a text is appropriate according to the reading purpose
2. (a) Make predictions about the text using text features
   (b) Assess relevant prior knowledge and identify gaps
3. Utilize tools to deepen understanding of vocabulary
4. Mark the text to accomplish the reading purpose through the lens of a content expert
   (b) Identify the key components of a text related to the reading purpose
5. Extend beyond the text by evaluating and synthesizing key learning

OPPORTUNITY KNOWLEDGE (7.OK)

Advancing College Preparedness

1. Define key personal attributes for academic, social, and financial fit related to college selection
2. (a) Explore the significance of GPA at different stages of the academic journey
   (b) Explore college options and terminology
3. Evaluate personal level of readiness for scholarship eligibility
4. (a) Reflect on how academic plans and course completion support progress toward desired major
   (b) Determine which courses or opportunities align with college goals and plans
   (c) Explore campus-, district-, or community-based opportunities to earn college credit in high school (dual credit, online learning, etc.)

5. (a) Explore match schools, reach schools, and safety schools in order to determine the best academic fit during the selection process
   (b) Prepare for college entrance exams

Building Career Knowledge

1. Define key personal attributes for academic, social, and financial fit related to career selection
2. Explore career fields and career pathways, including what resources and opportunities are available locally
3. Investigate best-fit career fields based on academic, social, and financial fit
4. Reflect on how academic plans and course completion support progress toward desired career field

GENERAL NOTES

Special Note: Skills acquired in this course will be implemented by the student across the curriculum. M/J Advancement Via Individual Determination 7 (M/J AVID 7) is a rigorous course offered by AVID Center, and content must be provided as specified by AVID Center. Students who are successful in this course will be on the appropriate pathway to success in M/J AVID 8. Teachers must receive training from AVID Center to teach this course.

Trained AVID Elective teachers may visit avid.org, and log into their MyAVID account using their AVID username and password; then follow my.avid.org/file_sharing/default.aspx?id=24544 to access the AVID Weeks at a Glance curriculum and resources for grades 6-12.

Career and Education Planning – Per section 1003.4156, Florida Statutes, the Career and Education Planning course must result in a completed, personalized academic and career plan for the student, that may be revised as the student progresses through middle and high school; must emphasize the importance of entrepreneurship and employability skills; and must include information from the Department of Economic Opportunity's economic security report as described in Section 445.07, Florida Statutes. The required, personalized academic and career plan must inform students of high school graduation requirements, including diploma designations (Section 1003.4285, Florida Statutes); requirements for a Florida Bright Futures Scholarship; state university and Florida College System institution admission requirements; and, available opportunities to earn college credit in high school utilizing acceleration mechanisms. For additional information on the Middle School Career and Education Planning courses, visit fldoe.org/academics/college-career-planning/educators-toolkit/index.stml.

Career and Education Planning Course Standards – Students will:

1.0 Describe the influences that societal, economic, and technological changes have on employment trends and future training.

2.0 Develop skills to locate, evaluate, and interpret career information.

3.0 Identify and demonstrate processes for making short and long term goals.

4.0 Demonstrate employability skills such as working in a group, problem-solving and organizational skills, and the importance of entrepreneurship.

5.0 Understand the relationship between educational achievement and career choices/postsecondary options.

6.0 Identify a career cluster and related pathways through an interest assessment that match career and education goals.

7.0 Develop a career and education plan that includes short and long-term goals, high school program of study, and postsecondary/career goals.

8.0 Demonstrate knowledge of technology and its application in career fields/clusters.

Florida's Benchmarks for Excellent Student Thinking (B.E.S.T.) Standards
This course includes Florida's B.E.S.T. ELA Expectations (EE) and Mathematical Thinking and Reasoning Standards (MTRs) for students. Florida educators should intentionally embed these standards within the content and their instruction as applicable. For guidance on the implementation of the EEs and MTRs, please visit cpalms.org/Standards/BEST_Standards.aspx and select the appropriate B.E.S.T. Standards package.

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VERSION REQUIREMENTS

These requirements include, but are not limited to, the Florida Standards that are most relevant to this course. Standards correlated with a specific course requirement may also be addressed by other course requirements as appropriate. Some requirements in this course are not addressed in the Florida Standards. Other subject areas and content may be used to fulfill course requirements. This course includes an agreement related to minimum standards for behavior, attendance, and participation.

QUALIFICATIONS

As well as any certification requirements listed on the course description, the following qualifications may also be acceptable for the course:

Any field when certification reflects a bachelor or higher degree.

GENERAL INFORMATION

Course Path: Section: Grades PreK to 12 Education

Course Number: 1700125

Courses > **Grade Group:** Grades 6 to 8 Education Courses > **Subject:** Research and Critical Thinking > **SubSubject:** General >

Abbreviated Title: M/J AVID 7TH & C/P

Course Length: Year (Y)

Course Type: Elective Course

Course Level: 2

Course Status: Draft - Course Pending Approval

Grade Level(s): 7

M/J AVID 8th (#1700130) 2022 - And Beyond

Course Standards

Name	Description
MA.K12.MTR.1.1:	Mathematicians who participate in effortful learning both individually and with others: • Analyze the problem in a way that makes sense given the task. • Ask questions that will help with solving the task. • Build perseverance by modifying methods as needed while solving a challenging task. • Stay engaged and maintain a positive mindset when working to solve tasks. • Help and support each other when attempting a new method or approach. **Clarifications:** Teachers who encourage students to participate actively in effortful learning both individually and with others: • Cultivate a community of growth mindset learners. • Foster perseverance in students by choosing tasks that are challenging. • Develop students' ability to analyze and problem solve. • Recognize students' effort when solving challenging problems.
MA.K12.MTR.2.1:	Demonstrate understanding by representing problems in multiple ways. Mathematicians who demonstrate understanding by representing problems in multiple ways: • Build understanding through modeling and using manipulatives. • Represent solutions to problems in multiple ways using objects, drawings, tables, graphs and equations. • Progress from modeling problems with objects and drawings to using algorithms and equations. • Express connections between concepts and representations. • Choose a representation based on the given context or purpose. **Clarifications:** Teachers who encourage students to demonstrate understanding by representing problems in multiple ways: • Help students make connections between concepts and representations. • Provide opportunities for students to use manipulatives when investigating concepts. • Guide students from concrete to pictorial to abstract representations as understanding progresses. • Show students that various representations can have different purposes and can be useful in different situations.
MA.K12.MTR.3.1:	Complete tasks with mathematical fluency. Mathematicians who complete tasks with mathematical fluency: • Select efficient and appropriate methods for solving problems within the given context. • Maintain flexibility and accuracy while performing procedures and mental calculations. • Complete tasks accurately and with confidence. • Adapt procedures to apply them to a new context. • Use feedback to improve efficiency when performing calculations. **Clarifications:** Teachers who encourage students to complete tasks with mathematical fluency: • Provide students with the flexibility to solve problems by selecting a procedure that allows them to solve efficiently and accurately. • Offer multiple opportunities for students to practice efficient and generalizable methods. • Provide opportunities for students to reflect on the method they used and determine if a more efficient method could have been used.
MA.K12.MTR.4.1:	Engage in discussions that reflect on the mathematical thinking of self and others. Mathematicians who engage in discussions that reflect on the mathematical thinking of self and others: • Communicate mathematical ideas, vocabulary and methods effectively. • Analyze the mathematical thinking of others. • Compare the efficiency of a method to those expressed by others. • Recognize errors and suggest how to correctly solve the task. • Justify results by explaining methods and processes. • Construct possible arguments based on evidence. **Clarifications:** Teachers who encourage students to engage in discussions that reflect on the mathematical thinking of self and others: • Establish a culture in which students ask questions of the teacher and their peers, and error is an opportunity for learning. • Create opportunities for students to discuss their thinking with peers. • Select, sequence and present student work to advance and deepen understanding of correct and increasingly efficient methods. • Develop students' ability to justify methods and compare their responses to the responses of their peers.
	Use patterns and structure to help understand and connect mathematical concepts. Mathematicians who use patterns and structure to help understand and connect mathematical concepts: • Focus on relevant details within a problem. • Create plans and procedures to logically order events, steps or ideas to solve problems. • Decompose a complex problem into manageable parts.

MA.K12.MTR.5.1:	• Relate previously learned concepts to new concepts. • Look for similarities among problems. • Connect solutions of problems to more complicated large-scale situations. **Clarifications:** Teachers who encourage students to use patterns and structure to help understand and connect mathematical concepts: • Help students recognize the patterns in the world around them and connect these patterns to mathematical concepts. • Support students to develop generalizations based on the similarities found among problems. • Provide opportunities for students to create plans and procedures to solve problems. • Develop students' ability to construct relationships between their current understanding and more sophisticated ways of thinking.
MA.K12.MTR.6.1:	Assess the reasonableness of solutions. Mathematicians who assess the reasonableness of solutions: • Estimate to discover possible solutions. • Use benchmark quantities to determine if a solution makes sense. • Check calculations when solving problems. • Verify possible solutions by explaining the methods used. • Evaluate results based on the given context. **Clarifications:** Teachers who encourage students to assess the reasonableness of solutions: • Have students estimate or predict solutions prior to solving. • Prompt students to continually ask, "Does this solution make sense? How do you know?" • Reinforce that students check their work as they progress within and after a task. • Strengthen students' ability to verify solutions through justifications.
MA.K12.MTR.7.1:	Apply mathematics to real-world contexts. Mathematicians who apply mathematics to real-world contexts: • Connect mathematical concepts to everyday experiences. • Use models and methods to understand, represent and solve problems. • Perform investigations to gather data or determine if a method is appropriate. • Redesign models and methods to improve accuracy or efficiency. **Clarifications:** Teachers who encourage students to apply mathematics to real-world contexts: • Provide opportunities for students to create models, both concrete and abstract, and perform investigations. • Challenge students to question the accuracy of their models and methods. • Support students as they validate conclusions by comparing them to the given situation. • Indicate how various concepts can be applied to other disciplines.
ELA.K12.EE.1.1:	Cite evidence to explain and justify reasoning. **Clarifications:** K-1 Students include textual evidence in their oral communication with guidance and support from adults. The evidence can consist of details from the text without naming the text. During 1st grade, students learn how to incorporate the evidence in their writing. 2-3 Students include relevant textual evidence in their written and oral communication. Students should name the text when they refer to it. In 3rd grade, students should use a combination of direct and indirect citations. 4-5 Students continue with previous skills and reference comments made by speakers and peers. Students cite texts that they've directly quoted, paraphrased, or used for information. When writing, students will use the form of citation dictated by the instructor or the style guide referenced by the instructor. 6-8 Students continue with previous skills and use a style guide to create a proper citation. 9-12 Students continue with previous skills and should be aware of existing style guides and the ways in which they differ.
ELA.K12.EE.2.1:	Read and comprehend grade-level complex texts proficiently. **Clarifications:** See Text Complexity for grade-level complexity bands and a text complexity rubric.
ELA.K12.EE.3.1:	Make inferences to support comprehension. **Clarifications:** Students will make inferences before the words infer or inference are introduced. Kindergarten students will answer questions like "Why is the girl smiling?" or make predictions about what will happen based on the title page. Students will use the terms and apply them in 2nd grade and beyond.
ELA.K12.EE.4.1:	Use appropriate collaborative techniques and active listening skills when engaging in discussions in a variety of situations. **Clarifications:** In kindergarten, students learn to listen to one another respectfully. In grades 1-2, students build upon these skills by justifying what they are thinking. For example: "I think _____ because _____." The collaborative conversations are becoming academic conversations. In grades 3-12, students engage in academic conversations discussing claims and justifying their reasoning, refining and applying skills. Students build on ideas, propel the conversation, and support claims and counterclaims with evidence.
ELA.K12.EE.5.1:	Use the accepted rules governing a specific format to create quality work. **Clarifications:** Students will incorporate skills learned into work products to produce quality work. For students to incorporate these skills appropriately, they must receive instruction. A 3rd grade student creating a poster board display must have instruction in how to effectively present information to do quality work.

	Use appropriate voice and tone when speaking or writing.
ELA.K12.EE.6.1:	**Clarifications:** In kindergarten and 1st grade, students learn the difference between formal and informal language. For example, the way we talk to our friends differs from the way we speak to adults. In 2nd grade and beyond, students practice appropriate social and academic language to discuss texts.
ELD.K12.ELL.SI.1:	English language learners communicate for social and instructional purposes within the school setting.

General Course Information and Notes

VERSION DESCRIPTION

Major Concepts/Content: Advancement Via Individual Determination (AVID) is an academic elective course that prepares students for college readiness and success, and it is scheduled during the regular school day as a year-long course. Each week, students receive instruction that utilizes a rigorous college-preparatory curriculum provided by AVID Center, tutor-facilitated study groups, motivational activities, and academic success skills. In AVID, students participate in activities that incorporate strategies focused on writing, inquiry, collaboration, organization, and reading to support their academic growth. Additionally, students engage in activities centered around exploring college and career opportunities and their own agency.

The 7th grade AVID elective course is the year of preparation for high school. Students will regularly exhibit and utilize the skills and strategies learned in the 6th and 7th grade AVID courses. They will refine previous goals, focusing on their transition to high school as part of a college-preparatory path. Their writing will focus on completing all steps of the writing process and varying style, word choice, vocabulary, structure, and voice. Major writing assignments include persuasive, expository, descriptive, and timed writing. Students will transition from active learners to leaders. Other areas of focus include increasing the use of technology and building upon test-preparation and test-taking knowledge. Students will broaden their experience with analyzing text and utilizing appropriate reading strategies in various settings. They will become more involved in guest-speaker presentations and field trips, particularly as they relate to preparation and prior knowledge. Students will also participate in college-preparatory testing and build connections with the high school they will attend.

AVID curriculum books used:

AVID College and Careers

AVID Critical Thinking and Engagement

AVID Reading for Disciplinary Literacy

AVID Secondary Implementation Resource

AVID Tutorial Guide

AVID Writing for Disciplinary Literacy

Supplemental materials course include the following:

AVID Weekly®, *Supporting Math in the AVID Elective*, *Write Path* content-area books, focused note-taking resources, and my.avid.org Curriculum Book Webpages

STUDENT OUTCOMES

Student Agency (SA)

- Student Empowerment
- Leadership of Others

Rigorous Academic Preparedness (AP)

- Writing
- Inquiry
- Collaboration
- Organization
- Reading

Opportunity Knowledge (OK)

- Advancing College Preparedness
- Building Career Knowledge

STUDENT AGENCY (8.SA)

Student Empowerment

1. Explore and pursue leadership opportunities in extracurricular and community service activities within the school and local and/or global community
2. Evaluate the impact of decisions on the world
3. Effectively manage stress and anxiety levels, including areas such as test preparation and test taking
4. Create a systemic decision-making model for personal financial decisions and circumstances
5. (a) Maintain a strong support network for academic and career success
   (b) Identify mentors to influence, support, and guide future transactions and success
6. Apply strategies to support motivation, especially when lacking intrinsic motivation
7. (a) Strengthen ability to self-advocate related to areas of need
   (b) Leverage support network to assist with areas of need
8. (a) Reflect on current status and skills to strengthen mental flexibility now and in the future
   (b) Recognize and overcome obstacles that could hinder future success
9. Apply self-awareness strategies and skills with a variety of academic challenges
10. Employ key learning points in real-world applications

Leadership of Others

1. Assess personal traits connected to integrity and ethical leadership
2. Pursue leadership and/or mentorship opportunities in the school and community
3. Reflect on conflict situations to strengthen ability to deal with the emotions that accompany conflict in leadership roles

RIGOROUS ACADEMIC PREPAREDNESS (8.AP)

Writing

1. (a) Develop writing skills related to timed, argumentative, and descriptive modes of writing
   (b) Gather information related to the writing prompt to generate a bank of resources and information
   (c) Compose first drafts with a focus on establishing a clear purpose for the writing
2. Utilize inquiry strategies to develop additional questions as needed
3. Independently create and execute a plan for the revision process
4. Analyze the language of writing and edit for voice, flow, and clarity
5. Publish writing to an audience outside of the classroom, such as an online forum
6. (a) Take notes with an emphasis on selecting the appropriate format for note-taking based on the note-taking objective
   (b) Take notes with an emphasis on using strategies to organize notes (e.g., indentation, bullets, outlines, skipping lines, color-coding)
7. Reflect on how notes help to meet the learning objective and contribute to academic and personal success

Inquiry

1. Use questioning techniques to think critically about content and concepts
2. Generate questions based on a misunderstood concept or problem
3. Determine modifications to the process that would be needed to solve similar problems
4. Reflect on learning to make connections between new learning and the broader world
5. Reflect throughout learning on progress and continually adjust actions on major tasks or assignments
6. Reflect throughout a process on progress and continually adjust actions
7. Develop research questions/claim statements that effectively address the research prompt
8. Determine the perspective, validity, and reliability of information found within sources with the use of multiple sources (such as books, articles, and websites)
9. Synthesize information, sources, and data that support the research prompt
10. Construct written claims and support them with reasoning and evidence
11. Publish research to an audience outside of the classroom

Collaboration

1. Negotiate roles within a collaborative group through the adoption of effective elements of collaboration
2. Integrate multiple perspectives into group products
3. Deepen relational capacity through the creation of novel ideas and solutions
4. Interact with peers in complex situations (providing feedback, conflict management, academic discourse) while maintaining a focus on respect, trust, and empathy
5. Support all members' understanding of key concepts
6. Utilize technology to connect to the global community and to explore topics from multiple perspectives
7. Adjust ineffective verbal and nonverbal communication into effective communication
8. Demonstrate active listening by asking clarifying questions
9. Demonstrate command of grammar when communicating
10. Speak effectively before the whole class

Organization

1. (a) Develop efficient, individualized routines related to using organizational tools and planning strategies that enhance academic performance
   (b) Reflect on the use of an activity log or tracking system for community extracurricular activities and hours
2. (a) Understand and demonstrate the concepts and practices of backward mapping
   (b) Identify upcoming events to proactively avoid time-management conflicts
3. Create short- and mid-range goals that support achievement of long-term goals
4. Modify goals and actions appropriately based on progress
5. Manage varied visual frameworks to organize language and show relationships between key concepts

Reading

1. Select texts and justify how they meet the reading purpose
2. Build background knowledge related to the text preview
3. Connect vocabulary within texts to broader concepts in the text
4. Create text-dependent questions while reading that align with the reading purpose
5. Extend beyond the text by analyzing how to best apply key learning

OPPORTUNITY KNOWLEDGE (8.OK)

Advancing College Preparedness

1. Refine key personal attributes for academic, social, and financial fit related to college selection
2. (a) Reflect on current GPA and how it relates to choosing a college and career path
   (b) Compare various college campus structures, services, and opportunities
3. Research and evaluate scholarship offerings, including FAFSA
4. (a) Produce long-term academic plans that align with goals
   (b) Plan for a successful transition to the next step in the academic journey
   (c) Gain exposure to pathways offering work opportunities (credentials, certifications, internships, etc.)
5. (a) Engage in information gathering to determine match, reach, and safety schools in order to mitigate "summer melt" and undermatching during the selection process
   (b) Determine whether additional test prep and testing is needed to reach scholarship goals

Building Career Knowledge

1. (a) Develop and authentic and personal definition of success
   (b) Refine key personal attributes for academic, social, and financial fit related to career selection
2. (a) Gain awareness of how academic performance links to career performance and success
   (b) Expand thinking about potential career fields by encouraging discovery of a variety of career fields and the opportunities therein
   (c) Develop knowledge and gain exposure to transitional phases related to work life
3. Identify best-fit career fields based on academic, social, and financial fit to develop short- and long-term career pathways
4. Engage in real-world experiences within career fields of interest, such as service-learning projects, job-shadowing opportunities, or internship possibilities

GENERAL NOTES

Special Note: Skills acquired in this course will be implemented by the student across the curriculum. M/J Advancement Via Individual Determination 8 (M/J AVID 8) is a rigorous course offered by AVID Center, and content must be provided as specified by AVID Center. Teachers must receive training from AVID Center to teach this course.

Trained AVID Elective teachers may visit avid.org, and log into their MyAVID account using their AVID username and password; then follow my.avid.org/file_sharing/default.aspx?id=24544 to access the AVID Weeks at a Glance curriculum and resources for grades 6-12.

Florida's Benchmarks for Excellent Student Thinking (B.E.S.T.) Standards
This course includes Florida's B.E.S.T. ELA Expectations (EE) and Mathematical Thinking and Reasoning Standards (MTRs) for students. Florida educators should intentionally embed these standards within the content and their instruction as applicable. For guidance on the implementation of the EEs and MTRs, please visit cpalms.org/Standards/BEST_Standards.aspx and select the appropriate B.E.S.T. Standards package.

English Language Development ELD Standards Special Notes Section:
Teachers are required to provide listening, speaking, reading and writing instruction that allows English language learners (ELL) to communicate for social and instructional purposes within the school setting. For the given level of English language proficiency and with visual, graphic, or interactive support, students will interact with grade level words, expressions, sentences and discourse to process or produce language necessary for academic success. The ELD standard should specify a relevant content area concept or topic of study chosen by curriculum developers and teachers which maximizes an ELL's need for communication and social skills. To access an ELL supporting document which delineates performance definitions and descriptors, please click on the following link: cpalms.org/uploads/docs/standards/eld/SI.pdf

VERSION REQUIREMENTS

These requirements include, but are not limited to, the Florida Standards that are most relevant to this course. Standards correlated with a specific course requirement may also be addressed by other course requirements as appropriate. Some requirements in this course are not addressed in the Florida Standards. Other subject areas and content may be used to fulfill course requirements. This course includes an agreement related to minimum standards for behavior, attendance, and participation.

QUALIFICATIONS

As well as any certification requirements listed on the course description, the following qualifications may also be acceptable for the course:

Any field when certification reflects a bachelor or higher degree.

GENERAL INFORMATION

Course Number: 1700130

Course Path: Section: Grades PreK to 12 Education Courses > **Grade Group:** Grades 6 to 8 Education Courses > **Subject:** Research and Critical Thinking > **SubSubject:** General >

Abbreviated Title: M/J AVID 8TH

Course Length: Year (Y)

Course Type: Elective Course

Course Level: 2

Course Status: Draft - Course Pending Approval

Grade Level(s): 8

M/J AVID 8th & Career Planning (#1700135) 2022 - And Beyond

Course Standards

Name	Description
MA.K12.MTR.1.1:	Mathematicians who participate in effortful learning both individually and with others: • Analyze the problem in a way that makes sense given the task. • Ask questions that will help with solving the task. • Build perseverance by modifying methods as needed while solving a challenging task. • Stay engaged and maintain a positive mindset when working to solve tasks. • Help and support each other when attempting a new method or approach. **Clarifications:** Teachers who encourage students to participate actively in effortful learning both individually and with others: • Cultivate a community of growth mindset learners. • Foster perseverance in students by choosing tasks that are challenging. • Develop students' ability to analyze and problem solve. • Recognize students' effort when solving challenging problems.
MA.K12.MTR.2.1:	Demonstrate understanding by representing problems in multiple ways. Mathematicians who demonstrate understanding by representing problems in multiple ways: • Build understanding through modeling and using manipulatives. • Represent solutions to problems in multiple ways using objects, drawings, tables, graphs and equations. • Progress from modeling problems with objects and drawings to using algorithms and equations. • Express connections between concepts and representations. • Choose a representation based on the given context or purpose. **Clarifications:** Teachers who encourage students to demonstrate understanding by representing problems in multiple ways: • Help students make connections between concepts and representations. • Provide opportunities for students to use manipulatives when investigating concepts. • Guide students from concrete to pictorial to abstract representations as understanding progresses. • Show students that various representations can have different purposes and can be useful in different situations.
MA.K12.MTR.3.1:	Complete tasks with mathematical fluency. Mathematicians who complete tasks with mathematical fluency: • Select efficient and appropriate methods for solving problems within the given context. • Maintain flexibility and accuracy while performing procedures and mental calculations. • Complete tasks accurately and with confidence. • Adapt procedures to apply them to a new context. • Use feedback to improve efficiency when performing calculations. **Clarifications:** Teachers who encourage students to complete tasks with mathematical fluency: • Provide students with the flexibility to solve problems by selecting a procedure that allows them to solve efficiently and accurately. • Offer multiple opportunities for students to practice efficient and generalizable methods. • Provide opportunities for students to reflect on the method they used and determine if a more efficient method could have been used.
MA.K12.MTR.4.1:	Engage in discussions that reflect on the mathematical thinking of self and others. Mathematicians who engage in discussions that reflect on the mathematical thinking of self and others: • Communicate mathematical ideas, vocabulary and methods effectively. • Analyze the mathematical thinking of others. • Compare the efficiency of a method to those expressed by others. • Recognize errors and suggest how to correctly solve the task. • Justify results by explaining methods and processes. • Construct possible arguments based on evidence. **Clarifications:** Teachers who encourage students to engage in discussions that reflect on the mathematical thinking of self and others: • Establish a culture in which students ask questions of the teacher and their peers, and error is an opportunity for learning. • Create opportunities for students to discuss their thinking with peers. • Select, sequence and present student work to advance and deepen understanding of correct and increasingly efficient methods. • Develop students' ability to justify methods and compare their responses to the responses of their peers.
	Use patterns and structure to help understand and connect mathematical concepts. Mathematicians who use patterns and structure to help understand and connect mathematical concepts: • Focus on relevant details within a problem. • Create plans and procedures to logically order events, steps or ideas to solve problems. • Decompose a complex problem into manageable parts.

MA.K12.MTR.5.1:	• Relate previously learned concepts to new concepts. • Look for similarities among problems. • Connect solutions of problems to more complicated large-scale situations. **Clarifications:** Teachers who encourage students to use patterns and structure to help understand and connect mathematical concepts: • Help students recognize the patterns in the world around them and connect these patterns to mathematical concepts. • Support students to develop generalizations based on the similarities found among problems. • Provide opportunities for students to create plans and procedures to solve problems. • Develop students' ability to construct relationships between their current understanding and more sophisticated ways of thinking.
MA.K12.MTR.6.1:	Assess the reasonableness of solutions. Mathematicians who assess the reasonableness of solutions: • Estimate to discover possible solutions. • Use benchmark quantities to determine if a solution makes sense. • Check calculations when solving problems. • Verify possible solutions by explaining the methods used. • Evaluate results based on the given context. **Clarifications:** Teachers who encourage students to assess the reasonableness of solutions: • Have students estimate or predict solutions prior to solving. • Prompt students to continually ask, "Does this solution make sense? How do you know?" • Reinforce that students check their work as they progress within and after a task. • Strengthen students' ability to verify solutions through justifications.
MA.K12.MTR.7.1:	Apply mathematics to real-world contexts. Mathematicians who apply mathematics to real-world contexts: • Connect mathematical concepts to everyday experiences. • Use models and methods to understand, represent and solve problems. • Perform investigations to gather data or determine if a method is appropriate. • Redesign models and methods to improve accuracy or efficiency. **Clarifications:** Teachers who encourage students to apply mathematics to real-world contexts: • Provide opportunities for students to create models, both concrete and abstract, and perform investigations. • Challenge students to question the accuracy of their models and methods. • Support students as they validate conclusions by comparing them to the given situation. • Indicate how various concepts can be applied to other disciplines.
ELA.K12.EE.1.1:	Cite evidence to explain and justify reasoning. **Clarifications:** K-1 Students include textual evidence in their oral communication with guidance and support from adults. The evidence can consist of details from the text without naming the text. During 1st grade, students learn how to incorporate the evidence in their writing. 2-3 Students include relevant textual evidence in their written and oral communication. Students should name the text when they refer to it. In 3rd grade, students should use a combination of direct and indirect citations. 4-5 Students continue with previous skills and reference comments made by speakers and peers. Students cite texts that they've directly quoted, paraphrased, or used for information. When writing, students will use the form of citation dictated by the instructor or the style guide referenced by the instructor. 6-8 Students continue with previous skills and use a style guide to create a proper citation. 9-12 Students continue with previous skills and should be aware of existing style guides and the ways in which they differ.
ELA.K12.EE.2.1:	Read and comprehend grade-level complex texts proficiently. **Clarifications:** See Text Complexity for grade-level complexity bands and a text complexity rubric.
ELA.K12.EE.3.1:	Make inferences to support comprehension. **Clarifications:** Students will make inferences before the words infer or inference are introduced. Kindergarten students will answer questions like "Why is the girl smiling?" or make predictions about what will happen based on the title page. Students will use the terms and apply them in 2nd grade and beyond.
ELA.K12.EE.4.1:	Use appropriate collaborative techniques and active listening skills when engaging in discussions in a variety of situations. **Clarifications:** In kindergarten, students learn to listen to one another respectfully. In grades 1-2, students build upon these skills by justifying what they are thinking. For example: "I think _____ because _____." The collaborative conversations are becoming academic conversations. In grades 3-12, students engage in academic conversations discussing claims and justifying their reasoning, refining and applying skills. Students build on ideas, propel the conversation, and support claims and counterclaims with evidence.
ELA.K12.EE.5.1:	Use the accepted rules governing a specific format to create quality work. **Clarifications:** Students will incorporate skills learned into work products to produce quality work. For students to incorporate these skills appropriately, they must receive instruction. A 3rd grade student creating a poster board display must have instruction in how to effectively present information to do quality work.

	Use appropriate voice and tone when speaking or writing.
ELA.K12.EE.6.1:	**Clarifications:** In kindergarten and 1st grade, students learn the difference between formal and informal language. For example, the way we talk to our friends differs from the way we speak to adults. In 2nd grade and beyond, students practice appropriate social and academic language to discuss texts.
ELD.K12.ELL.SI.1:	English language learners communicate for social and instructional purposes within the school setting.

General Course Information and Notes

VERSION DESCRIPTION

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RIGOROUS ACADEMIC PREPAREDNESS (8.AP)

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1. (a) Develop writing skills related to timed, argumentative, and descriptive modes of writing
   (b) Gather information related to the writing prompt to generate a bank of resources and information
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1. (a) Develop efficient, individualized routines related to using organizational tools and planning strategies that enhance academic performance
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2. (a) Understand and demonstrate the concepts and practices of backward mapping
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OPPORTUNITY KNOWLEDGE (8.OK)

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Career and Education Planning – Per section 1003.4156, Florida Statutes, the Career and Education Planning course must result in a completed, personalized academic and career plan for the student, that may be revised as the student progresses through middle and high school; must emphasize the importance of entrepreneurship and employability skills; and must include information from the Department of Economic Opportunity's economic security report as described in Section 445.07, Florida Statutes. The required, personalized academic and career plan must inform students of high school graduation requirements, including diploma designations (Section 1003.4285, Florida Statutes); requirements for a Florida Bright Futures Scholarship; state university and Florida College System institution admission requirements; and, available opportunities to earn college credit in high school utilizing acceleration mechanisms. For additional information on the Middle School Career and Education Planning courses, visit fldoe.org/academics/college-career-planning/educators-toolkit/index.stml.

Career and Education Planning Course Standards – Students will:

1.0 Describe the influences that societal, economic, and technological changes have on employment trends and future training.

2.0 Develop skills to locate, evaluate, and interpret career information.

3.0 Identify and demonstrate processes for making short and long term goals.

4.0 Demonstrate employability skills such as working in a group, problem-solving and organizational skills, and the importance of entrepreneurship.

5.0 Understand the relationship between educational achievement and career choices/postsecondary options.

6.0 Identify a career cluster and related pathways through an interest assessment that match career and education goals.

7.0 Develop a career and education plan that includes short and long-term goals, high school program of study, and postsecondary/career goals.

8.0 Demonstrate knowledge of technology and its application in career fields/clusters.

Florida's Benchmarks for Excellent Student Thinking (B.E.S.T.) Standards
This course includes Florida's B.E.S.T. ELA Expectations (EE) and Mathematical Thinking and Reasoning Standards (MTRs) for students. Florida educators should intentionally embed these standards within the content and their instruction as applicable. For guidance on the implementation of the EEs and MTRs, please visit cpalms.org/Standards/BEST_Standards.aspx and select the appropriate B.E.S.T. Standards package.

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VERSION REQUIREMENTS

These requirements include, but are not limited to, the Florida Standards that are most relevant to this course. Standards correlated with a specific course requirement may also be addressed by other course requirements as appropriate. Some requirements in this course are not addressed in the Florida Standards. Other subject areas and content may be used to fulfill course requirements. This course includes an agreement related to minimum standards for behavior, attendance, and participation.

QUALIFICATIONS

As well as any certification requirements listed on the course description, the following qualifications may also be acceptable for the course:

Any field when certification reflects a bachelor or higher degree.

GENERAL INFORMATION

Course Path: Section: Grades PreK to 12 Education

Course Number: 1700135

Course Type: Elective Course

Course Status: Draft - Course Pending Approval

Grade Level(s): 8

Courses > **Grade Group:** Grades 6 to 8 Education
Courses > **Subject:** Research and Critical Thinking >
SubSubject: General >

Abbreviated Title: M/J AVID 8TH & C/P

Course Length: Year (Y)

Course Level: 2

Research 1 (#1700300) 2022 - And Beyond

Course Standards

Name	Description
MA.K12.MTR.1.1:	Mathematicians who participate in effortful learning both individually and with others: • Analyze the problem in a way that makes sense given the task. • Ask questions that will help with solving the task. • Build perseverance by modifying methods as needed while solving a challenging task. • Stay engaged and maintain a positive mindset when working to solve tasks. • Help and support each other when attempting a new method or approach. **Clarifications:** Teachers who encourage students to participate actively in effortful learning both individually and with others: • Cultivate a community of growth mindset learners. • Foster perseverance in students by choosing tasks that are challenging. • Develop students' ability to analyze and problem solve. • Recognize students' effort when solving challenging problems.
MA.K12.MTR.2.1:	Demonstrate understanding by representing problems in multiple ways. Mathematicians who demonstrate understanding by representing problems in multiple ways: • Build understanding through modeling and using manipulatives. • Represent solutions to problems in multiple ways using objects, drawings, tables, graphs and equations. • Progress from modeling problems with objects and drawings to using algorithms and equations. • Express connections between concepts and representations. • Choose a representation based on the given context or purpose. **Clarifications:** Teachers who encourage students to demonstrate understanding by representing problems in multiple ways: • Help students make connections between concepts and representations. • Provide opportunities for students to use manipulatives when investigating concepts. • Guide students from concrete to pictorial to abstract representations as understanding progresses. • Show students that various representations can have different purposes and can be useful in different situations.
MA.K12.MTR.3.1:	Complete tasks with mathematical fluency. Mathematicians who complete tasks with mathematical fluency: • Select efficient and appropriate methods for solving problems within the given context. • Maintain flexibility and accuracy while performing procedures and mental calculations. • Complete tasks accurately and with confidence. • Adapt procedures to apply them to a new context. • Use feedback to improve efficiency when performing calculations. **Clarifications:** Teachers who encourage students to complete tasks with mathematical fluency: • Provide students with the flexibility to solve problems by selecting a procedure that allows them to solve efficiently and accurately. • Offer multiple opportunities for students to practice efficient and generalizable methods. • Provide opportunities for students to reflect on the method they used and determine if a more efficient method could have been used.
MA.K12.MTR.4.1:	Engage in discussions that reflect on the mathematical thinking of self and others. Mathematicians who engage in discussions that reflect on the mathematical thinking of self and others: • Communicate mathematical ideas, vocabulary and methods effectively. • Analyze the mathematical thinking of others. • Compare the efficiency of a method to those expressed by others. • Recognize errors and suggest how to correctly solve the task. • Justify results by explaining methods and processes. • Construct possible arguments based on evidence. **Clarifications:** Teachers who encourage students to engage in discussions that reflect on the mathematical thinking of self and others: • Establish a culture in which students ask questions of the teacher and their peers, and error is an opportunity for learning. • Create opportunities for students to discuss their thinking with peers. • Select, sequence and present student work to advance and deepen understanding of correct and increasingly efficient methods. • Develop students' ability to justify methods and compare their responses to the responses of their peers.
	Use patterns and structure to help understand and connect mathematical concepts. Mathematicians who use patterns and structure to help understand and connect mathematical concepts: • Focus on relevant details within a problem. • Create plans and procedures to logically order events, steps or ideas to solve problems. • Decompose a complex problem into manageable parts. • Relate previously learned concepts to new concepts.

MA.K12.MTR.5.1:	• Look for similarities among problems. • Connect solutions of problems to more complicated large-scale situations. **Clarifications:** Teachers who encourage students to use patterns and structure to help understand and connect mathematical concepts: • Help students recognize the patterns in the world around them and connect these patterns to mathematical concepts. • Support students to develop generalizations based on the similarities found among problems. • Provide opportunities for students to create plans and procedures to solve problems. • Develop students' ability to construct relationships between their current understanding and more sophisticated ways of thinking.
MA.K12.MTR.6.1:	Assess the reasonableness of solutions. Mathematicians who assess the reasonableness of solutions: • Estimate to discover possible solutions. • Use benchmark quantities to determine if a solution makes sense. • Check calculations when solving problems. • Verify possible solutions by explaining the methods used. • Evaluate results based on the given context. **Clarifications:** Teachers who encourage students to assess the reasonableness of solutions: • Have students estimate or predict solutions prior to solving. • Prompt students to continually ask, "Does this solution make sense? How do you know?" • Reinforce that students check their work as they progress within and after a task. • Strengthen students' ability to verify solutions through justifications.
MA.K12.MTR.7.1:	Apply mathematics to real-world contexts. Mathematicians who apply mathematics to real-world contexts: • Connect mathematical concepts to everyday experiences. • Use models and methods to understand, represent and solve problems. • Perform investigations to gather data or determine if a method is appropriate. • Redesign models and methods to improve accuracy or efficiency. **Clarifications:** Teachers who encourage students to apply mathematics to real-world contexts: • Provide opportunities for students to create models, both concrete and abstract, and perform investigations. • Challenge students to question the accuracy of their models and methods. • Support students as they validate conclusions by comparing them to the given situation. • Indicate how various concepts can be applied to other disciplines.
ELA.K12.EE.1.1:	Cite evidence to explain and justify reasoning. **Clarifications:** K-1 Students include textual evidence in their oral communication with guidance and support from adults. The evidence can consist of details from the text without naming the text. During 1st grade, students learn how to incorporate the evidence in their writing. 2-3 Students include relevant textual evidence in their written and oral communication. Students should name the text when they refer to it. In 3rd grade, students should use a combination of direct and indirect citations. 4-5 Students continue with previous skills and reference comments made by speakers and peers. Students cite texts that they've directly quoted, paraphrased, or used for information. When writing, students will use the form of citation dictated by the instructor or the style guide referenced by the instructor. 6-8 Students continue with previous skills and use a style guide to create a proper citation. 9-12 Students continue with previous skills and should be aware of existing style guides and the ways in which they differ.
ELA.K12.EE.2.1:	Read and comprehend grade-level complex texts proficiently. **Clarifications:** See Text Complexity for grade-level complexity bands and a text complexity rubric.
ELA.K12.EE.3.1:	Make inferences to support comprehension. **Clarifications:** Students will make inferences before the words infer or inference are introduced. Kindergarten students will answer questions like "Why is the girl smiling?" or make predictions about what will happen based on the title page. Students will use the terms and apply them in 2nd grade and beyond.
ELA.K12.EE.4.1:	Use appropriate collaborative techniques and active listening skills when engaging in discussions in a variety of situations. **Clarifications:** In kindergarten, students learn to listen to one another respectfully. In grades 1-2, students build upon these skills by justifying what they are thinking. For example: "I think _____ because _____." The collaborative conversations are becoming academic conversations. In grades 3-12, students engage in academic conversations discussing claims and justifying their reasoning, refining and applying skills. Students build on ideas, propel the conversation, and support claims and counterclaims with evidence.
ELA.K12.EE.5.1:	Use the accepted rules governing a specific format to create quality work. **Clarifications:** Students will incorporate skills learned into work products to produce quality work. For students to incorporate these skills appropriately, they must receive instruction. A 3rd grade student creating a poster board display must have instruction in how to effectively present information to do quality work.
	Use appropriate voice and tone when speaking or writing.

ELA.K12.EE.6.1:	**Clarifications:** In kindergarten and 1st grade, students learn the difference between formal and informal language. For example, the way we talk to our friends differs from the way we speak to adults. In 2nd grade and beyond, students practice appropriate social and academic language to discuss texts.
SC.912.N.1.1:	Define a problem based on a specific body of knowledge, for example: biology, chemistry, physics, and earth/space science, and do the following: 1. **Pose questions about the natural world,** (Articulate the purpose of the investigation and identify the relevant scientific concepts). 2. **Conduct systematic observations,** (Write procedures that are clear and replicable. Identify observables and examine relationships between test (independent) variable and outcome (dependent) variable. Employ appropriate methods for accurate and consistent observations; conduct and record measurements at appropriate levels of precision. Follow safety guidelines). 3. **Examine books and other sources of information to see what is already known,** 4. **Review what is known in light of empirical evidence,** (Examine whether available empirical evidence can be interpreted in terms of existing knowledge and models, and if not, modify or develop new models). 5. **Plan investigations,** (Design and evaluate a scientific investigation). 6. **Use tools to gather, analyze, and interpret data (this includes the use of measurement in metric and other systems, and also the generation and interpretation of graphical representations of data, including data tables and graphs),** (Collect data or evidence in an organized way. Properly use instruments, equipment, and materials (e.g., scales, probeware, meter sticks, microscopes, computers) including set-up, calibration, technique, maintenance, and storage). 7. **Pose answers, explanations, or descriptions of events,** 8. **Generate explanations that explicate or describe natural phenomena (inferences),** 9. **Use appropriate evidence and reasoning to justify these explanations to others,** 10. **Communicate results of scientific investigations, and** 11. **Evaluate the merits of the explanations produced by others.**
SC.912.N.1.4:	Identify sources of information and assess their reliability according to the strict standards of scientific investigation.
ELD.K12.ELL.SI.1:	English language learners communicate for social and instructional purposes within the school setting.
SS.912.P.12.1:	Define cognitive processes involved in understanding information. **Clarifications:** Examples may include, but are not limited to, encoding, storage, and retrieval.

General Course Information and Notes

GENERAL NOTES

The purpose of this course is to enable students to develop fundamental knowledge of the steps in the research process.

The content should include, but not be limited to, the following:

- nature and purpose of research
- research questions and hypotheses
- research methods and procedures
- review of literature and other resources
- primary and secondary sources
- directed investigations
- organization of information
- report formats, styles, and content
- critical analysis of research
- submission of a major independent research project

Florida's Benchmarks for Excellent Student Thinking (B.E.S.T.) Standards
This course includes Florida's B.E.S.T. ELA Expectations (EE) and Mathematical Thinking and Reasoning Standards (MTRs) for students. Florida educators should intentionally embed these standards within the content and their instruction as applicable. For guidance on the implementation of the EEs and MTRs, please visit cpalms.org/Standards/BEST_Standards.aspx and select the appropriate B.E.S.T. Standards package.

English Language Development ELD Standards Special Notes Section:
Teachers are required to provide listening, speaking, reading and writing instruction that allows English language learners (ELL) to communicate for social and instructional purposes within the school setting. For the given level of English language proficiency and with visual, graphic, or interactive support, students will interact with grade level words, expressions, sentences and discourse to process or produce language necessary for academic success. The ELD standard should specify a relevant content area concept or topic of study chosen by curriculum developers and teachers which maximizes an ELL's need for communication and social skills. To access an ELL supporting document which delineates performance definitions and descriptors, please click on the following link: cpalms.org/uploads/docs/standards/eld/SI.pdf

QUALIFICATIONS

As well as any certification requirements listed on the course description, the following qualifications may also be acceptable for the course:

Any field when certification reflects a bachelor or higher degree.

GENERAL INFORMATION

Course Number: 1700300

Course Path: Section: Grades PreK to 12 Education Courses > **Grade Group:** Grades 9 to 12 and Adult Education Courses > **Subject:** Research and Critical Thinking > **SubSubject:** General >

Abbreviated Title: RESEARCH 1

Number of Credits: One (1) credit

Course Length: Year (Y)

Course Type: Elective Course

Course Level: 2

Course Status: Draft - Course Pending Approval

Grade Level(s): 9,10,11,12

Research 2 (#1700310) 2022 - And Beyond

Course Standards

Name	Description
MA.K12.MTR.1.1:	Mathematicians who participate in effortful learning both individually and with others: • Analyze the problem in a way that makes sense given the task. • Ask questions that will help with solving the task. • Build perseverance by modifying methods as needed while solving a challenging task. • Stay engaged and maintain a positive mindset when working to solve tasks. • Help and support each other when attempting a new method or approach. **Clarifications:** Teachers who encourage students to participate actively in effortful learning both individually and with others: • Cultivate a community of growth mindset learners. • Foster perseverance in students by choosing tasks that are challenging. • Develop students' ability to analyze and problem solve. • Recognize students' effort when solving challenging problems.
MA.K12.MTR.2.1:	Demonstrate understanding by representing problems in multiple ways. Mathematicians who demonstrate understanding by representing problems in multiple ways: • Build understanding through modeling and using manipulatives. • Represent solutions to problems in multiple ways using objects, drawings, tables, graphs and equations. • Progress from modeling problems with objects and drawings to using algorithms and equations. • Express connections between concepts and representations. • Choose a representation based on the given context or purpose. **Clarifications:** Teachers who encourage students to demonstrate understanding by representing problems in multiple ways: • Help students make connections between concepts and representations. • Provide opportunities for students to use manipulatives when investigating concepts. • Guide students from concrete to pictorial to abstract representations as understanding progresses. • Show students that various representations can have different purposes and can be useful in different situations.
MA.K12.MTR.3.1:	Complete tasks with mathematical fluency. Mathematicians who complete tasks with mathematical fluency: • Select efficient and appropriate methods for solving problems within the given context. • Maintain flexibility and accuracy while performing procedures and mental calculations. • Complete tasks accurately and with confidence. • Adapt procedures to apply them to a new context. • Use feedback to improve efficiency when performing calculations. **Clarifications:** Teachers who encourage students to complete tasks with mathematical fluency: • Provide students with the flexibility to solve problems by selecting a procedure that allows them to solve efficiently and accurately. • Offer multiple opportunities for students to practice efficient and generalizable methods. • Provide opportunities for students to reflect on the method they used and determine if a more efficient method could have been used.
MA.K12.MTR.4.1:	Engage in discussions that reflect on the mathematical thinking of self and others. Mathematicians who engage in discussions that reflect on the mathematical thinking of self and others: • Communicate mathematical ideas, vocabulary and methods effectively. • Analyze the mathematical thinking of others. • Compare the efficiency of a method to those expressed by others. • Recognize errors and suggest how to correctly solve the task. • Justify results by explaining methods and processes. • Construct possible arguments based on evidence. **Clarifications:** Teachers who encourage students to engage in discussions that reflect on the mathematical thinking of self and others: • Establish a culture in which students ask questions of the teacher and their peers, and error is an opportunity for learning. • Create opportunities for students to discuss their thinking with peers. • Select, sequence and present student work to advance and deepen understanding of correct and increasingly efficient methods. • Develop students' ability to justify methods and compare their responses to the responses of their peers.
	Use patterns and structure to help understand and connect mathematical concepts. Mathematicians who use patterns and structure to help understand and connect mathematical concepts: • Focus on relevant details within a problem. • Create plans and procedures to logically order events, steps or ideas to solve problems. • Decompose a complex problem into manageable parts. • Relate previously learned concepts to new concepts.

MA.K12.MTR.5.1:	• Look for similarities among problems. • Connect solutions of problems to more complicated large-scale situations. **Clarifications:** Teachers who encourage students to use patterns and structure to help understand and connect mathematical concepts: • Help students recognize the patterns in the world around them and connect these patterns to mathematical concepts. • Support students to develop generalizations based on the similarities found among problems. • Provide opportunities for students to create plans and procedures to solve problems. • Develop students' ability to construct relationships between their current understanding and more sophisticated ways of thinking.
MA.K12.MTR.6.1:	Assess the reasonableness of solutions. Mathematicians who assess the reasonableness of solutions: • Estimate to discover possible solutions. • Use benchmark quantities to determine if a solution makes sense. • Check calculations when solving problems. • Verify possible solutions by explaining the methods used. • Evaluate results based on the given context. **Clarifications:** Teachers who encourage students to assess the reasonableness of solutions: • Have students estimate or predict solutions prior to solving. • Prompt students to continually ask, "Does this solution make sense? How do you know?" • Reinforce that students check their work as they progress within and after a task. • Strengthen students' ability to verify solutions through justifications.
MA.K12.MTR.7.1:	Apply mathematics to real-world contexts. Mathematicians who apply mathematics to real-world contexts: • Connect mathematical concepts to everyday experiences. • Use models and methods to understand, represent and solve problems. • Perform investigations to gather data or determine if a method is appropriate. • Redesign models and methods to improve accuracy or efficiency. **Clarifications:** Teachers who encourage students to apply mathematics to real-world contexts: • Provide opportunities for students to create models, both concrete and abstract, and perform investigations. • Challenge students to question the accuracy of their models and methods. • Support students as they validate conclusions by comparing them to the given situation. • Indicate how various concepts can be applied to other disciplines.
ELA.K12.EE.1.1:	Cite evidence to explain and justify reasoning. **Clarifications:** K-1 Students include textual evidence in their oral communication with guidance and support from adults. The evidence can consist of details from the text without naming the text. During 1st grade, students learn how to incorporate the evidence in their writing. 2-3 Students include relevant textual evidence in their written and oral communication. Students should name the text when they refer to it. In 3rd grade, students should use a combination of direct and indirect citations. 4-5 Students continue with previous skills and reference comments made by speakers and peers. Students cite texts that they've directly quoted, paraphrased, or used for information. When writing, students will use the form of citation dictated by the instructor or the style guide referenced by the instructor. 6-8 Students continue with previous skills and use a style guide to create a proper citation. 9-12 Students continue with previous skills and should be aware of existing style guides and the ways in which they differ.
ELA.K12.EE.2.1:	Read and comprehend grade-level complex texts proficiently. **Clarifications:** See Text Complexity for grade-level complexity bands and a text complexity rubric.
ELA.K12.EE.3.1:	Make inferences to support comprehension. **Clarifications:** Students will make inferences before the words infer or inference are introduced. Kindergarten students will answer questions like "Why is the girl smiling?" or make predictions about what will happen based on the title page. Students will use the terms and apply them in 2nd grade and beyond.
ELA.K12.EE.4.1:	Use appropriate collaborative techniques and active listening skills when engaging in discussions in a variety of situations. **Clarifications:** In kindergarten, students learn to listen to one another respectfully. In grades 1-2, students build upon these skills by justifying what they are thinking. For example: "I think _____ because _____." The collaborative conversations are becoming academic conversations. In grades 3-12, students engage in academic conversations discussing claims and justifying their reasoning, refining and applying skills. Students build on ideas, propel the conversation, and support claims and counterclaims with evidence.
ELA.K12.EE.5.1:	Use the accepted rules governing a specific format to create quality work. **Clarifications:** Students will incorporate skills learned into work products to produce quality work. For students to incorporate these skills appropriately, they must receive instruction. A 3rd grade student creating a poster board display must have instruction in how to effectively present information to do quality work.
	Use appropriate voice and tone when speaking or writing.

ELA.K12.EE.6.1:	**Clarifications:** In kindergarten and 1st grade, students learn the difference between formal and informal language. For example, the way we talk to our friends differs from the way we speak to adults. In 2nd grade and beyond, students practice appropriate social and academic language to discuss texts.
SC.912.N.1.1:	Define a problem based on a specific body of knowledge, for example: biology, chemistry, physics, and earth/space science, and do the following: 1. **Pose questions about the natural world,** (Articulate the purpose of the investigation and identify the relevant scientific concepts). 2. **Conduct systematic observations,** (Write procedures that are clear and replicable. Identify observables and examine relationships between test (independent) variable and outcome (dependent) variable. Employ appropriate methods for accurate and consistent observations; conduct and record measurements at appropriate levels of precision. Follow safety guidelines). 3. **Examine books and other sources of information to see what is already known,** 4. **Review what is known in light of empirical evidence,** (Examine whether available empirical evidence can be interpreted in terms of existing knowledge and models, and if not, modify or develop new models). 5. **Plan investigations,** (Design and evaluate a scientific investigation). 6. **Use tools to gather, analyze, and interpret data (this includes the use of measurement in metric and other systems, and also the generation and interpretation of graphical representations of data, including data tables and graphs),** (Collect data or evidence in an organized way. Properly use instruments, equipment, and materials (e.g., scales, probeware, meter sticks, microscopes, computers) including set-up, calibration, technique, maintenance, and storage). 7. **Pose answers, explanations, or descriptions of events,** 8. **Generate explanations that explicate or describe natural phenomena (inferences),** 9. **Use appropriate evidence and reasoning to justify these explanations to others,** 10. **Communicate results of scientific investigations, and** 11. **Evaluate the merits of the explanations produced by others.**
SC.912.N.1.4:	Identify sources of information and assess their reliability according to the strict standards of scientific investigation.
SC.912.N.1.5:	Describe and provide examples of how similar investigations conducted in many parts of the world result in the same outcome.
ELD.K12.ELL.SI.1:	English language learners communicate for social and instructional purposes within the school setting.
SS.912.P.12.1:	Define cognitive processes involved in understanding information. **Clarifications:** Examples may include, but are not limited to, encoding, storage, and retrieval.

General Course Information and Notes

GENERAL NOTES

The purpose of this course is to enable students to develop basic knowledge and skills in the research process with emphasis on determining and refining research questions.

The content should include, but not be limited to, the following:

- research process
- research topics
- research questions and hypotheses
- definition, analysis, and evaluation of research questions
- review of literature and other resources
- primary and secondary sources
- formulation of hypotheses
- organization of information
- report formats, styles, and content
- directed investigations -critical analysis of research

Florida's Benchmarks for Excellent Student Thinking (B.E.S.T.) Standards
This course includes Florida's B.E.S.T. ELA Expectations (EE) and Mathematical Thinking and Reasoning Standards (MTRs) for students. Florida educators should intentionally embed these standards within the content and their instruction as applicable. For guidance on the implementation of the EEs and MTRs, please visit cpalms.org/Standards/BEST_Standards.aspx and select the appropriate B.E.S.T. Standards package.

English Language Development ELD Standards Special Notes Section:
Teachers are required to provide listening, speaking, reading and writing instruction that allows English language learners (ELL) to communicate for social and instructional purposes within the school setting. For the given level of English language proficiency and with visual, graphic, or interactive support, students will interact with grade level words, expressions, sentences and discourse to process or produce language necessary for academic success. The ELD standard should specify a relevant content area concept or topic of study chosen by curriculum developers and teachers which maximizes an ELL's need for communication and social skills. To access an ELL supporting document which delineates performance definitions and descriptors, please click on the following link: cpalms.org/uploads/docs/standards/eld/SI.pdf

QUALIFICATIONS

As well as any certification requirements listed on the course description, the following qualifications may also be acceptable for the course:

Any field when certification reflects a bachelor or higher degree.

GENERAL INFORMATION

Course Number: 1700310

Course Path: Section: Grades PreK to 12 Education Courses > **Grade Group:** Grades 9 to 12 and Adult Education Courses > **Subject:** Research and Critical Thinking > **SubSubject:** General >

Abbreviated Title: RESEARCH 2

Number of Credits: One (1) credit

Course Length: Year (Y)

Course Type: Elective Course

Course Level: 2

Course Status: Draft - Course Pending Approval

Grade Level(s): 9,10,11,12

Research 3 (#1700320) 2022 - And Beyond

Course Standards

Name	Description
MA.K12.MTR.1.1:	Mathematicians who participate in effortful learning both individually and with others: • Analyze the problem in a way that makes sense given the task. • Ask questions that will help with solving the task. • Build perseverance by modifying methods as needed while solving a challenging task. • Stay engaged and maintain a positive mindset when working to solve tasks. • Help and support each other when attempting a new method or approach. **Clarifications:** Teachers who encourage students to participate actively in effortful learning both individually and with others: • Cultivate a community of growth mindset learners. • Foster perseverance in students by choosing tasks that are challenging. • Develop students' ability to analyze and problem solve. • Recognize students' effort when solving challenging problems.
MA.K12.MTR.2.1:	Demonstrate understanding by representing problems in multiple ways. Mathematicians who demonstrate understanding by representing problems in multiple ways: • Build understanding through modeling and using manipulatives. • Represent solutions to problems in multiple ways using objects, drawings, tables, graphs and equations. • Progress from modeling problems with objects and drawings to using algorithms and equations. • Express connections between concepts and representations. • Choose a representation based on the given context or purpose. **Clarifications:** Teachers who encourage students to demonstrate understanding by representing problems in multiple ways: • Help students make connections between concepts and representations. • Provide opportunities for students to use manipulatives when investigating concepts. • Guide students from concrete to pictorial to abstract representations as understanding progresses. • Show students that various representations can have different purposes and can be useful in different situations.
MA.K12.MTR.3.1:	Complete tasks with mathematical fluency. Mathematicians who complete tasks with mathematical fluency: • Select efficient and appropriate methods for solving problems within the given context. • Maintain flexibility and accuracy while performing procedures and mental calculations. • Complete tasks accurately and with confidence. • Adapt procedures to apply them to a new context. • Use feedback to improve efficiency when performing calculations. **Clarifications:** Teachers who encourage students to complete tasks with mathematical fluency: • Provide students with the flexibility to solve problems by selecting a procedure that allows them to solve efficiently and accurately. • Offer multiple opportunities for students to practice efficient and generalizable methods. • Provide opportunities for students to reflect on the method they used and determine if a more efficient method could have been used.
MA.K12.MTR.4.1:	Engage in discussions that reflect on the mathematical thinking of self and others. Mathematicians who engage in discussions that reflect on the mathematical thinking of self and others: • Communicate mathematical ideas, vocabulary and methods effectively. • Analyze the mathematical thinking of others. • Compare the efficiency of a method to those expressed by others. • Recognize errors and suggest how to correctly solve the task. • Justify results by explaining methods and processes. • Construct possible arguments based on evidence. **Clarifications:** Teachers who encourage students to engage in discussions that reflect on the mathematical thinking of self and others: • Establish a culture in which students ask questions of the teacher and their peers, and error is an opportunity for learning. • Create opportunities for students to discuss their thinking with peers. • Select, sequence and present student work to advance and deepen understanding of correct and increasingly efficient methods. • Develop students' ability to justify methods and compare their responses to the responses of their peers.
	Use patterns and structure to help understand and connect mathematical concepts. Mathematicians who use patterns and structure to help understand and connect mathematical concepts: • Focus on relevant details within a problem. • Create plans and procedures to logically order events, steps or ideas to solve problems. • Decompose a complex problem into manageable parts. • Relate previously learned concepts to new concepts.

MA.K12.MTR.5.1:	• Look for similarities among problems. • Connect solutions of problems to more complicated large-scale situations. **Clarifications:** Teachers who encourage students to use patterns and structure to help understand and connect mathematical concepts: • Help students recognize the patterns in the world around them and connect these patterns to mathematical concepts. • Support students to develop generalizations based on the similarities found among problems. • Provide opportunities for students to create plans and procedures to solve problems. • Develop students' ability to construct relationships between their current understanding and more sophisticated ways of thinking.
MA.K12.MTR.6.1:	Assess the reasonableness of solutions. Mathematicians who assess the reasonableness of solutions: • Estimate to discover possible solutions. • Use benchmark quantities to determine if a solution makes sense. • Check calculations when solving problems. • Verify possible solutions by explaining the methods used. • Evaluate results based on the given context. **Clarifications:** Teachers who encourage students to assess the reasonableness of solutions: • Have students estimate or predict solutions prior to solving. • Prompt students to continually ask, "Does this solution make sense? How do you know?" • Reinforce that students check their work as they progress within and after a task. • Strengthen students' ability to verify solutions through justifications.
MA.K12.MTR.7.1:	Apply mathematics to real-world contexts. Mathematicians who apply mathematics to real-world contexts: • Connect mathematical concepts to everyday experiences. • Use models and methods to understand, represent and solve problems. • Perform investigations to gather data or determine if a method is appropriate. • Redesign models and methods to improve accuracy or efficiency. **Clarifications:** Teachers who encourage students to apply mathematics to real-world contexts: • Provide opportunities for students to create models, both concrete and abstract, and perform investigations. • Challenge students to question the accuracy of their models and methods. • Support students as they validate conclusions by comparing them to the given situation. • Indicate how various concepts can be applied to other disciplines.
ELA.K12.EE.1.1:	Cite evidence to explain and justify reasoning. **Clarifications:** K-1 Students include textual evidence in their oral communication with guidance and support from adults. The evidence can consist of details from the text without naming the text. During 1st grade, students learn how to incorporate the evidence in their writing. 2-3 Students include relevant textual evidence in their written and oral communication. Students should name the text when they refer to it. In 3rd grade, students should use a combination of direct and indirect citations. 4-5 Students continue with previous skills and reference comments made by speakers and peers. Students cite texts that they've directly quoted, paraphrased, or used for information. When writing, students will use the form of citation dictated by the instructor or the style guide referenced by the instructor. 6-8 Students continue with previous skills and use a style guide to create a proper citation. 9-12 Students continue with previous skills and should be aware of existing style guides and the ways in which they differ.
ELA.K12.EE.2.1:	Read and comprehend grade-level complex texts proficiently. **Clarifications:** See Text Complexity for grade-level complexity bands and a text complexity rubric.
ELA.K12.EE.3.1:	Make inferences to support comprehension. **Clarifications:** Students will make inferences before the words infer or inference are introduced. Kindergarten students will answer questions like "Why is the girl smiling?" or make predictions about what will happen based on the title page. Students will use the terms and apply them in 2nd grade and beyond.
ELA.K12.EE.4.1:	Use appropriate collaborative techniques and active listening skills when engaging in discussions in a variety of situations. **Clarifications:** In kindergarten, students learn to listen to one another respectfully. In grades 1-2, students build upon these skills by justifying what they are thinking. For example: "I think _____ because _____." The collaborative conversations are becoming academic conversations. In grades 3-12, students engage in academic conversations discussing claims and justifying their reasoning, refining and applying skills. Students build on ideas, propel the conversation, and support claims and counterclaims with evidence.
ELA.K12.EE.5.1:	Use the accepted rules governing a specific format to create quality work. **Clarifications:** Students will incorporate skills learned into work products to produce quality work. For students to incorporate these skills appropriately, they must receive instruction. A 3rd grade student creating a poster board display must have instruction in how to effectively present information to do quality work.
	Use appropriate voice and tone when speaking or writing.

ELA.K12.EE.6.1:	**Clarifications:** In kindergarten and 1st grade, students learn the difference between formal and informal language. For example, the way we talk to our friends differs from the way we speak to adults. In 2nd grade and beyond, students practice appropriate social and academic language to discuss texts.
SC.912.N.1.1:	Define a problem based on a specific body of knowledge, for example: biology, chemistry, physics, and earth/space science, and do the following: 1. **Pose questions about the natural world,** (Articulate the purpose of the investigation and identify the relevant scientific concepts). 2. **Conduct systematic observations,** (Write procedures that are clear and replicable. Identify observables and examine relationships between test (independent) variable and outcome (dependent) variable. Employ appropriate methods for accurate and consistent observations; conduct and record measurements at appropriate levels of precision. Follow safety guidelines). 3. **Examine books and other sources of information to see what is already known,** 4. **Review what is known in light of empirical evidence,** (Examine whether available empirical evidence can be interpreted in terms of existing knowledge and models, and if not, modify or develop new models). 5. **Plan investigations,** (Design and evaluate a scientific investigation). 6. **Use tools to gather, analyze, and interpret data (this includes the use of measurement in metric and other systems, and also the generation and interpretation of graphical representations of data, including data tables and graphs),** (Collect data or evidence in an organized way. Properly use instruments, equipment, and materials (e.g., scales, probeware, meter sticks, microscopes, computers) including set-up, calibration, technique, maintenance, and storage). 7. **Pose answers, explanations, or descriptions of events,** 8. **Generate explanations that explicate or describe natural phenomena (inferences),** 9. **Use appropriate evidence and reasoning to justify these explanations to others,** 10. **Communicate results of scientific investigations, and** 11. **Evaluate the merits of the explanations produced by others.**
SC.912.N.1.7:	Recognize the role of creativity in constructing scientific questions, methods and explanations.
SC.912.N.2.2:	Identify which questions can be answered through science and which questions are outside the boundaries of scientific investigation, such as questions addressed by other ways of knowing, such as art, philosophy, and religion.
SC.912.N.2.3:	Identify examples of pseudoscience (such as astrology, phrenology) in society.
ELD.K12.ELL.SI.1:	English language learners communicate for social and instructional purposes within the school setting.
SS.912.P.12.1:	Define cognitive processes involved in understanding information. **Clarifications:** Examples may include, but are not limited to, encoding, storage, and retrieval.

General Course Information and Notes

GENERAL NOTES

The purpose of this course is to enable students to develop proficient knowledge and skills in the research process with emphasis on appropriate research design.

The content should include, but not be limited to, the following:

- research process
- experimental, descriptive, and historical research
- research design and methodology
- legal and ethical issues in research
- research questions and hypotheses
- review of literature and other resources
- data collection, analysis, and statistics
- report formats, styles, and content
- investigations
- critical analysis of research

Florida's Benchmarks for Excellent Student Thinking (B.E.S.T.) Standards
This course includes Florida's B.E.S.T. ELA Expectations (EE) and Mathematical Thinking and Reasoning Standards (MTRs) for students. Florida educators should intentionally embed these standards within the content and their instruction as applicable. For guidance on the implementation of the EEs and MTRs, please visit cpalms.org/Standards/BEST_Standards.aspx and select the appropriate B.E.S.T. Standards package.

English Language Development ELD Standards Special Notes Section:
Teachers are required to provide listening, speaking, reading and writing instruction that allows English language learners (ELL) to communicate for social and instructional purposes within the school setting. For the given level of English language proficiency and with visual, graphic, or interactive support, students will interact with grade level words, expressions, sentences and discourse to process or produce language necessary for academic success. The ELD standard should specify a relevant content area concept or topic of study chosen by curriculum developers and teachers which maximizes an ELL's need for communication and social skills. To access an ELL supporting document which delineates performance definitions and descriptors, please click on the following link: cpalms.org/uploads/docs/standards/eld/SI.pdf

QUALIFICATIONS

As well as any certification requirements listed on the course description, the following qualifications may also be acceptable for the course:

Any field when certification reflects a bachelor or higher degree.

GENERAL INFORMATION

Course Number: 1700320

Course Path: Section: Grades PreK to 12 Education Courses > **Grade Group:** Grades 9 to 12 and Adult Education Courses > **Subject:** Research and Critical Thinking > **SubSubject:** General >

Abbreviated Title: RESEARCH 3

Number of Credits: One (1) credit

Course Length: Year (Y)

Course Type: Elective Course

Course Level: 2

Course Status: Draft - Course Pending Approval

Grade Level(s): 9,10,11,12

Florida's Preinternational Baccalaureate Inquiry Skills (#1700360) 2022 - And Beyond

Course Standards

Name	Description
MA.K12.MTR.1.1:	Mathematicians who participate in effortful learning both individually and with others: • Analyze the problem in a way that makes sense given the task. • Ask questions that will help with solving the task. • Build perseverance by modifying methods as needed while solving a challenging task. • Stay engaged and maintain a positive mindset when working to solve tasks. • Help and support each other when attempting a new method or approach. **Clarifications:** Teachers who encourage students to participate actively in effortful learning both individually and with others: • Cultivate a community of growth mindset learners. • Foster perseverance in students by choosing tasks that are challenging. • Develop students' ability to analyze and problem solve. • Recognize students' effort when solving challenging problems.
MA.K12.MTR.2.1:	Demonstrate understanding by representing problems in multiple ways. Mathematicians who demonstrate understanding by representing problems in multiple ways: • Build understanding through modeling and using manipulatives. • Represent solutions to problems in multiple ways using objects, drawings, tables, graphs and equations. • Progress from modeling problems with objects and drawings to using algorithms and equations. • Express connections between concepts and representations. • Choose a representation based on the given context or purpose. **Clarifications:** Teachers who encourage students to demonstrate understanding by representing problems in multiple ways: • Help students make connections between concepts and representations. • Provide opportunities for students to use manipulatives when investigating concepts. • Guide students from concrete to pictorial to abstract representations as understanding progresses. • Show students that various representations can have different purposes and can be useful in different situations.
MA.K12.MTR.3.1:	Complete tasks with mathematical fluency. Mathematicians who complete tasks with mathematical fluency: • Select efficient and appropriate methods for solving problems within the given context. • Maintain flexibility and accuracy while performing procedures and mental calculations. • Complete tasks accurately and with confidence. • Adapt procedures to apply them to a new context. • Use feedback to improve efficiency when performing calculations. **Clarifications:** Teachers who encourage students to complete tasks with mathematical fluency: • Provide students with the flexibility to solve problems by selecting a procedure that allows them to solve efficiently and accurately. • Offer multiple opportunities for students to practice efficient and generalizable methods. • Provide opportunities for students to reflect on the method they used and determine if a more efficient method could have been used.
MA.K12.MTR.4.1:	Engage in discussions that reflect on the mathematical thinking of self and others. Mathematicians who engage in discussions that reflect on the mathematical thinking of self and others: • Communicate mathematical ideas, vocabulary and methods effectively. • Analyze the mathematical thinking of others. • Compare the efficiency of a method to those expressed by others. • Recognize errors and suggest how to correctly solve the task. • Justify results by explaining methods and processes. • Construct possible arguments based on evidence. **Clarifications:** Teachers who encourage students to engage in discussions that reflect on the mathematical thinking of self and others: • Establish a culture in which students ask questions of the teacher and their peers, and error is an opportunity for learning. • Create opportunities for students to discuss their thinking with peers. • Select, sequence and present student work to advance and deepen understanding of correct and increasingly efficient methods. • Develop students' ability to justify methods and compare their responses to the responses of their peers.
	Use patterns and structure to help understand and connect mathematical concepts. Mathematicians who use patterns and structure to help understand and connect mathematical concepts: • Focus on relevant details within a problem.

MA.K12.MTR.5.1:	• Create plans and procedures to logically order events, steps or ideas to solve problems. • Decompose a complex problem into manageable parts. • Relate previously learned concepts to new concepts. • Look for similarities among problems. • Connect solutions of problems to more complicated large-scale situations. **Clarifications:** Teachers who encourage students to use patterns and structure to help understand and connect mathematical concepts: • Help students recognize the patterns in the world around them and connect these patterns to mathematical concepts. • Support students to develop generalizations based on the similarities found among problems. • Provide opportunities for students to create plans and procedures to solve problems. • Develop students' ability to construct relationships between their current understanding and more sophisticated ways of thinking.
MA.K12.MTR.6.1:	Assess the reasonableness of solutions. Mathematicians who assess the reasonableness of solutions: • Estimate to discover possible solutions. • Use benchmark quantities to determine if a solution makes sense. • Check calculations when solving problems. • Verify possible solutions by explaining the methods used. • Evaluate results based on the given context. **Clarifications:** Teachers who encourage students to assess the reasonableness of solutions: • Have students estimate or predict solutions prior to solving. • Prompt students to continually ask, "Does this solution make sense? How do you know?" • Reinforce that students check their work as they progress within and after a task. • Strengthen students' ability to verify solutions through justifications.
MA.K12.MTR.7.1:	Apply mathematics to real-world contexts. Mathematicians who apply mathematics to real-world contexts: • Connect mathematical concepts to everyday experiences. • Use models and methods to understand, represent and solve problems. • Perform investigations to gather data or determine if a method is appropriate. • Redesign models and methods to improve accuracy or efficiency. **Clarifications:** Teachers who encourage students to apply mathematics to real-world contexts: • Provide opportunities for students to create models, both concrete and abstract, and perform investigations. • Challenge students to question the accuracy of their models and methods. • Support students as they validate conclusions by comparing them to the given situation. • Indicate how various concepts can be applied to other disciplines.
ELA.K12.EE.1.1:	Cite evidence to explain and justify reasoning. **Clarifications:** K-1 Students include textual evidence in their oral communication with guidance and support from adults. The evidence can consist of details from the text without naming the text. During 1st grade, students learn how to incorporate the evidence in their writing. 2-3 Students include relevant textual evidence in their written and oral communication. Students should name the text when they refer to it. In 3rd grade, students should use a combination of direct and indirect citations. 4-5 Students continue with previous skills and reference comments made by speakers and peers. Students cite texts that they've directly quoted, paraphrased, or used for information. When writing, students will use the form of citation dictated by the instructor or the style guide referenced by the instructor. 6-8 Students continue with previous skills and use a style guide to create a proper citation. 9-12 Students continue with previous skills and should be aware of existing style guides and the ways in which they differ.
ELA.K12.EE.2.1:	Read and comprehend grade-level complex texts proficiently. **Clarifications:** See Text Complexity for grade-level complexity bands and a text complexity rubric.
ELA.K12.EE.3.1:	Make inferences to support comprehension. **Clarifications:** Students will make inferences before the words infer or inference are introduced. Kindergarten students will answer questions like "Why is the girl smiling?" or make predictions about what will happen based on the title page. Students will use the terms and apply them in 2nd grade and beyond.
ELA.K12.EE.4.1:	Use appropriate collaborative techniques and active listening skills when engaging in discussions in a variety of situations. **Clarifications:** In kindergarten, students learn to listen to one another respectfully. In grades 1-2, students build upon these skills by justifying what they are thinking. For example: "I think _____ because _____." The collaborative conversations are becoming academic conversations. In grades 3-12, students engage in academic conversations discussing claims and justifying their reasoning, refining and applying skills. Students build on ideas, propel the conversation, and support claims and counterclaims with evidence.
ELA.K12.EE.5.1:	Use the accepted rules governing a specific format to create quality work. **Clarifications:** Students will incorporate skills learned into work products to produce quality work. For students to incorporate these skills appropriately, they

	must receive instruction. A 3rd grade student creating a poster board display must have instruction in how to effectively present information to do quality work.
ELA.K12.EE.6.1:	Use appropriate voice and tone when speaking or writing. **Clarifications:** In kindergarten and 1st grade, students learn the difference between formal and informal language. For example, the way we talk to our friends differs from the way we speak to adults. In 2nd grade and beyond, students practice appropriate social and academic language to discuss texts.
SS.912.P.11.3:	Discuss strategies for improving the encoding of memory.
SS.912.P.11.7:	Discuss strategies for improving the storage of memories.
SS.912.P.11.12:	Discuss strategies for improving the retrieval of memories.
SS.912.P.12.1:	Define cognitive processes involved in understanding information. **Clarifications:** Examples may include, but are not limited to, encoding, storage, and retrieval.
SS.912.P.12.2:	Define processes involved in problem solving and decision making. **Clarifications:** Examples may include, but are not limited to, identification, analysis, solution generation, plan, implement, and evaluate.
SS.912.P.12.5:	Describe obstacles to decision making. **Clarifications:** Examples may include, but are not limited to, confirmation bias, counterproductive heuristics, and overconfidence.
ELD.K12.ELL.SI.1:	English language learners communicate for social and instructional purposes within the school setting.
SC.912.N.4.2:	Weigh the merits of alternative strategies for solving a specific societal problem by comparing a number of different costs and benefits, such as human, economic, and environmental.

General Course Information and Notes

GENERAL NOTES

Special Note. *Pre-IB courses have been created by individual schools or school districts since before the MYP started. These courses mapped backwards the Diploma Programme (DP) to prepare students as early as age 14. The IB was never involved in creating or approving these courses. The IB acknowledges that it is important for students to receive preparation for taking part in the DP, and that preparation is the MYP. The IB designed the MYP to address the whole child, which, as a result, has a very different philosophical approach that aims at educating all students aged 11-16. Pre-IB courses usually deal with content, with less emphasis upon the needs of the whole child or the affective domain than the MYP. A school can have a course that it calls "pre-IB" as long as it makes it clear that the course and any supporting material have been developed independently of the IB. For this reason, the school must name the course along the lines of, for example, the "Any School pre-IB course".*

The IB does not recognize pre-IB courses or courses labeled IB by different school districts which are not an official part of the IBDP or IBCC curriculum. Typically, students enrolled in grade 9 or 10 are not in the IBDP or IBCC programmes.
ibanswers.ibo.org/app/answers/detail/a_id/5414/kw/pre-ib. **Florida's Pre-IB courses should only be used in schools where MYP is not offered in order to prepare students to enter the IBDP. Teachers of Florida's Pre-IB courses should have undergone IB training in order to ensure seamless articulation for students within the subject area.**
Honors and Advanced Level Course Note: Advanced courses require a greater demand on students through increased academic rigor. Academic rigor is obtained through the application, analysis, evaluation, and creation of complex ideas that are often abstract and multi-faceted. Students are challenged to think and collaborate critically on the content they are learning. Honors level rigor will be achieved by increasing text complexity through text selection, focus on high-level qualitative measures, and complexity of task. Instruction will be structured to give students a deeper understanding of conceptual themes and organization within and across disciplines. Academic rigor is more than simply assigning to students a greater quantity of work.

Florida's Benchmarks for Excellent Student Thinking (B.E.S.T.) Standards
This course includes Florida's B.E.S.T. ELA Expectations (EE) and Mathematical Thinking and Reasoning Standards (MTRs) for students. Florida educators should intentionally embed these standards within the content and their instruction as applicable. For guidance on the implementation of the EEs and MTRs, please visit cpalms.org/Standards/BEST_Standards.aspx and select the appropriate B.E.S.T. Standards package.

English Language Development ELD Standards Special Notes Section:
Teachers are required to provide listening, speaking, reading and writing instruction that allows English language learners (ELL) to communicate for social and instructional purposes within the school setting. For the given level of English language proficiency and with visual, graphic, or interactive support, students will interact with grade level words, expressions, sentences and discourse to process or produce language necessary for academic success. The ELD standard should specify a relevant content area concept or topic of study chosen by curriculum developers and teachers which maximizes an ELL's need for communication and social skills. To access an ELL supporting document which delineates performance definitions and descriptors, please click on the following link: cpalms.org/uploads/docs/standards/eld/SI.pdf

QUALIFICATIONS

As well as any certification requirements listed on the course description, the following qualifications may also be acceptable for the course:

Any academic coverage (any coverage classified as an academic coverage in Rules 6A-4.0101 through 6A-4.0343, Florida Administrative Code).

GENERAL INFORMATION

Course Path: Section: Grades PreK to 12 Education

Course Number: 1700360

Number of Credits: One (1) credit

Course Type: Elective Course

Course Status: Draft - Course Pending Approval

Grade Level(s): 9,10

Courses > **Grade Group:** Grades 9 to 12 and Adult Education Courses > **Subject:** Research and Critical Thinking > **SubSubject:** General >

Abbreviated Title: FL PRE-IB INQ SKILLS

Course Length: Year (Y)

Course Attributes:

- Honors

Course Level: 3

Critical Thinking and Study Skills (#1700370) 2022 - And Beyond

Course Standards

Name	Description
MA.K12.MTR.1.1:	Mathematicians who participate in effortful learning both individually and with others: • Analyze the problem in a way that makes sense given the task. • Ask questions that will help with solving the task. • Build perseverance by modifying methods as needed while solving a challenging task. • Stay engaged and maintain a positive mindset when working to solve tasks. • Help and support each other when attempting a new method or approach. **Clarifications:** Teachers who encourage students to participate actively in effortful learning both individually and with others: • Cultivate a community of growth mindset learners. • Foster perseverance in students by choosing tasks that are challenging. • Develop students' ability to analyze and problem solve. • Recognize students' effort when solving challenging problems.
MA.K12.MTR.2.1:	Demonstrate understanding by representing problems in multiple ways. Mathematicians who demonstrate understanding by representing problems in multiple ways: • Build understanding through modeling and using manipulatives. • Represent solutions to problems in multiple ways using objects, drawings, tables, graphs and equations. • Progress from modeling problems with objects and drawings to using algorithms and equations. • Express connections between concepts and representations. • Choose a representation based on the given context or purpose. **Clarifications:** Teachers who encourage students to demonstrate understanding by representing problems in multiple ways: • Help students make connections between concepts and representations. • Provide opportunities for students to use manipulatives when investigating concepts. • Guide students from concrete to pictorial to abstract representations as understanding progresses. • Show students that various representations can have different purposes and can be useful in different situations.
MA.K12.MTR.3.1:	Complete tasks with mathematical fluency. Mathematicians who complete tasks with mathematical fluency: • Select efficient and appropriate methods for solving problems within the given context. • Maintain flexibility and accuracy while performing procedures and mental calculations. • Complete tasks accurately and with confidence. • Adapt procedures to apply them to a new context. • Use feedback to improve efficiency when performing calculations. **Clarifications:** Teachers who encourage students to complete tasks with mathematical fluency: • Provide students with the flexibility to solve problems by selecting a procedure that allows them to solve efficiently and accurately. • Offer multiple opportunities for students to practice efficient and generalizable methods. • Provide opportunities for students to reflect on the method they used and determine if a more efficient method could have been used.
MA.K12.MTR.4.1:	Engage in discussions that reflect on the mathematical thinking of self and others. Mathematicians who engage in discussions that reflect on the mathematical thinking of self and others: • Communicate mathematical ideas, vocabulary and methods effectively. • Analyze the mathematical thinking of others. • Compare the efficiency of a method to those expressed by others. • Recognize errors and suggest how to correctly solve the task. • Justify results by explaining methods and processes. • Construct possible arguments based on evidence. **Clarifications:** Teachers who encourage students to engage in discussions that reflect on the mathematical thinking of self and others: • Establish a culture in which students ask questions of the teacher and their peers, and error is an opportunity for learning. • Create opportunities for students to discuss their thinking with peers. • Select, sequence and present student work to advance and deepen understanding of correct and increasingly efficient methods. • Develop students' ability to justify methods and compare their responses to the responses of their peers.
	Use patterns and structure to help understand and connect mathematical concepts. Mathematicians who use patterns and structure to help understand and connect mathematical concepts: • Focus on relevant details within a problem. • Create plans and procedures to logically order events, steps or ideas to solve problems. • Decompose a complex problem into manageable parts. • Relate previously learned concepts to new concepts.

MA.K12.MTR.5.1:	• Look for similarities among problems. • Connect solutions of problems to more complicated large-scale situations. **Clarifications:** Teachers who encourage students to use patterns and structure to help understand and connect mathematical concepts: • Help students recognize the patterns in the world around them and connect these patterns to mathematical concepts. • Support students to develop generalizations based on the similarities found among problems. • Provide opportunities for students to create plans and procedures to solve problems. • Develop students' ability to construct relationships between their current understanding and more sophisticated ways of thinking.
MA.K12.MTR.6.1:	Assess the reasonableness of solutions. Mathematicians who assess the reasonableness of solutions: • Estimate to discover possible solutions. • Use benchmark quantities to determine if a solution makes sense. • Check calculations when solving problems. • Verify possible solutions by explaining the methods used. • Evaluate results based on the given context. **Clarifications:** Teachers who encourage students to assess the reasonableness of solutions: • Have students estimate or predict solutions prior to solving. • Prompt students to continually ask, "Does this solution make sense? How do you know?" • Reinforce that students check their work as they progress within and after a task. • Strengthen students' ability to verify solutions through justifications.
MA.K12.MTR.7.1:	Apply mathematics to real-world contexts. Mathematicians who apply mathematics to real-world contexts: • Connect mathematical concepts to everyday experiences. • Use models and methods to understand, represent and solve problems. • Perform investigations to gather data or determine if a method is appropriate. • Redesign models and methods to improve accuracy or efficiency. **Clarifications:** Teachers who encourage students to apply mathematics to real-world contexts: • Provide opportunities for students to create models, both concrete and abstract, and perform investigations. • Challenge students to question the accuracy of their models and methods. • Support students as they validate conclusions by comparing them to the given situation. • Indicate how various concepts can be applied to other disciplines.
ELA.K12.EE.1.1:	Cite evidence to explain and justify reasoning. **Clarifications:** K-1 Students include textual evidence in their oral communication with guidance and support from adults. The evidence can consist of details from the text without naming the text. During 1st grade, students learn how to incorporate the evidence in their writing. 2-3 Students include relevant textual evidence in their written and oral communication. Students should name the text when they refer to it. In 3rd grade, students should use a combination of direct and indirect citations. 4-5 Students continue with previous skills and reference comments made by speakers and peers. Students cite texts that they've directly quoted, paraphrased, or used for information. When writing, students will use the form of citation dictated by the instructor or the style guide referenced by the instructor. 6-8 Students continue with previous skills and use a style guide to create a proper citation. 9-12 Students continue with previous skills and should be aware of existing style guides and the ways in which they differ.
ELA.K12.EE.2.1:	Read and comprehend grade-level complex texts proficiently. **Clarifications:** See Text Complexity for grade-level complexity bands and a text complexity rubric.
ELA.K12.EE.3.1:	Make inferences to support comprehension. **Clarifications:** Students will make inferences before the words infer or inference are introduced. Kindergarten students will answer questions like "Why is the girl smiling?" or make predictions about what will happen based on the title page. Students will use the terms and apply them in 2nd grade and beyond.
ELA.K12.EE.4.1:	Use appropriate collaborative techniques and active listening skills when engaging in discussions in a variety of situations. **Clarifications:** In kindergarten, students learn to listen to one another respectfully. In grades 1-2, students build upon these skills by justifying what they are thinking. For example: "I think _____ because _____." The collaborative conversations are becoming academic conversations. In grades 3-12, students engage in academic conversations discussing claims and justifying their reasoning, refining and applying skills. Students build on ideas, propel the conversation, and support claims and counterclaims with evidence.
ELA.K12.EE.5.1:	Use the accepted rules governing a specific format to create quality work. **Clarifications:** Students will incorporate skills learned into work products to produce quality work. For students to incorporate these skills appropriately, they must receive instruction. A 3rd grade student creating a poster board display must have instruction in how to effectively present information to do quality work.
	Use appropriate voice and tone when speaking or writing.

ELA.K12.EE.6.1:	**Clarifications:** In kindergarten and 1st grade, students learn the difference between formal and informal language. For example, the way we talk to our friends differs from the way we speak to adults. In 2nd grade and beyond, students practice appropriate social and academic language to discuss texts.
SS.912.P.11.3:	Discuss strategies for improving the encoding of memory.
SS.912.P.11.7:	Discuss strategies for improving the storage of memories.
SS.912.P.11.12:	Discuss strategies for improving the retrieval of memories.
SS.912.P.12.2:	Define processes involved in problem solving and decision making. **Clarifications:** Examples may include, but are not limited to, identification, analysis, solution generation, plan, implement, and evaluate.
ELD.K12.ELL.SI.1:	English language learners communicate for social and instructional purposes within the school setting.

General Course Information and Notes

GENERAL NOTES

This course is designed to develop skills related to critical thinking, learning and problem solving, enabling students to enhance their performance in both academic and non-academic areas. Strategies for acquiring, storing and retrieving information, time management and organizational skills, critical thinking operations and processes, strategies for oral and written communication, and problem solving skills including test taking skills are an integral part of this course.

Florida's Benchmarks for Excellent Student Thinking (B.E.S.T.) Standards
This course includes Florida's B.E.S.T. ELA Expectations (EE) and Mathematical Thinking and Reasoning Standards (MTRs) for students. Florida educators should intentionally embed these standards within the content and their instruction as applicable. For guidance on the implementation of the EEs and MTRs, please visit cpalms.org/Standards/BEST_Standards.aspx and select the appropriate B.E.S.T. Standards package.

English Language Development ELD Standards Special Notes Section:
Teachers are required to provide listening, speaking, reading and writing instruction that allows English language learners (ELL) to communicate for social and instructional purposes within the school setting. For the given level of English language proficiency and with visual, graphic, or interactive support, students will interact with grade level words, expressions, sentences and discourse to process or produce language necessary for academic success. The ELD standard should specify a relevant content area concept or topic of study chosen by curriculum developers and teachers which maximizes an ELL's need for communication and social skills. To access an ELL supporting document which delineates performance definitions and descriptors, please click on the following link: cpalms.org/uploads/docs/standards/eld/SI.pdf

QUALIFICATIONS

As well as any certification requirements listed on the course description, the following qualifications may also be acceptable for the course:

Any academic coverage (any coverage classified as an academic coverage in Rules 6A-4.0101 through 6A-4.0343, Florida Administrative Code).

GENERAL INFORMATION

Course Number: 1700370

Course Path: Section: Grades PreK to 12 Education Courses > **Grade Group:** Grades 9 to 12 and Adult Education Courses > **Subject:** Research and Critical Thinking > **SubSubject:** General >

Abbreviated Title: CRIT THINK ST SKLS

Number of Credits: Half credit (.5)

Course Length: Semester (S)

Course Type: Elective Course

Course Level: 2

Course Status: Draft - Course Pending Approval

Grade Level(s): 9,10,11,12

Career Research and Decision Making (#1700380) 2022 - And Beyond

Course Standards

Name	Description
SS.912.E.1.5:	Compare different forms of business organizations. **Clarifications:** Examples are sole proprietorship, partnership, corporation, limited liability corporation.
SS.912.E.1.13:	Explain the basic functions and characteristics of money, and describe the composition of the money supply in the United States.
SS.912.E.1.14:	Compare credit, savings, and investment services available to the consumer from financial institutions.
SS.912.E.1.15:	Describe the risk and return profiles of various investment vehicles and the importance of diversification. **Clarifications:** Examples are savings accounts, certificates of deposit, stocks, bonds, mutual funds, Individual Retirement Accounts.
SS.912.E.1.16:	Construct a one-year budget plan for a specific career path including expenses and construction of a credit plan for purchasing a major item. **Clarifications:** Examples of a career path are university student, trade school student, food service employee, retail employee, laborer, armed forces enlisted personnel. Examples of a budget plan are housing expenses, furnishing, utilities, food costs, transportation, and personal expenses - medical, clothing, grooming, entertainment and recreation, and gifts and contributions. Examples of a credit plan are interest rates, credit scores, payment plan.
SS.912.E.2.1:	Identify and explain broad economic goals. **Clarifications:** Examples are freedom, efficiency, equity, security, growth, price stability, full employment.
SS.912.E.2.8:	Differentiate between direct and indirect taxes, and describe the progressivity of taxes (progressive, proportional, regressive). **Clarifications:** Examples are income, sales, social security.
SS.912.P.12.2:	Define processes involved in problem solving and decision making. **Clarifications:** Examples may include, but are not limited to, identification, analysis, solution generation, plan, implement, and evaluate.
SS.912.P.12.4:	Describe obstacles to problem solving. **Clarifications:** Examples may include, but are not limited to, fixation and functional fixedness.
SS.912.P.12.5:	Describe obstacles to decision making. **Clarifications:** Examples may include, but are not limited to, confirmation bias, counterproductive heuristics, and overconfidence.
MA.K12.MTR.1.1:	Mathematicians who participate in effortful learning both individually and with others: • Analyze the problem in a way that makes sense given the task. • Ask questions that will help with solving the task. • Build perseverance by modifying methods as needed while solving a challenging task. • Stay engaged and maintain a positive mindset when working to solve tasks. • Help and support each other when attempting a new method or approach. **Clarifications:** Teachers who encourage students to participate actively in effortful learning both individually and with others: • Cultivate a community of growth mindset learners. • Foster perseverance in students by choosing tasks that are challenging. • Develop students' ability to analyze and problem solve. • Recognize students' effort when solving challenging problems.
MA.K12.MTR.2.1:	Demonstrate understanding by representing problems in multiple ways. Mathematicians who demonstrate understanding by representing problems in multiple ways: • Build understanding through modeling and using manipulatives. • Represent solutions to problems in multiple ways using objects, drawings, tables, graphs and equations. • Progress from modeling problems with objects and drawings to using algorithms and equations. • Express connections between concepts and representations. • Choose a representation based on the given context or purpose. **Clarifications:** Teachers who encourage students to demonstrate understanding by representing problems in multiple ways: • Help students make connections between concepts and representations.

- Provide opportunities for students to use manipulatives when investigating concepts.
- Guide students from concrete to pictorial to abstract representations as understanding progresses.
- Show students that various representations can have different purposes and can be useful in different situations.

MA.K12.MTR.3.1:

Complete tasks with mathematical fluency.
Mathematicians who complete tasks with mathematical fluency:

- Select efficient and appropriate methods for solving problems within the given context.
- Maintain flexibility and accuracy while performing procedures and mental calculations.
- Complete tasks accurately and with confidence.
- Adapt procedures to apply them to a new context.
- Use feedback to improve efficiency when performing calculations.

Clarifications:
Teachers who encourage students to complete tasks with mathematical fluency:

- Provide students with the flexibility to solve problems by selecting a procedure that allows them to solve efficiently and accurately.
- Offer multiple opportunities for students to practice efficient and generalizable methods.
- Provide opportunities for students to reflect on the method they used and determine if a more efficient method could have been used.

MA.K12.MTR.4.1:

Engage in discussions that reflect on the mathematical thinking of self and others.
Mathematicians who engage in discussions that reflect on the mathematical thinking of self and others:

- Communicate mathematical ideas, vocabulary and methods effectively.
- Analyze the mathematical thinking of others.
- Compare the efficiency of a method to those expressed by others.
- Recognize errors and suggest how to correctly solve the task.
- Justify results by explaining methods and processes.
- Construct possible arguments based on evidence.

Clarifications:
Teachers who encourage students to engage in discussions that reflect on the mathematical thinking of self and others:

- Establish a culture in which students ask questions of the teacher and their peers, and error is an opportunity for learning.
- Create opportunities for students to discuss their thinking with peers.
- Select, sequence and present student work to advance and deepen understanding of correct and increasingly efficient methods.
- Develop students' ability to justify methods and compare their responses to the responses of their peers.

MA.K12.MTR.5.1:

Use patterns and structure to help understand and connect mathematical concepts.
Mathematicians who use patterns and structure to help understand and connect mathematical concepts:

- Focus on relevant details within a problem.
- Create plans and procedures to logically order events, steps or ideas to solve problems.
- Decompose a complex problem into manageable parts.
- Relate previously learned concepts to new concepts.
- Look for similarities among problems.
- Connect solutions of problems to more complicated large-scale situations.

Clarifications:
Teachers who encourage students to use patterns and structure to help understand and connect mathematical concepts:

- Help students recognize the patterns in the world around them and connect these patterns to mathematical concepts.
- Support students to develop generalizations based on the similarities found among problems.
- Provide opportunities for students to create plans and procedures to solve problems.
- Develop students' ability to construct relationships between their current understanding and more sophisticated ways of thinking.

MA.K12.MTR.6.1:

Assess the reasonableness of solutions.
Mathematicians who assess the reasonableness of solutions:

- Estimate to discover possible solutions.
- Use benchmark quantities to determine if a solution makes sense.
- Check calculations when solving problems.
- Verify possible solutions by explaining the methods used.
- Evaluate results based on the given context.

Clarifications:
Teachers who encourage students to assess the reasonableness of solutions:

- Have students estimate or predict solutions prior to solving.
- Prompt students to continually ask, "Does this solution make sense? How do you know?"
- Reinforce that students check their work as they progress within and after a task.
- Strengthen students' ability to verify solutions through justifications.

MA.K12.MTR.7.1:

Apply mathematics to real-world contexts.
Mathematicians who apply mathematics to real-world contexts:

- Connect mathematical concepts to everyday experiences.
- Use models and methods to understand, represent and solve problems.
- Perform investigations to gather data or determine if a method is appropriate. • Redesign models and methods to improve accuracy or efficiency.

Clarifications:
Teachers who encourage students to apply mathematics to real-world contexts:

- Provide opportunities for students to create models, both concrete and abstract, and perform investigations.
- Challenge students to question the accuracy of their models and methods.

	• Support students as they validate conclusions by comparing them to the given situation. • Indicate how various concepts can be applied to other disciplines.
ELA.K12.EE.1.1:	Cite evidence to explain and justify reasoning. **Clarifications:** K-1 Students include textual evidence in their oral communication with guidance and support from adults. The evidence can consist of details from the text without naming the text. During 1st grade, students learn how to incorporate the evidence in their writing. 2-3 Students include relevant textual evidence in their written and oral communication. Students should name the text when they refer to it. In 3rd grade, students should use a combination of direct and indirect citations. 4-5 Students continue with previous skills and reference comments made by speakers and peers. Students cite texts that they've directly quoted, paraphrased, or used for information. When writing, students will use the form of citation dictated by the instructor or the style guide referenced by the instructor. 6-8 Students continue with previous skills and use a style guide to create a proper citation. 9-12 Students continue with previous skills and should be aware of existing style guides and the ways in which they differ.
ELA.K12.EE.2.1:	Read and comprehend grade-level complex texts proficiently. **Clarifications:** See Text Complexity for grade-level complexity bands and a text complexity rubric.
ELA.K12.EE.3.1:	Make inferences to support comprehension. **Clarifications:** Students will make inferences before the words infer or inference are introduced. Kindergarten students will answer questions like "Why is the girl smiling?" or make predictions about what will happen based on the title page. Students will use the terms and apply them in 2nd grade and beyond.
ELA.K12.EE.4.1:	Use appropriate collaborative techniques and active listening skills when engaging in discussions in a variety of situations. **Clarifications:** In kindergarten, students learn to listen to one another respectfully. In grades 1-2, students build upon these skills by justifying what they are thinking. For example: "I think _____ because _____." The collaborative conversations are becoming academic conversations. In grades 3-12, students engage in academic conversations discussing claims and justifying their reasoning, refining and applying skills. Students build on ideas, propel the conversation, and support claims and counterclaims with evidence.
ELA.K12.EE.5.1:	Use the accepted rules governing a specific format to create quality work. **Clarifications:** Students will incorporate skills learned into work products to produce quality work. For students to incorporate these skills appropriately, they must receive instruction. A 3rd grade student creating a poster board display must have instruction in how to effectively present information to do quality work.
ELA.K12.EE.6.1:	Use appropriate voice and tone when speaking or writing. **Clarifications:** In kindergarten and 1st grade, students learn the difference between formal and informal language. For example, the way we talk to our friends differs from the way we speak to adults. In 2nd grade and beyond, students practice appropriate social and academic language to discuss texts.
HE.912.B.4.3:	Demonstrate strategies to prevent, manage, or resolve interpersonal conflicts without harming self or others. **Clarifications:** Effective verbal and nonverbal communication, compromise, and conflict-resolution.
HE.912.B.5.4:	Assess whether individual or collaborative decision making is needed to make a healthy decision. **Clarifications:** Planning a post-high school career/education, purchasing the family's groceries for the week, planning the weekly menu, planning appropriate activities for siblings, community planning, Internet safety, and purchasing insurance.
HE.912.C.2.2:	Compare how peers influence healthy and unhealthy behaviors. **Clarifications:** Binge drinking and social groups, sexual coercion [pressure, force, or manipulation] by a dating partner, students' recommendations for school vending machines, healthy lifestyle, review trends in current and emerging diseases, and use of helmets and seatbelts.
HE.912.C.2.3:	Assess how the school and community can affect personal health practice and behaviors. **Clarifications:** Healthier foods, required health education, health screenings, and enforcement of "no tolerance" policies related to all forms of violence, and AED availability and training.
ELD.K12.ELL.SI.1:	English language learners communicate for social and instructional purposes within the school setting.

General Course Information and Notes

GENERAL NOTES

The purpose of this course is to develop career planning competencies, enabling students to make informed career choices and develop the skills needed to successfully plan and apply for college or a job.

The content should include, but not be limited to, the following:

- goal-setting and decision-making processes
- self-assessment
- sources of career information
- occupational fields and educational requirements -postsecondary education and training opportunities -writing, listening, viewing, and speaking skills for applications and interviews
- financial planning and sources of educational financial assistance
- career planning

After successfully completing this course, the student will:

1. Identify and demonstrate use of the steps of systematic goal-setting and decision-making processes.
2. Demonstrate use of techniques for self-assessment (e.g., inventories, journals, surveys, interviews) to determine personal career interests and capabilities.
3. Demonstrate use of strategies for identifying personal strengths and weaknesses and making improvements.
4. Demonstrate use of career resources to identify preferred occupational fields, career opportunities within each field, employment prospects, and education or training requirements.
5. Demonstrate appropriate writing, listening, viewing, and speaking skills needed to successfully apply for postsecondary education or work (e.g., writing a letter of application, résumé, or essay; compiling a portfolio; filling out an application; participating in an interview).
6. Understand the importance of financial planning and demonstrate knowledge of varied types and sources of financial aid to obtain assistance for postsecondary education.
7. Develop a personal education and career plan.

Florida's Benchmarks for Excellent Student Thinking (B.E.S.T.) Standards
This course includes Florida's B.E.S.T. ELA Expectations (EE) and Mathematical Thinking and Reasoning Standards (MTRs) for students. Florida educators should intentionally embed these standards within the content and their instruction as applicable. For guidance on the implementation of the EEs and MTRs, please visit cpalms.org/Standards/BEST_Standards.aspx and select the appropriate B.E.S.T. Standards package.

English Language Development ELD Standards Special Notes Section:
Teachers are required to provide listening, speaking, reading and writing instruction that allows English language learners (ELL) to communicate for social and instructional purposes within the school setting. For the given level of English language proficiency and with visual, graphic, or interactive support, students will interact with grade level words, expressions, sentences and discourse to process or produce language necessary for academic success. The ELD standard should specify a relevant content area concept or topic of study chosen by curriculum developers and teachers which maximizes an ELL's need for communication and social skills. To access an ELL supporting document which delineates performance definitions and descriptors, please click on the following link: cpalms.org/uploads/docs/standards/eld/SI.pdf

VERSION REQUIREMENTS

These requirements include, but are not limited to, the benchmarks from the Next Generation Sunshine State Standards and Florida Standards that are most relevant to this course. Benchmarks correlated with a specific course requirement may also be addressed by other course requirements as appropriate. Some requirements in this course are not addressed in the Sunshine State Standards. Other subject areas and content may be used to fulfill course requirements.

QUALIFICATIONS

As well as any certification requirements listed on the course description, the following qualifications may also be acceptable for the course:

Any field when certification reflects a bachelor or higher degree.

GENERAL INFORMATION

Course Number: 1700380

Course Path: Section: Grades PreK to 12 Education Courses > **Grade Group:** Grades 9 to 12 and Adult Education Courses > **Subject:** Research and Critical Thinking > **SubSubject:** General >
Abbreviated Title: CAR RESA & DECI MAK

Number of Credits: Half credit (.5)

Course Length: Semester (S)

Course Type: Elective Course

Course Level: 2

Course Status: Draft - Course Pending Approval

Grade Level(s): 9,10,11,12

Advancement Via Individual Determination 1 (#1700390) 2022 - And Beyond

Course Standards

Name	Description
MA.K12.MTR.1.1:	Mathematicians who participate in effortful learning both individually and with others: • Analyze the problem in a way that makes sense given the task. • Ask questions that will help with solving the task. • Build perseverance by modifying methods as needed while solving a challenging task. • Stay engaged and maintain a positive mindset when working to solve tasks. • Help and support each other when attempting a new method or approach. **Clarifications:** Teachers who encourage students to participate actively in effortful learning both individually and with others: • Cultivate a community of growth mindset learners. • Foster perseverance in students by choosing tasks that are challenging. • Develop students' ability to analyze and problem solve. • Recognize students' effort when solving challenging problems.
MA.K12.MTR.2.1:	Demonstrate understanding by representing problems in multiple ways. Mathematicians who demonstrate understanding by representing problems in multiple ways: • Build understanding through modeling and using manipulatives. • Represent solutions to problems in multiple ways using objects, drawings, tables, graphs and equations. • Progress from modeling problems with objects and drawings to using algorithms and equations. • Express connections between concepts and representations. • Choose a representation based on the given context or purpose. **Clarifications:** Teachers who encourage students to demonstrate understanding by representing problems in multiple ways: • Help students make connections between concepts and representations. • Provide opportunities for students to use manipulatives when investigating concepts. • Guide students from concrete to pictorial to abstract representations as understanding progresses. • Show students that various representations can have different purposes and can be useful in different situations.
MA.K12.MTR.3.1:	Complete tasks with mathematical fluency. Mathematicians who complete tasks with mathematical fluency: • Select efficient and appropriate methods for solving problems within the given context. • Maintain flexibility and accuracy while performing procedures and mental calculations. • Complete tasks accurately and with confidence. • Adapt procedures to apply them to a new context. • Use feedback to improve efficiency when performing calculations. **Clarifications:** Teachers who encourage students to complete tasks with mathematical fluency: • Provide students with the flexibility to solve problems by selecting a procedure that allows them to solve efficiently and accurately. • Offer multiple opportunities for students to practice efficient and generalizable methods. • Provide opportunities for students to reflect on the method they used and determine if a more efficient method could have been used.
MA.K12.MTR.4.1:	Engage in discussions that reflect on the mathematical thinking of self and others. Mathematicians who engage in discussions that reflect on the mathematical thinking of self and others: • Communicate mathematical ideas, vocabulary and methods effectively. • Analyze the mathematical thinking of others. • Compare the efficiency of a method to those expressed by others. • Recognize errors and suggest how to correctly solve the task. • Justify results by explaining methods and processes. • Construct possible arguments based on evidence. **Clarifications:** Teachers who encourage students to engage in discussions that reflect on the mathematical thinking of self and others: • Establish a culture in which students ask questions of the teacher and their peers, and error is an opportunity for learning. • Create opportunities for students to discuss their thinking with peers. • Select, sequence and present student work to advance and deepen understanding of correct and increasingly efficient methods. • Develop students' ability to justify methods and compare their responses to the responses of their peers.
	Use patterns and structure to help understand and connect mathematical concepts. Mathematicians who use patterns and structure to help understand and connect mathematical concepts: • Focus on relevant details within a problem.

MA.K12.MTR.5.1:	• Create plans and procedures to logically order events, steps or ideas to solve problems. • Decompose a complex problem into manageable parts. • Relate previously learned concepts to new concepts. • Look for similarities among problems. • Connect solutions of problems to more complicated large-scale situations. **Clarifications:** Teachers who encourage students to use patterns and structure to help understand and connect mathematical concepts: • Help students recognize the patterns in the world around them and connect these patterns to mathematical concepts. • Support students to develop generalizations based on the similarities found among problems. • Provide opportunities for students to create plans and procedures to solve problems. • Develop students' ability to construct relationships between their current understanding and more sophisticated ways of thinking.
MA.K12.MTR.6.1:	Assess the reasonableness of solutions. Mathematicians who assess the reasonableness of solutions: • Estimate to discover possible solutions. • Use benchmark quantities to determine if a solution makes sense. • Check calculations when solving problems. • Verify possible solutions by explaining the methods used. • Evaluate results based on the given context. **Clarifications:** Teachers who encourage students to assess the reasonableness of solutions: • Have students estimate or predict solutions prior to solving. • Prompt students to continually ask, "Does this solution make sense? How do you know?" • Reinforce that students check their work as they progress within and after a task. • Strengthen students' ability to verify solutions through justifications.
MA.K12.MTR.7.1:	Apply mathematics to real-world contexts. Mathematicians who apply mathematics to real-world contexts: • Connect mathematical concepts to everyday experiences. • Use models and methods to understand, represent and solve problems. • Perform investigations to gather data or determine if a method is appropriate. • Redesign models and methods to improve accuracy or efficiency. **Clarifications:** Teachers who encourage students to apply mathematics to real-world contexts: • Provide opportunities for students to create models, both concrete and abstract, and perform investigations. • Challenge students to question the accuracy of their models and methods. • Support students as they validate conclusions by comparing them to the given situation. • Indicate how various concepts can be applied to other disciplines.
ELA.K12.EE.1.1:	Cite evidence to explain and justify reasoning. **Clarifications:** K-1 Students include textual evidence in their oral communication with guidance and support from adults. The evidence can consist of details from the text without naming the text. During 1st grade, students learn how to incorporate the evidence in their writing. 2-3 Students include relevant textual evidence in their written and oral communication. Students should name the text when they refer to it. In 3rd grade, students should use a combination of direct and indirect citations. 4-5 Students continue with previous skills and reference comments made by speakers and peers. Students cite texts that they've directly quoted, paraphrased, or used for information. When writing, students will use the form of citation dictated by the instructor or the style guide referenced by the instructor. 6-8 Students continue with previous skills and use a style guide to create a proper citation. 9-12 Students continue with previous skills and should be aware of existing style guides and the ways in which they differ.
ELA.K12.EE.2.1:	Read and comprehend grade-level complex texts proficiently. **Clarifications:** See Text Complexity for grade-level complexity bands and a text complexity rubric.
ELA.K12.EE.3.1:	Make inferences to support comprehension. **Clarifications:** Students will make inferences before the words infer or inference are introduced. Kindergarten students will answer questions like "Why is the girl smiling?" or make predictions about what will happen based on the title page. Students will use the terms and apply them in 2nd grade and beyond.
ELA.K12.EE.4.1:	Use appropriate collaborative techniques and active listening skills when engaging in discussions in a variety of situations. **Clarifications:** In kindergarten, students learn to listen to one another respectfully. In grades 1-2, students build upon these skills by justifying what they are thinking. For example: "I think _____ because _____." The collaborative conversations are becoming academic conversations. In grades 3-12, students engage in academic conversations discussing claims and justifying their reasoning, refining and applying skills. Students build on ideas, propel the conversation, and support claims and counterclaims with evidence.
ELA.K12.EE.5.1:	Use the accepted rules governing a specific format to create quality work. **Clarifications:** Students will incorporate skills learned into work products to produce quality work. For students to incorporate these skills appropriately, they

	must receive instruction. A 3rd grade student creating a poster board display must have instruction in how to effectively present information to do quality work.
ELA.K12.EE.6.1:	Use appropriate voice and tone when speaking or writing. **Clarifications:** In kindergarten and 1st grade, students learn the difference between formal and informal language. For example, the way we talk to our friends differs from the way we speak to adults. In 2nd grade and beyond, students practice appropriate social and academic language to discuss texts.
ELD.K12.ELL.SI.1:	English language learners communicate for social and instructional purposes within the school setting.

General Course Information and Notes

VERSION DESCRIPTION

Major Concepts/Content: Advancement Via Individual Determination (AVID) is an academic elective course that prepares students for college readiness and success, and it is scheduled during the regular school day as a year-long course. Each week, students receive instruction that utilizes a rigorous college-preparatory curriculum provided by AVID Center, tutor-facilitated study groups, motivational activities, and academic success skills. In AVID, students participate in activities that incorporate strategies focused on writing, inquiry, collaboration, organization, and reading to support their academic growth. Additionally, students engage in activities centered around exploring college and career opportunities and their own agency.

Some students will have previous experience with AVID in the middle school grades, and some students will be experiencing AVID for the first time. Either way, the 9th grade AVID elective course will service as a review of the AVID philosophy and strategies. Students will work on academic and personal goals and communication, adjusting to the high school setting. Students will increase their awareness of their personal contributions to their learning as well as their involvement in their school and community. There is an emphasis on analytical writing, focusing on personal goals and thesis writing. Students will work in collaborative settings, learning how to participate in collegial discussions and use sources to support their ideas and opinions. Students will prepare for and participate in college entrance and placement exams while refining study skills and test-taking, note-taking, and research techniques. They will take an active role in field trips and guest-speaker preparations and presentations. Their college research will include financial topics and building their knowledge of colleges and careers of interest.

AVID curriculum books used:

AVID College and Careers

AVID Critical Thinking and Engagement

AVID Reading for Disciplinary Literacy

AVID Secondary Implementation Resource

AVID Tutorial Guide

AVID Writing for Disciplinary Literacy

Preparing for College

Supplemental materials course include the following:

AVID Weekly®, *Supporting Math in the AVID Elective*, *Write Path* content-area books, focused note-taking resources, and my.avid.org Curriculum Book Webpages

STUDENT OUTCOMES

Student Agency (SA)

- Student Empowerment
- Leadership of Others

Rigorous Academic Preparedness (AP)

- Writing
- Inquiry
- Collaboration
- Organization
- Reading

Opportunity Knowledge (OK)

- Advancing College Preparedness
- Building Career Knowledge

STUDENT AGENCY (9.SA)

Student Empowerment

1. (a) Determine personal interest for extracurricular and community service activities within the school and community
   (b) Gain awareness of extracurricular and community service activities within the school and community
2. Evaluate the impact of decisions on others
3. Explore the importance of healthy, balanced lifestyles, including aspects such as good sleeping, eating, and exercise habits
4. Establish understanding of concepts and content-specific vocabulary related to personal finance
5. (a) Identify characteristics of positive, healthy relationships
   (b) Explore individual peer relationships and identify those that are positive and healthy
6. Gain awareness of motivators that positively impact performance
7. Self-monitor to diagnose areas of need (e.g., academic, personal, social-emotional)
8. (a) Gain awareness of skills that increase mental flexibility
   (b) Explore the relationship between grit and perseverance

9. (a) Identify strategies and skills that promote self-awareness
   (b) Identify individual strengths and areas of challenge related to academic skills and performance
10. Determine key points ifrom learning experiences

Leadership of Others

1. Identify traits connected to personal integrity and ethics
2. (a) Identify leadership opportunities and positions in the school and community
   (b) Determine formal and informal leadership opportunities that could be pursued
3. (a) Select tools to analyze a conflict and identify a positive solution
   (b) Classify passive, assertive, and aggressive statements

RIGOROUS ACADEMIC PREPAREDNESS (9.AP)

Writing

1. (a) Develop writing skills related to expository, timed, and descriptive modes of writing
   (b) Plan and structure writing based on the mode (descriptive, narrative, expository, argumentative)
   (c) Draft initial writing
2. Analyze a writing task by identifying key vocabulary and audience
3. Gather and analyze feedback from peers and instructors
4. (a) Edit drafts for grammar, mechanics, and spelling
   (b) Analyze the organizational structure of writing
5. Publish writing to a small group audience within the classroom, such as a formal written paper
6. (a) Take notes with an emphasis on identifying and recording the note-taking objective and/or Essential Question
   (b) Take notes with an emphasis on setting up notes, including all required components
7. Summarize by pulling together the most important information related to the objective and/or Essential Question

Inquiry

1. Create questions based on Costa's Levels of Thinking
2. Identify misunderstood concepts or problems
3. Determine the steps/process that led to a solution
4. Reflect on learning to make connections between new learning and previous learning
5. Reflect on learning strategies that were employed and whether those strategies were effective
6. (a) Identify processes that are used
   (b) Reflect on a process that was used and whether that process was effective
7. Analyze a research prompt
8. (a) Locate sources that are relevant to the topic and support the purpose of the research assignment
   (b) Distinguish between primary and secondary sources
9. Plan and structure the writing based on the research prompt
10. Integrate quotations and references to texts, using proper citations
11. Publish research to a small group audience within the classroom, such as a formal, written paper

Collaboration

1. Establish norms and expectations around shared responsibility among group members
2. Establish norms and expectations around appreciating diversity among group members
3. Develop a foundational familiarity and comfort with classmates
4. Identify respectful and disrespectful actions of self and others
5. Check group members' level of understanding
6. Utilize technology to collaborate with classmates
7. (a) Apply basic understanding of effective public speaking
   (b) Incorporate visual aids and/or technology when appropriate
8. Describe the characteristics of effective listening, such as eye contact and mirroring
9. Monitor word choice when speaking
10. Identify formal and informal language registers

Organization

1. (a) Begin implementing organizational tools (e.g., binders/eBinders, portfolios, or digital folders) that support academic success
   (b) Create an activity log or tracking system for community extracurricular activities and hours
2. (a) Explore a variety of organizational formats for calendaring/planning
   (b) Determine how to use time effectively
   (c) Assess complex assignments and break them into smaller tasks
3. Set personal, academic, and career goals
4. Monitor progress toward goals
5. Utilize visual frameworks to organize information

Reading

1. Determine the characteristics of a high-quality text in relation to the reading purpose
2. (a) Preview text features
   (b) Identify prior knowledge that may be relevant to the reading
3. Assess knowledge of academic and content-specific vocabulary words
4. (a) Mark the text to accomplish the reading purpose
   (b) Identify the key components of a text related to the reading purpose

5. Extend beyond the text by applying key learning

OPPORTUNITY KNOWLEDGE (9.OK)

Advancing College Preparedness

1. Identify personal interests and skills related to future college aspirations, such as through an interest inventory
2. (a) Know how to determine GPA
   (b) Develop familiarity with college terminology
   (c) Classify the various types of colleges
3. Understand scholarship and the role they play in college financing
4. Articulate the importance of long-term academic plans as a part of goal setting and achievement
5. (a) Identify what is meant by match schools, reach schools, and safety schools in order to determine the best academic fit during the selection process
   (b) Understand the different college entrance exams: PSAT, PreACT, SAT, ACT

Building Career Knowledge

1. Identify personal interests and skills related to future career aspirations
2. (a) Increase familiarity with career terminology
   (b) Distinguish between jobs, careers, and career fields
3. (a) Establish initial knowledge around the characteristics that contribute to academic, social, and financial fit
   (b) Explore the net cost of attending college to inform decisions and budget plans
4. Request assistance in selecting career elective courses and pathways that match interests and goals

GENERAL NOTES

Special Note: Skills acquired in this course will be implemented by the student across the curriculum. Advancement Via Individual Determination 1 (AVID 1) is a rigorous course offered by AVID Center, and content must be provided as specified by AVID Center. Students who are successful in this course will be on the appropriate pathway to success in AVID 2, 3 and 4. Teachers must receive training from AVID Center to teach this course.

Trained AVID Elective teachers may visit avid.org, and log into their MyAVID account using their AVID username and password; then follow my.avid.org/file_sharing/default.aspx?id=24544 to access the AVID Weeks at a Glance curriculum and resources for grades 6-12.

Florida's Benchmarks for Excellent Student Thinking (B.E.S.T.) Standards
This course includes Florida's B.E.S.T. ELA Expectations (EE) and Mathematical Thinking and Reasoning Standards (MTRs) for students. Florida educators should intentionally embed these standards within the content and their instruction as applicable. For guidance on the implementation of the EEs and MTRs, please visit cpalms.org/Standards/BEST_Standards.aspx and select the appropriate B.E.S.T. Standards package.

English Language Development ELD Standards Special Notes Section:
Teachers are required to provide listening, speaking, reading and writing instruction that allows English language learners (ELL) to communicate for social and instructional purposes within the school setting. For the given level of English language proficiency and with visual, graphic, or interactive support, students will interact with grade level words, expressions, sentences and discourse to process or produce language necessary for academic success. The ELD standard should specify a relevant content area concept or topic of study chosen by curriculum developers and teachers which maximizes an ELL's need for communication and social skills. To access an ELL supporting document which delineates performance definitions and descriptors, please click on the following link: cpalms.org/uploads/docs/standards/eld/SI.pdf

VERSION REQUIREMENTS

These requirements include, but are not limited to, the Florida Standards that are most relevant to this course. Standards correlated with a specific course requirement may also be addressed by other course requirements as appropriate. Some requirements in this course are not addressed in the Florida Standards. Other subject areas and content may be used to fulfill course requirements. This course includes an agreement related to minimum standards for behavior, attendance, and participation.

QUALIFICATIONS

As well as any certification requirements listed on the course description, the following qualifications may also be acceptable for the course:

Any field when certification reflects a bachelor or higher degree.

GENERAL INFORMATION

Course Number: 1700390	**Course Path: Section:** Grades PreK to 12 Education Courses > **Grade Group:** Grades 9 to 12 and Adult Education Courses > **Subject:** Research and Critical Thinking > **SubSubject:** General > **Abbreviated Title:** AVID 1
Number of Credits: One (1) credit	**Course Length:** Year (Y)
Course Type: Elective Course	**Course Level:** 2
Course Status: Draft - Course Pending Approval	

Grade Level(s): 9

Advancement Via Individual Determination 2 (#1700400) 2022 - And Beyond

Course Standards

Name	Description
MA.K12.MTR.1.1:	Mathematicians who participate in effortful learning both individually and with others: • Analyze the problem in a way that makes sense given the task. • Ask questions that will help with solving the task. • Build perseverance by modifying methods as needed while solving a challenging task. • Stay engaged and maintain a positive mindset when working to solve tasks. • Help and support each other when attempting a new method or approach. **Clarifications:** Teachers who encourage students to participate actively in effortful learning both individually and with others: • Cultivate a community of growth mindset learners. • Foster perseverance in students by choosing tasks that are challenging. • Develop students' ability to analyze and problem solve. • Recognize students' effort when solving challenging problems.
MA.K12.MTR.2.1:	Demonstrate understanding by representing problems in multiple ways. Mathematicians who demonstrate understanding by representing problems in multiple ways: • Build understanding through modeling and using manipulatives. • Represent solutions to problems in multiple ways using objects, drawings, tables, graphs and equations. • Progress from modeling problems with objects and drawings to using algorithms and equations. • Express connections between concepts and representations. • Choose a representation based on the given context or purpose. **Clarifications:** Teachers who encourage students to demonstrate understanding by representing problems in multiple ways: • Help students make connections between concepts and representations. • Provide opportunities for students to use manipulatives when investigating concepts. • Guide students from concrete to pictorial to abstract representations as understanding progresses. • Show students that various representations can have different purposes and can be useful in different situations.
MA.K12.MTR.3.1:	Complete tasks with mathematical fluency. Mathematicians who complete tasks with mathematical fluency: • Select efficient and appropriate methods for solving problems within the given context. • Maintain flexibility and accuracy while performing procedures and mental calculations. • Complete tasks accurately and with confidence. • Adapt procedures to apply them to a new context. • Use feedback to improve efficiency when performing calculations. **Clarifications:** Teachers who encourage students to complete tasks with mathematical fluency: • Provide students with the flexibility to solve problems by selecting a procedure that allows them to solve efficiently and accurately. • Offer multiple opportunities for students to practice efficient and generalizable methods. • Provide opportunities for students to reflect on the method they used and determine if a more efficient method could have been used.
MA.K12.MTR.4.1:	Engage in discussions that reflect on the mathematical thinking of self and others. Mathematicians who engage in discussions that reflect on the mathematical thinking of self and others: • Communicate mathematical ideas, vocabulary and methods effectively. • Analyze the mathematical thinking of others. • Compare the efficiency of a method to those expressed by others. • Recognize errors and suggest how to correctly solve the task. • Justify results by explaining methods and processes. • Construct possible arguments based on evidence. **Clarifications:** Teachers who encourage students to engage in discussions that reflect on the mathematical thinking of self and others: • Establish a culture in which students ask questions of the teacher and their peers, and error is an opportunity for learning. • Create opportunities for students to discuss their thinking with peers. • Select, sequence and present student work to advance and deepen understanding of correct and increasingly efficient methods. • Develop students' ability to justify methods and compare their responses to the responses of their peers.
	Use patterns and structure to help understand and connect mathematical concepts. Mathematicians who use patterns and structure to help understand and connect mathematical concepts: • Focus on relevant details within a problem.

MA.K12.MTR.5.1:	• Create plans and procedures to logically order events, steps or ideas to solve problems. • Decompose a complex problem into manageable parts. • Relate previously learned concepts to new concepts. • Look for similarities among problems. • Connect solutions of problems to more complicated large-scale situations. **Clarifications:** Teachers who encourage students to use patterns and structure to help understand and connect mathematical concepts: • Help students recognize the patterns in the world around them and connect these patterns to mathematical concepts. • Support students to develop generalizations based on the similarities found among problems. • Provide opportunities for students to create plans and procedures to solve problems. • Develop students' ability to construct relationships between their current understanding and more sophisticated ways of thinking.
MA.K12.MTR.6.1:	Assess the reasonableness of solutions. Mathematicians who assess the reasonableness of solutions: • Estimate to discover possible solutions. • Use benchmark quantities to determine if a solution makes sense. • Check calculations when solving problems. • Verify possible solutions by explaining the methods used. • Evaluate results based on the given context. **Clarifications:** Teachers who encourage students to assess the reasonableness of solutions: • Have students estimate or predict solutions prior to solving. • Prompt students to continually ask, "Does this solution make sense? How do you know?" • Reinforce that students check their work as they progress within and after a task. • Strengthen students' ability to verify solutions through justifications.
MA.K12.MTR.7.1:	Apply mathematics to real-world contexts. Mathematicians who apply mathematics to real-world contexts: • Connect mathematical concepts to everyday experiences. • Use models and methods to understand, represent and solve problems. • Perform investigations to gather data or determine if a method is appropriate. • Redesign models and methods to improve accuracy or efficiency. **Clarifications:** Teachers who encourage students to apply mathematics to real-world contexts: • Provide opportunities for students to create models, both concrete and abstract, and perform investigations. • Challenge students to question the accuracy of their models and methods. • Support students as they validate conclusions by comparing them to the given situation. • Indicate how various concepts can be applied to other disciplines.
ELA.K12.EE.1.1:	Cite evidence to explain and justify reasoning. **Clarifications:** K-1 Students include textual evidence in their oral communication with guidance and support from adults. The evidence can consist of details from the text without naming the text. During 1st grade, students learn how to incorporate the evidence in their writing. 2-3 Students include relevant textual evidence in their written and oral communication. Students should name the text when they refer to it. In 3rd grade, students should use a combination of direct and indirect citations. 4-5 Students continue with previous skills and reference comments made by speakers and peers. Students cite texts that they've directly quoted, paraphrased, or used for information. When writing, students will use the form of citation dictated by the instructor or the style guide referenced by the instructor. 6-8 Students continue with previous skills and use a style guide to create a proper citation. 9-12 Students continue with previous skills and should be aware of existing style guides and the ways in which they differ.
ELA.K12.EE.2.1:	Read and comprehend grade-level complex texts proficiently. **Clarifications:** See Text Complexity for grade-level complexity bands and a text complexity rubric.
ELA.K12.EE.3.1:	Make inferences to support comprehension. **Clarifications:** Students will make inferences before the words infer or inference are introduced. Kindergarten students will answer questions like "Why is the girl smiling?" or make predictions about what will happen based on the title page. Students will use the terms and apply them in 2nd grade and beyond.
ELA.K12.EE.4.1:	Use appropriate collaborative techniques and active listening skills when engaging in discussions in a variety of situations. **Clarifications:** In kindergarten, students learn to listen to one another respectfully. In grades 1-2, students build upon these skills by justifying what they are thinking. For example: "I think _____ because _____." The collaborative conversations are becoming academic conversations. In grades 3-12, students engage in academic conversations discussing claims and justifying their reasoning, refining and applying skills. Students build on ideas, propel the conversation, and support claims and counterclaims with evidence.
ELA.K12.EE.5.1:	Use the accepted rules governing a specific format to create quality work. **Clarifications:** Students will incorporate skills learned into work products to produce quality work. For students to incorporate these skills appropriately, they

	must receive instruction. A 3rd grade student creating a poster board display must have instruction in how to effectively present information to do quality work.
ELA.K12.EE.6.1:	Use appropriate voice and tone when speaking or writing. **Clarifications:** In kindergarten and 1st grade, students learn the difference between formal and informal language. For example, the way we talk to our friends differs from the way we speak to adults. In 2nd grade and beyond, students practice appropriate social and academic language to discuss texts.
ELD.K12.ELL.SI.1:	English language learners communicate for social and instructional purposes within the school setting.

General Course Information and Notes

VERSION DESCRIPTION

Major Concepts/Content: Advancement Via Individual Determination (AVID) is an academic elective course that prepares students for college readiness and success, and it is scheduled during the regular school day as a year-long course. Each week, students receive instruction that utilizes a rigorous college-preparatory curriculum provided by AVID Center, tutor-facilitated study groups, motivational activities, and academic success skills. In AVID, students participate in activities that incorporate strategies focused on writing, inquiry, collaboration, organization, and reading to support their academic growth. Additionally, students engage in activities centered around exploring college and career opportunities and their own agency.

During the 10th grade AVID elective course, students will refine the AVID strategies to meet their independent needs and learning styles. Students will continue to refine and adjust their academic learning plans and goals, increasing awareness of their actions and behaviors. As students increase their rigorous course load and school/community involvement, they will refine their time-management and study skills accordingly. Students will expand their writing portfolio to include analyzing prompts, supporting arguments and claims, character analysis, and detailed reflections. Students will also analyze various documents in order to participate in collaborative discussions and develop leadership skills in those settings. Students will expand their vocabulary use, continuing to prepare for college entrance exams. Text analysis will focus on specific strategies to understand complex texts. Lastly, students will narrow down their colleges and careers of interest based on their personal interests and goals.

AVID curriculum books used:

AVID College and Careers

AVID Critical Thinking and Engagement

AVID Reading for Disciplinary Literacy

AVID Secondary Implementation Resource

AVID Tutorial Guide

AVID Writing for Disciplinary Literacy

Preparing for College

Supplemental materials course include the following:

AVID Weekly®, *Supporting Math in the AVID Elective*, *Write Path* content-area books, focused note-taking resources, and my.avid.org Curriculum Book Webpages

STUDENT OUTCOMES

Student Agency (SA)

- Student Empowerment
- Leadership of Others

Rigorous Academic Preparedness (AP)

- Writing
- Inquiry
- Collaboration
- Organization
- Reading

Opportunity Knowledge (OK)

- Advancing College Preparedness
- Building Career Knowledge

STUDENT AGENCY (10.SA)

Student Empowerment

1. Explore and experience extracurricular and community service activities within the school and community
2. Evaluate the impact of decisions on the environment
3. (a) Identify activities that assist with self-care and healthy habits
   (b) Identify areas that need attention and develop goals to address those areas
4. Increase awareness and apply basic concepts of budgeting, spending, and making responsible financial decisions
5. Develop a support network that includes peers and adults for academic and future success
6. Explore how individual motivators and self-monitoring of motivation impact academic performance
7. Seek help related to areas of need
8. Determine personal levels of grit and perseverance in relation to growth mindset
9. Establish self-awareness strategies and skills, including SLANT (Sit with proper posture, Lean forward and listen, Ask pertinent questions, Nod your head "yes" or "no," Talk to your teachers)
10. Make connections between key learning points and new contexts

Leadership of Others

1. Identify traits connected to responsibility, integrity and ethical interactions with others
2. Pursue leadership opportunities across the school
3. (a) Identify personal conflict-management style
   (b) Transform passive and aggressive statements into constructive, assertive statements

RIGOROUS ACADEMIC PREPAREDNESS (10.AP)

Writing

1. (a) Develop writing skills related to the argumentative mode of writing
   (b) Generate multiple ideas that support, explain, or enhance the writing topic or theme
   (c) Compose first drafts using ideas and information gathered during pre-writing
2. Analyze a writing task to determine the purpose, format/style, and audience
3. Write multiple drafts with increasing depth based on feedback and observations
4. Analyze and edit sentence structure to create interest and complexity
5. Publish writing to entire class, such as an oral presentation
6. (a) Take notes with an emphasis on recording main ideas and important information
   (b) Take notes with an emphasis on condensing information by using abbreviations/symbols/paraphrasing
7. Summarize by pulling together the most important information and personal connections related to the objective and/or Essential Question

Inquiry

1. Develop inquiry skills through focused observations and analyses
2. Identify the specific point of confusion related to a misunderstood concept or problem
3. Determine whether similar problems could be solved using the same steps/process
4. Reflect on learning to make connections between new learning and previous experience
5. Reflect on learning strategies that were employed, and whether those learning strategies were effective, and how methods could be adjusted in the future
6. Reflect on a process that was used, whether that process was effective, and how methods could be adjusted in the future
7. Brainstorm ideas for research topics to address a research prompt
8. Determine the relevance, validity, and reliability of information found within sources
9. Organize information, sources, and data that support the research prompt
10. Integrate quotations to support claims, citing locations and referenced for texts
11. Publish research to entire class, such as an oral presentation

Collaboration

1. Hold self and peers accountable for following group norms about shared responsibility
2. Summarize points of agreement and disagreement from varying perspectives
3. Deepen relational capacity with classmates through effective conflict management
4. Establish norms and expectations around respectful interactions among group members
5. Ask clarifying questions to group members to facilitate understanding
6. Utilize technology to collaborate with classmates and community members
7. (a) Distinguish between effective and ineffective language during interactions
   (b) Refine usage of nonverbal communication when speaking, including body language and eye contact
8. Demonstrate active listening skills during academic conversations
9. Utilize academic vocabulary when communicating
10. Speak effectively before small groups of peers

Organization

1. (a) Refine usage of organizational tools (e.g., binders/eBinders, portfolios, or digital folders) and systems that support academic success
   (b) Maintain an activity log or tracking system for community extracurricular activities and hours
2. (a) Utilize an organizational tool to record obligations and constraints on time
   (b) Demonstrate the process of backward mapping
3. Identify the steps necessary to accomplish goals
4. Identify reasons for why progress is or isn't being made toward accomplishing goals
5. Apply visual frameworks to organize language and comprehend key concepts

Reading

1. Assess whether a text is appropriate according to the reading purpose
2. (a) Make predictions about the text using text features
   (b) Assess relevant prior knowledge and identify gaps
3. Utilize tools to deepen understanding of vocabulary
4. Mark the text to accomplish the reading purpose through the lens of a content expert
5. Extend beyond the text by evaluating and synthesizing key learning

OPPORTUNITY KNOWLEDGE (10.OK)

Advancing College Preparedness

1. Define key personal attributes for academic, social, and financial fit related to college selection
2. (a) Explore the significance of GPA at different stages of the academic journey
   (b) Explore college options and terminology
   (c) Classify the various types of colleges
3. Evaluate personal level of readiness for scholarship eligibility

4. (a) Reflect on how academic plans and course completion support progress toward desired major
   (b) Determine which courses or opportunities align with college goals and plans
   (c) Explore campus-, district-, or community-based opportunities to earn college credit in high school (dual credit, online learning, etc.)
5. (a) Explore match schools, reach schools, and safety schools in order to determine the best academic fit during the selection process
   (b) Prepare for college entrance exams

Building Career Knowledge

1. Define key personal attributes for academic, social, and financial fit related to career selection
2. Explore career fields and career pathways, including what resources and opportunities are available locally
3. Investigate best-fit career fields based on academic, social, and financial fit
4. Reflect on how academic plans and course completion support progress toward desired career field

GENERAL NOTES

Special Note: Skills acquired in this course will be implemented by the student across the curriculum. Advancement Via Individual Determination 2 (AVID 2) is a rigorous course offered by AVID Center, and content must be provided as specified by AVID Center. Students who are successful in this course will be on the appropriate pathway to success in AVID 3 and 4. Teachers must receive training from AVID Center to teach this course.

Trained AVID Elective teachers may visit avid.org, and log into their MyAVID account using their AVID username and password; then follow my.avid.org/file_sharing/default.aspx?id=24544 to access the AVID Weeks at a Glance curriculum and resources for grades 6-12.

Florida's Benchmarks for Excellent Student Thinking (B.E.S.T.) Standards
This course includes Florida's B.E.S.T. ELA Expectations (EE) and Mathematical Thinking and Reasoning Standards (MTRs) for students. Florida educators should intentionally embed these standards within the content and their instruction as applicable. For guidance on the implementation of the EEs and MTRs, please visit cpalms.org/Standards/BEST_Standards.aspx and select the appropriate B.E.S.T. Standards package.

English Language Development ELD Standards Special Notes Section:
Teachers are required to provide listening, speaking, reading and writing instruction that allows English language learners (ELL) to communicate for social and instructional purposes within the school setting. For the given level of English language proficiency and with visual, graphic, or interactive support, students will interact with grade level words, expressions, sentences and discourse to process or produce language necessary for academic success. The ELD standard should specify a relevant content area concept or topic of study chosen by curriculum developers and teachers which maximizes an ELL's need for communication and social skills. To access an ELL supporting document which delineates performance definitions and descriptors, please click on the following link: cpalms.org/uploads/docs/standards/eld/SI.pdf

VERSION REQUIREMENTS

These requirements include, but are not limited to, the Florida Standards that are most relevant to this course. Standards correlated with a specific course requirement may also be addressed by other course requirements as appropriate. Some requirements in this course are not addressed in the Florida Standards. Other subject areas and content may be used to fulfill course requirements. This course includes an agreement related to minimum standards for behavior, attendance, and participation.

QUALIFICATIONS

As well as any certification requirements listed on the course description, the following qualifications may also be acceptable for the course:

Any field when certification reflects a bachelor or higher degree.

GENERAL INFORMATION

Course Number: 1700400

Course Path: Section: Grades PreK to 12 Education Courses > **Grade Group:** Grades 9 to 12 and Adult Education Courses > **Subject:** Research and Critical Thinking > **SubSubject:** General >

Abbreviated Title: AVID 2

Number of Credits: One (1) credit

Course Length: Year (Y)

Course Type: Elective Course

Course Level: 2

Course Status: Draft - Course Pending Approval

Grade Level(s): 10

Advancement Via Individual Determination 3 (#1700410) 2022 - And Beyond

Course Standards

Name	Description
MA.K12.MTR.1.1:	Mathematicians who participate in effortful learning both individually and with others: • Analyze the problem in a way that makes sense given the task. • Ask questions that will help with solving the task. • Build perseverance by modifying methods as needed while solving a challenging task. • Stay engaged and maintain a positive mindset when working to solve tasks. • Help and support each other when attempting a new method or approach. **Clarifications:** Teachers who encourage students to participate actively in effortful learning both individually and with others: • Cultivate a community of growth mindset learners. • Foster perseverance in students by choosing tasks that are challenging. • Develop students' ability to analyze and problem solve. • Recognize students' effort when solving challenging problems.
MA.K12.MTR.2.1:	Demonstrate understanding by representing problems in multiple ways. Mathematicians who demonstrate understanding by representing problems in multiple ways: • Build understanding through modeling and using manipulatives. • Represent solutions to problems in multiple ways using objects, drawings, tables, graphs and equations. • Progress from modeling problems with objects and drawings to using algorithms and equations. • Express connections between concepts and representations. • Choose a representation based on the given context or purpose. **Clarifications:** Teachers who encourage students to demonstrate understanding by representing problems in multiple ways: • Help students make connections between concepts and representations. • Provide opportunities for students to use manipulatives when investigating concepts. • Guide students from concrete to pictorial to abstract representations as understanding progresses. • Show students that various representations can have different purposes and can be useful in different situations.
MA.K12.MTR.3.1:	Complete tasks with mathematical fluency. Mathematicians who complete tasks with mathematical fluency: • Select efficient and appropriate methods for solving problems within the given context. • Maintain flexibility and accuracy while performing procedures and mental calculations. • Complete tasks accurately and with confidence. • Adapt procedures to apply them to a new context. • Use feedback to improve efficiency when performing calculations. **Clarifications:** Teachers who encourage students to complete tasks with mathematical fluency: • Provide students with the flexibility to solve problems by selecting a procedure that allows them to solve efficiently and accurately. • Offer multiple opportunities for students to practice efficient and generalizable methods. • Provide opportunities for students to reflect on the method they used and determine if a more efficient method could have been used.
MA.K12.MTR.4.1:	Engage in discussions that reflect on the mathematical thinking of self and others. Mathematicians who engage in discussions that reflect on the mathematical thinking of self and others: • Communicate mathematical ideas, vocabulary and methods effectively. • Analyze the mathematical thinking of others. • Compare the efficiency of a method to those expressed by others. • Recognize errors and suggest how to correctly solve the task. • Justify results by explaining methods and processes. • Construct possible arguments based on evidence. **Clarifications:** Teachers who encourage students to engage in discussions that reflect on the mathematical thinking of self and others: • Establish a culture in which students ask questions of the teacher and their peers, and error is an opportunity for learning. • Create opportunities for students to discuss their thinking with peers. • Select, sequence and present student work to advance and deepen understanding of correct and increasingly efficient methods. • Develop students' ability to justify methods and compare their responses to the responses of their peers.
	Use patterns and structure to help understand and connect mathematical concepts. Mathematicians who use patterns and structure to help understand and connect mathematical concepts: • Focus on relevant details within a problem.

MA.K12.MTR.5.1:	• Create plans and procedures to logically order events, steps or ideas to solve problems. • Decompose a complex problem into manageable parts. • Relate previously learned concepts to new concepts. • Look for similarities among problems. • Connect solutions of problems to more complicated large-scale situations. **Clarifications:** Teachers who encourage students to use patterns and structure to help understand and connect mathematical concepts: • Help students recognize the patterns in the world around them and connect these patterns to mathematical concepts. • Support students to develop generalizations based on the similarities found among problems. • Provide opportunities for students to create plans and procedures to solve problems. • Develop students' ability to construct relationships between their current understanding and more sophisticated ways of thinking.
MA.K12.MTR.6.1:	Assess the reasonableness of solutions. Mathematicians who assess the reasonableness of solutions: • Estimate to discover possible solutions. • Use benchmark quantities to determine if a solution makes sense. • Check calculations when solving problems. • Verify possible solutions by explaining the methods used. • Evaluate results based on the given context. **Clarifications:** Teachers who encourage students to assess the reasonableness of solutions: • Have students estimate or predict solutions prior to solving. • Prompt students to continually ask, "Does this solution make sense? How do you know?" • Reinforce that students check their work as they progress within and after a task. • Strengthen students' ability to verify solutions through justifications.
MA.K12.MTR.7.1:	Apply mathematics to real-world contexts. Mathematicians who apply mathematics to real-world contexts: • Connect mathematical concepts to everyday experiences. • Use models and methods to understand, represent and solve problems. • Perform investigations to gather data or determine if a method is appropriate. • Redesign models and methods to improve accuracy or efficiency. **Clarifications:** Teachers who encourage students to apply mathematics to real-world contexts: • Provide opportunities for students to create models, both concrete and abstract, and perform investigations. • Challenge students to question the accuracy of their models and methods. • Support students as they validate conclusions by comparing them to the given situation. • Indicate how various concepts can be applied to other disciplines.
ELA.K12.EE.1.1:	Cite evidence to explain and justify reasoning. **Clarifications:** K-1 Students include textual evidence in their oral communication with guidance and support from adults. The evidence can consist of details from the text without naming the text. During 1st grade, students learn how to incorporate the evidence in their writing. 2-3 Students include relevant textual evidence in their written and oral communication. Students should name the text when they refer to it. In 3rd grade, students should use a combination of direct and indirect citations. 4-5 Students continue with previous skills and reference comments made by speakers and peers. Students cite texts that they've directly quoted, paraphrased, or used for information. When writing, students will use the form of citation dictated by the instructor or the style guide referenced by the instructor. 6-8 Students continue with previous skills and use a style guide to create a proper citation. 9-12 Students continue with previous skills and should be aware of existing style guides and the ways in which they differ.
ELA.K12.EE.2.1:	Read and comprehend grade-level complex texts proficiently. **Clarifications:** See Text Complexity for grade-level complexity bands and a text complexity rubric.
ELA.K12.EE.3.1:	Make inferences to support comprehension. **Clarifications:** Students will make inferences before the words infer or inference are introduced. Kindergarten students will answer questions like "Why is the girl smiling?" or make predictions about what will happen based on the title page. Students will use the terms and apply them in 2nd grade and beyond.
ELA.K12.EE.4.1:	Use appropriate collaborative techniques and active listening skills when engaging in discussions in a variety of situations. **Clarifications:** In kindergarten, students learn to listen to one another respectfully. In grades 1-2, students build upon these skills by justifying what they are thinking. For example: "I think _____ because _____." The collaborative conversations are becoming academic conversations. In grades 3-12, students engage in academic conversations discussing claims and justifying their reasoning, refining and applying skills. Students build on ideas, propel the conversation, and support claims and counterclaims with evidence.
ELA.K12.EE.5.1:	Use the accepted rules governing a specific format to create quality work. **Clarifications:** Students will incorporate skills learned into work products to produce quality work. For students to incorporate these skills appropriately, they

	must receive instruction. A 3rd grade student creating a poster board display must have instruction in how to effectively present information to do quality work.
ELA.K12.EE.6.1:	Use appropriate voice and tone when speaking or writing. **Clarifications:** In kindergarten and 1st grade, students learn the difference between formal and informal language. For example, the way we talk to our friends differs from the way we speak to adults. In 2nd grade and beyond, students practice appropriate social and academic language to discuss texts.
ELD.K12.ELL.SI.1:	English language learners communicate for social and instructional purposes within the school setting.

General Course Information and Notes

VERSION DESCRIPTION

Major Concepts/Content: Advancement Via Individual Determination (AVID) is an academic elective course that prepares students for college readiness and success, and it is scheduled during the regular school day as a year-long course. Each week, students receive instruction that utilizes a rigorous college-preparatory curriculum provided by AVID Center, tutor-facilitated study groups, motivational activities, and academic success skills. In AVID, students participate in activities that incorporate strategies focused on writing, inquiry, collaboration, organization, and reading to support their academic growth. Additionally, students engage in activities centered around exploring college and career opportunities and their own agency.

The 11th grade AVID elective course is the first part in a junior/senior seminar course that focuses on writing and critical thinking expected of first- and second-year college students. In addition to the academic focus of the AVID seminar, there are college-bound activities, methodologies, and tasks that should be undertaken during the junior year to support students when they apply to four-year universities and confirm their postsecondary plans.

AVID curriculum books used:

AVID College and Careers

AVID College Readiness: Working with Sources

AVID Critical Thinking and Engagement

AVID Reading for Disciplinary Literacy

AVID Secondary Implementation Resource

AVID Tutorial Guide

AVID Writing for Disciplinary Literacy

Preparing for College

Supplemental materials course include the following:

AVID Weekly®, *Supporting Math in the AVID Elective*, *Write Path* content-area books, focused note-taking resources, and my.avid.org Curriculum Book Webpages

STUDENT OUTCOMES

Student Agency (SA)

- Student Empowerment
- Leadership of Others

Rigorous Academic Preparedness (AP)

- Writing
- Inquiry
- Collaboration
- Organization
- Reading

Opportunity Knowledge (OK)

- Advancing College Preparedness
- Building Career Knowledge

STUDENT AGENCY (11.SA)

Student Empowerment

1. Explore and pursue leadership opportunities in extracurricular and community service activities within the school and local and/or global community
2. Evaluate the impact of decisions on the world
3. Effectively manage stress and anxiety levels, including areas such as test preparation and test-taking
4. Create a systematic decision-making model for personal financial decisions and circumstances
5. (a) Maintain a strong support network for academic and future success
   (b) Identify mentors to influence, support, and guide future transitions and success
6. Apply strategies to support motivation, especially when lacking intrinsic motivation
7. (a) Strengthen ability to self-advocate related to areas of need
   (b) Leverage support network to assist with areas of need
8. (a) Reflect on current status and skills to strengthen mental flexibility now and in the future
   (b) Recognize and overcome obstacles that could hinder future success
9. Apply self-awareness strategies and skills with a variety of academic challenges
10. Employ key learning points in real-world applications

Leadership of Others

1. Assess personal traits connected to integrity and ethical leadership
2. Pursue leadership and/or mentorship opportunities in the school and community
3. Reflect on conflict situations to strengthen ability to deal with the emotions that accompany conflict in leadership roles

RIGOROUS ACADEMIC PREPAREDNESS (11.AP)

Writing

1. (a) Develop writing skills related to expository writing, incorporating MLA or APA format
   (b) Gather information related to the writing prompt to generate a bank of resources and information
   (c) Compose first drafts with a focus on establishing a clear purpose for the writing
2. Utilize inquiry strategies to develop additional questions as needed
3. Independently create and execute a plan for the revision process
4. Analyze the language of the writing and edit for voice, flow, and clarity
5. Publish writing to an audience outside of the classroom, such as an online forum
6. (a) Take notes with an emphasis on selecting the appropriate format for note-taking based on the note-taking objective
   (b) Take notes with an emphasis on using strategies to organize notes (e.g., indentation, bullets, outlines, skipping lines, color-coding)
7. Reflect on how notes help to meet the learning objective and contribute to academic and personal success

Inquiry

1. Use questioning techniques to think critically about content and concepts
2. Generate questions based on a misunderstood concept or problem
3. Determine modifications to the process that would be needed to solve similar problems
4. Reflect on learning to make connections between new learning and the broader world
5. Reflect throughout learning on progress and continually adjust actions on major tasks or assignments
6. Reflect throughout a process on progress and continually adjust actions
7. Develop research questions/claim statements that effectively address the research prompt
8. Determine the perspective, validity, and reliability of information found within sources with the use of multiple sources (such as books, articles, and websites)
9. Synthesize information, sources, and data that support the research prompt
10. Construct written claims and support them with reasoning and evidence
11. Publish research to an audience outside of the classroom

Collaboration

1. Negotiate roles within a collaborative group through the adoption of effective elements of collaboration
2. Integrate multiple perspectives into group projects
3. Deepen relational capacity through the creation of novel ideas and solutions
4. Interact with peers in complex situations (providing feedback, conflict management, academic discourse) while maintaining a focus on respect, trust, and empathy
5. Support all group members' understanding of key concepts
6. Utilize technology to connect to the global community and to explore topics from multiple perspectives
7. Adjust ineffective verbal and nonverbal communication into effective communication
8. Demonstrate active listening skills by asking clarifying questions
9. Demonstrate command of grammar when communicating
10. Speak effectively before the whole class

Organization

1. (a) Develop efficient, individualized routines related to using organizational tools and planning strategies to enhance academic performance
   (b) Reflect on the use of an activity log or tracking system for community extracurricular activities and hours
2. (a) Understand and demonstrate the concepts and practices of backward mapping
   (b) Identify upcoming events to proactively avoid time-management conflicts
3. Create short- and mid-range goals that support achievement of long-term goals
4. Modify goals and actions appropriately based on progress
5. Manage varied visual frameworks to organize language and show relationships between key concepts

Reading

1. Select texts and justify how they meet the reading purpose
2. Build background knowledge related to the text preview
3. Connect vocabulary within texts to broader concepts in the text
4. Create text-dependent questions while reading that align with the reading purpose
5. Extend beyond the text by analyzing how to best apply key learning

OPPORTUNITY KNOWLEDGE (11.OK)

Advancing College Preparedness

1. Refine key personal attributes for academic, social, and financial fit related to college selection
2. (a) Reflect on current GPA and how it relates to choosing a college and career path
   (b) Compare various college campus structures, services, and opportunities
3. Research and evaluate scholarship offerings, including FAFSA
4. (a) Produce long-term academic plans that align with goals
   (b) Plan for a successful transition to the next step in the academic journey
   (c) Gain exposure to pathways offering work opportunities (credentials, certifications, internships, etc.)
5. (a) Engage in information gathering to determine match, reach, and safety schools in order to mitigate "summer melt" and undermatching during the selection process

(b) Determine whether additional test prep and testing is needed to reach scholarship goals

Building Career Knowledge

1. (a) Develop an authentic and personal definition of success
   (b) Refine key personal attributes for academic, social, and financial fit related to career selection
2. (a) Gain awareness of how academic performance links to career performance and success
   (b) Expand thinking about potential career fields by encouraging discovery of a variety of career fields and the opportunities therein
   (c) Develop knowledge and gain exposure to transitional phases related to work life
3. Identify best-fit career fields based on academic, social, and financial fit to develop short- and long-term career pathways
4. Engage in real-world experiences within career fields of interest, such as service-learning projects, job-shadowing opportunities, or internship possibilities

GENERAL NOTES

Special Note: Skills acquired in this course will be implemented by the student across the curriculum. Advancement Via Individual Determination 3 (AVID 3) is a rigorous course offered by AVID Center, and content must be provided as specified by AVID Center. Students who are successful in this course will be on the appropriate pathway to success in AVID 4. Teachers must receive training from AVID Center to teach this course.

Trained AVID Elective teachers may visit avid.org, and log into their MyAVID account using their AVID username and password; then follow my.avid.org/file_sharing/default.aspx?id=24544 to access the AVID Weeks at a Glance curriculum and resources for grades 6-12.

Florida's Benchmarks for Excellent Student Thinking (B.E.S.T.) Standards
This course includes Florida's B.E.S.T. ELA Expectations (EE) and Mathematical Thinking and Reasoning Standards (MTRs) for students. Florida educators should intentionally embed these standards within the content and their instruction as applicable. For guidance on the implementation of the EEs and MTRs, please visit cpalms.org/Standards/BEST_Standards.aspx and select the appropriate B.E.S.T. Standards package.

English Language Development ELD Standards Special Notes Section:
Teachers are required to provide listening, speaking, reading and writing instruction that allows English language learners (ELL) to communicate for social and instructional purposes within the school setting. For the given level of English language proficiency and with visual, graphic, or interactive support, students will interact with grade level words, expressions, sentences and discourse to process or produce language necessary for academic success. The ELD standard should specify a relevant content area concept or topic of study chosen by curriculum developers and teachers which maximizes an ELL's need for communication and social skills. To access an ELL supporting document which delineates performance definitions and descriptors, please click on the following link: cpalms.org/uploads/docs/standards/eld/SI.pdf

VERSION REQUIREMENTS

These requirements include, but are not limited to, the Florida Standards that are most relevant to this course. Standards correlated with a specific course requirement may also be addressed by other course requirements as appropriate. Some requirements in this course are not addressed in the Florida Standards. Other subject areas and content may be used to fulfill course requirements. This course includes an agreement related to minimum standards for behavior, attendance, and participation.

QUALIFICATIONS

As well as any certification requirements listed on the course description, the following qualifications may also be acceptable for the course:

Any field when certification reflects a bachelor or higher degree.

GENERAL INFORMATION

Course Number: 1700410

Course Path: Section: Grades PreK to 12 Education Courses > **Grade Group:** Grades 9 to 12 and Adult Education Courses > **Subject:** Research and Critical Thinking > **SubSubject:** General >
Abbreviated Title: AVID 3

Number of Credits: One (1) credit

Course Length: Year (Y)

Course Type: Elective Course

Course Level: 2

Course Status: Draft - Course Pending Approval

Grade Level(s): 11

Advancement Via Individual Determination 4 (#1700420) 2022 - And Beyond

Course Standards

Name	Description
MA.K12.MTR.1.1:	Mathematicians who participate in effortful learning both individually and with others: • Analyze the problem in a way that makes sense given the task. • Ask questions that will help with solving the task. • Build perseverance by modifying methods as needed while solving a challenging task. • Stay engaged and maintain a positive mindset when working to solve tasks. • Help and support each other when attempting a new method or approach. **Clarifications:** Teachers who encourage students to participate actively in effortful learning both individually and with others: • Cultivate a community of growth mindset learners. • Foster perseverance in students by choosing tasks that are challenging. • Develop students' ability to analyze and problem solve. • Recognize students' effort when solving challenging problems.
MA.K12.MTR.2.1:	Demonstrate understanding by representing problems in multiple ways. Mathematicians who demonstrate understanding by representing problems in multiple ways: • Build understanding through modeling and using manipulatives. • Represent solutions to problems in multiple ways using objects, drawings, tables, graphs and equations. • Progress from modeling problems with objects and drawings to using algorithms and equations. • Express connections between concepts and representations. • Choose a representation based on the given context or purpose. **Clarifications:** Teachers who encourage students to demonstrate understanding by representing problems in multiple ways: • Help students make connections between concepts and representations. • Provide opportunities for students to use manipulatives when investigating concepts. • Guide students from concrete to pictorial to abstract representations as understanding progresses. • Show students that various representations can have different purposes and can be useful in different situations.
MA.K12.MTR.3.1:	Complete tasks with mathematical fluency. Mathematicians who complete tasks with mathematical fluency: • Select efficient and appropriate methods for solving problems within the given context. • Maintain flexibility and accuracy while performing procedures and mental calculations. • Complete tasks accurately and with confidence. • Adapt procedures to apply them to a new context. • Use feedback to improve efficiency when performing calculations. **Clarifications:** Teachers who encourage students to complete tasks with mathematical fluency: • Provide students with the flexibility to solve problems by selecting a procedure that allows them to solve efficiently and accurately. • Offer multiple opportunities for students to practice efficient and generalizable methods. • Provide opportunities for students to reflect on the method they used and determine if a more efficient method could have been used.
MA.K12.MTR.4.1:	Engage in discussions that reflect on the mathematical thinking of self and others. Mathematicians who engage in discussions that reflect on the mathematical thinking of self and others: • Communicate mathematical ideas, vocabulary and methods effectively. • Analyze the mathematical thinking of others. • Compare the efficiency of a method to those expressed by others. • Recognize errors and suggest how to correctly solve the task. • Justify results by explaining methods and processes. • Construct possible arguments based on evidence. **Clarifications:** Teachers who encourage students to engage in discussions that reflect on the mathematical thinking of self and others: • Establish a culture in which students ask questions of the teacher and their peers, and error is an opportunity for learning. • Create opportunities for students to discuss their thinking with peers. • Select, sequence and present student work to advance and deepen understanding of correct and increasingly efficient methods. • Develop students' ability to justify methods and compare their responses to the responses of their peers.
	Use patterns and structure to help understand and connect mathematical concepts. Mathematicians who use patterns and structure to help understand and connect mathematical concepts:

MA.K12.MTR.5.1:	• Focus on relevant details within a problem. • Create plans and procedures to logically order events, steps or ideas to solve problems. • Decompose a complex problem into manageable parts. • Relate previously learned concepts to new concepts. • Look for similarities among problems. • Connect solutions of problems to more complicated large-scale situations. **Clarifications:** Teachers who encourage students to use patterns and structure to help understand and connect mathematical concepts: • Help students recognize the patterns in the world around them and connect these patterns to mathematical concepts. • Support students to develop generalizations based on the similarities found among problems. • Provide opportunities for students to create plans and procedures to solve problems. • Develop students' ability to construct relationships between their current understanding and more sophisticated ways of thinking.
MA.K12.MTR.6.1:	Assess the reasonableness of solutions. Mathematicians who assess the reasonableness of solutions: • Estimate to discover possible solutions. • Use benchmark quantities to determine if a solution makes sense. • Check calculations when solving problems. • Verify possible solutions by explaining the methods used. • Evaluate results based on the given context. **Clarifications:** Teachers who encourage students to assess the reasonableness of solutions: • Have students estimate or predict solutions prior to solving. • Prompt students to continually ask, "Does this solution make sense? How do you know?" • Reinforce that students check their work as they progress within and after a task. • Strengthen students' ability to verify solutions through justifications.
MA.K12.MTR.7.1:	Apply mathematics to real-world contexts. Mathematicians who apply mathematics to real-world contexts: • Connect mathematical concepts to everyday experiences. • Use models and methods to understand, represent and solve problems. • Perform investigations to gather data or determine if a method is appropriate. • Redesign models and methods to improve accuracy or efficiency. **Clarifications:** Teachers who encourage students to apply mathematics to real-world contexts: • Provide opportunities for students to create models, both concrete and abstract, and perform investigations. • Challenge students to question the accuracy of their models and methods. • Support students as they validate conclusions by comparing them to the given situation. • Indicate how various concepts can be applied to other disciplines.
ELA.K12.EE.1.1:	Cite evidence to explain and justify reasoning. **Clarifications:** K-1 Students include textual evidence in their oral communication with guidance and support from adults. The evidence can consist of details from the text without naming the text. During 1st grade, students learn how to incorporate the evidence in their writing. 2-3 Students include relevant textual evidence in their written and oral communication. Students should name the text when they refer to it. In 3rd grade, students should use a combination of direct and indirect citations. 4-5 Students continue with previous skills and reference comments made by speakers and peers. Students cite texts that they've directly quoted, paraphrased, or used for information. When writing, students will use the form of citation dictated by the instructor or the style guide referenced by the instructor. 6-8 Students continue with previous skills and use a style guide to create a proper citation. 9-12 Students continue with previous skills and should be aware of existing style guides and the ways in which they differ.
ELA.K12.EE.2.1:	Read and comprehend grade-level complex texts proficiently. **Clarifications:** See Text Complexity for grade-level complexity bands and a text complexity rubric.
ELA.K12.EE.3.1:	Make inferences to support comprehension. **Clarifications:** Students will make inferences before the words infer or inference are introduced. Kindergarten students will answer questions like "Why is the girl smiling?" or make predictions about what will happen based on the title page. Students will use the terms and apply them in 2nd grade and beyond.
ELA.K12.EE.4.1:	Use appropriate collaborative techniques and active listening skills when engaging in discussions in a variety of situations. **Clarifications:** In kindergarten, students learn to listen to one another respectfully. In grades 1-2, students build upon these skills by justifying what they are thinking. For example: "I think _____ because _____." The collaborative conversations are becoming academic conversations. In grades 3-12, students engage in academic conversations discussing claims and justifying their reasoning, refining and applying skills. Students build on ideas, propel the conversation, and support claims and counterclaims with evidence.
	Use the accepted rules governing a specific format to create quality work. **Clarifications:**

ELA.K12.EE.5.1:	Students will incorporate skills learned into work products to produce quality work. For students to incorporate these skills appropriately, they must receive instruction. A 3rd grade student creating a poster board display must have instruction in how to effectively present information to do quality work.
ELA.K12.EE.6.1:	Use appropriate voice and tone when speaking or writing. **Clarifications:** In kindergarten and 1st grade, students learn the difference between formal and informal language. For example, the way we talk to our friends differs from the way we speak to adults. In 2nd grade and beyond, students practice appropriate social and academic language to discuss texts.
ELD.K12.ELL.SI.1:	English language learners communicate for social and instructional purposes within the school setting.

General Course Information and Notes

VERSION DESCRIPTION

Major Concepts/Content: Advancement Via Individual Determination (AVID) is an academic elective course that prepares students for college readiness and success, and it is scheduled during the regular school day as a year-long course. Each week, students receive instruction that utilizes a rigorous college-preparatory curriculum provided by AVID Center, tutor-facilitated study groups, motivational activities, and academic success skills. In AVID, students participate in activities that incorporate strategies focused on writing, inquiry, collaboration, organization, and reading to support their academic growth. Additionally, students engage in activities centered around exploring college and career opportunities and their own agency.

The 12th grade AVID elective course is the second part in a junior/senior seminar course that focuses on the writing and critical thinking expected of first- and second-year college students. Students will complete a final research essay project with research skills gained in their junior year in AVID. In addition to the academic focus of the AVID senior seminar, there are college-bound activities, methodologies, and tasks that should be achieved during the senior year that supports students as they apply to four-year universities and confirm their postsecondary plans. All AVID seniors are required to develop and present a portfolio representing their years of work in the AVID program, as well as complete the requirements for the seminar course.

AVID curriculum books used:

AVID College and Careers

AVID College Readiness: Working with Sources

AVID Critical Thinking and Engagement

AVID Reading for Disciplinary Literacy

AVID Secondary Implementation Resource

AVID Tutorial Guide

AVID Writing for Disciplinary Literacy

Preparing for College

Supplemental materials course include the following:

AVID Weekly®, *Supporting Math in the AVID Elective*, *Write Path* content-area books, focused note-taking resources, and my.avid.org Curriculum Book Webpages

STUDENT OUTCOMES

Student Agency (SA)

- Student Empowerment
- Leadership of Others

Rigorous Academic Preparedness (AP)

- Writing
- Inquiry
- Collaboration
- Organization
- Reading

Opportunity Knowledge (OK)

- Advancing College Preparedness
- Building Career Knowledge

STUDENT AGENCY (12.SA)

Student Empowerment

1. Act as a globally and digitally aware, responsible, and contributing citizen
2. Evaluate the impact of decisions on others and the world
3. Attend to personal health, safety, and balance (including digital security)
4. Make appropriate personal financial choices
5. Generate and maintain a network of support for current and future success
6. Develop, demonstrate, and maintain motivation
7. Self-monitor and seek help when necessary
8. Demonstrate persistence, flexibility, and adaptability
9. Demonstrate self-awareness strategies and skills
10. Apply learning to demonstrate knowledge and achieve success

Leadership of Others

1. Demonstrate integrity and ethical leadership, including online
2. Pursue leadership opportunities and hold leadership positions
3. Manage and resolve conflict with others

RIGOROUS ACADEMIC PREPAREDNESS (12.AP)

Writing

1. Compose a variety of text types
2. Analyze a writing task
3. Revise writing to improve clarity and accomplish the writing purpose
4. Polish writing through editing and proofreading
5. Publish writing by distributing it to varied audiences
6. Take notes to meet the note-taking objective
7. Summarize and reflect to synthesize learning and identify next steps

Inquiry

1. Use questioning techniques to engage in discussions and think critically about content and concepts
2. Identify specific questions based on a misunderstood concept or problem
3. Upon arriving at a solution, identify generalized steps/processes that could be used to solve similar problems
4. Make connections between new learning and previous learning, experiences, self, and/or the world
5. Continuously reflect and modify actions to promote learning and academic success
6. Reflect on and modify actions related to successful utilization of a process
7. Identify topics/questions to be investigated and include source material on opposing sides of the topic
8. Evaluate the validity and reliability of both digital and print sources
9. Synthesize and organize information effectively, including usage of digital tools
10. Cite evidence and support claims
11. Present research findings, customizing the presentation for the intended audience

Collaboration

1. Share responsibility among group members
2. Work productively and effectively in diverse teams with diverse perspectives
3. Establish and maintain relational capacity with others
4. Respect individual contributions
5. Support group members in clarifying confusion and checking for understanding
6. Utilize technology as a tool for collaboration both synchronously and asynchronously
7. Clearly communicate verbally and nonverbally, including appropriate usage of technology
8. Listen effective to decipher meaning
9. Demonstrate a command of language and grammar usage when communicating
10. Adapt speech to a variety of contexts and communicative tasks

Organization

1. Routinely utilize organizational systems to access and archive materials efficiently
2. Organize and allocate time based on priorities and task completion
3. Identify and plan for the steps necessary to accomplish various types of goals
4. Monitor progress toward goals and revise appropriately, leveraging technology
5. Organize information, indicating relationships between ideas

Reading

1. Select a text according to the reading purpose
2. Preview text to connect or build background knowledge
3. Examine key academic and content-related vocabulary to deepen comprehension of texts
4. Interact with the text to process information as it is read
5. Extend beyond the text by using academic thinking skills (applying, analyzing, evaluating, and/or synthesizing key learning)

OPPORTUNITY KNOWLEDGE (12.OK)

Advancing College Preparedness

1. Develop an awareness of personal abilities, skills, and interests related to college selection
2. Expand understanding around key college information
3. understand scholarships and the role they play in financing college
4. Plan a path for education and college aligned to personal goals
5. Complete college admission requirements, including testing and application

Building Career Knowledge

1. Develop an awareness of personal abilities, skills and interests related to career and career selection
2. Expand understanding around key career-related information
3. Develop skills and attitudes related to career readiness
4. Plan a path for education and career aligned to personal goals

GENERAL NOTES

Special Note: Skills acquired in this course will be implemented by the student across the curriculum. Advancement Via Individual Determination 4 (AVID 4) is a rigorous course offered by AVID Center, and content must be provided as specified by AVID Center. Teachers must receive training from AVID Center to teach this course.

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English Language Development ELD Standards Special Notes Section:
Teachers are required to provide listening, speaking, reading and writing instruction that allows English language learners (ELL) to communicate for social and instructional purposes within the school setting. For the given level of English language proficiency and with visual, graphic, or interactive support, students will interact with grade level words, expressions, sentences and discourse to process or produce language necessary for academic success. The ELD standard should specify a relevant content area concept or topic of study chosen by curriculum developers and teachers which maximizes an ELL's need for communication and social skills. To access an ELL supporting document which delineates performance definitions and descriptors, please click on the following link: cpalms.org/uploads/docs/standards/eld/SI.pdf

VERSION REQUIREMENTS

These requirements include, but are not limited to, the Florida Standards that are most relevant to this course. Standards correlated with a specific course requirement may also be addressed by other course requirements as appropriate. Some requirements in this course are not addressed in the Florida Standards. Other subject areas and content may be used to fulfill course requirements. This course includes an agreement related to minimum standards for behavior, attendance, and participation.

QUALIFICATIONS

As well as any certification requirements listed on the course description, the following qualifications may also be acceptable for the course:

Any field when certification reflects a bachelor or higher degree.

GENERAL INFORMATION

Course Number: 1700420

Course Path: Section: Grades PreK to 12 Education Courses > **Grade Group:** Grades 9 to 12 and Adult Education Courses > **Subject:** Research and Critical Thinking > **SubSubject:** General >

Abbreviated Title: AVID 4

Number of Credits: One (1) credit

Course Length: Year (Y)

Course Type: Elective Course

Course Level: 2

Course Status: Draft - Course Pending Approval

Grade Level(s): 12

GEAR Up 1 (#1700600) 2022 - And Beyond

Course Standards

The following standards are also included in this course to support students' understanding of the course objectives.

- Evaluate the impact of decisions on others.
- Establish understanding of concepts and content-specific vocabulary related to personal finance.
- Identify the characteristics of positive, healthy relationships.
- Explore individual peer relationships and identify those that are positive and healthy.
- Demonstrate an understanding of positive self-worth and recognize limits in the emotional capacity of individuals.
- Identify personal attributes as areas of strength or weakness; Differentiate between individual strengths and weaknesses as motivators and/or limiters.
- Celebrate self-advocacy as a personal strength.
- Accept weaknesses as an opportunity for change.
- Select tools to analyze a conflict and identify a positive solution.
- Classify passive, assertive, and aggressive statements.
- Establish norms and expectations around shared responsibility among group members.
- Distinguish between effective and ineffective language during interactions.
- Refine usage of non-verbal communication when speaking, including body language and eye contact.

Name	Description
MA.912.AR.2.1:	Given a real-world context, write and solve one-variable multi-step linear equations.
MA.912.AR.2.5:	Solve and graph mathematical and real-world problems that are modeled with linear functions. Interpret key features and determine constraints in terms of the context. **Clarifications:** *Clarification 1*: Key features are limited to domain, range, intercepts and rate of change. *Clarification 2*: Instruction includes the use of standard form, slope-intercept form and point-slope form. *Clarification 3*: Instruction includes representing the domain, range and constraints with inequality notation, interval notation or set-builder notation. *Clarification 4*: Within the Algebra 1 course, notations for domain, range and constraints are limited to inequality and set-builder. *Clarification 5*: Within the Mathematics for Data and Financial Literacy course, problem types focus on money and business.
MA.912.AR.5.3:	Given a mathematical or real-world context, classify an exponential function as representing growth or decay. **Clarifications:** *Clarification 1:* Within the Algebra 1 course, exponential functions are limited to the forms $f(x) = ab^x$, where b is a whole number greater than 1 or a unit fraction, or $f(x) = a(1 \pm r)^x$, where $0 < r < 1$.
MA.912.DP.1.2:	Interpret data distributions represented in various ways. State whether the data is numerical or categorical, whether it is univariate or bivariate and interpret the different components and quantities in the display. **Clarifications:** *Clarification 1*: Within the Probability and Statistics course, instruction includes the use of spreadsheets and technology.
MA.912.F.1.3:	Calculate and interpret the average rate of change of a real-world situation represented graphically, algebraically or in a table over a specified interval. **Clarifications:** *Clarification 1*: Instruction includes making the connection to determining the slope of a particular line segment.
MA.912.FL.1.2:	Extend previous knowledge of ratios and proportional relationships to solve real-world problems involving money and business.
MA.912.FL.2.1:	Given assets and liabilities, calculate net worth using spreadsheets and other technology. **Clarifications:** *Clarification 1*: Instruction includes net worth for a business and for an individual. *Clarification 2*: Instruction includes understanding the difference between a capital asset and a liquid asset. *Clarification 3*: Instruction includes displaying net worth over time in a table or graph.
MA.912.FL.3.1:	Compare simple, compound and continuously compounded interest over time. **Clarifications:** *Clarification 1*: Instruction includes taking into consideration the annual percentage rate (APR) when comparing simple and compound interest.
MA.912.FL.3.3:	Solve real-world problems involving present value and future value of money
MA.912.FL.3.5:	Compare the advantages and disadvantages of using cash versus personal financing options. **Clarifications:** *Clarification 1*: Instruction includes advantages and disadvantages for a business and for an individual. *Clarification 2*: Personal financing options include debit cards, credit cards, installment plans and loans.
	Mathematicians who participate in effortful learning both individually and with others: • Analyze the problem in a way that makes sense given the task.

- Ask questions that will help with solving the task.
- Build perseverance by modifying methods as needed while solving a challenging task.
- Stay engaged and maintain a positive mindset when working to solve tasks.
- Help and support each other when attempting a new method or approach.

MA.K12.MTR.1.1:

Clarifications:
Teachers who encourage students to participate actively in effortful learning both individually and with others:
- Cultivate a community of growth mindset learners.
- Foster perseverance in students by choosing tasks that are challenging.
- Develop students' ability to analyze and problem solve.
- Recognize students' effort when solving challenging problems.

Demonstrate understanding by representing problems in multiple ways.
Mathematicians who demonstrate understanding by representing problems in multiple ways:

- Build understanding through modeling and using manipulatives.
- Represent solutions to problems in multiple ways using objects, drawings, tables, graphs and equations.
- Progress from modeling problems with objects and drawings to using algorithms and equations.
- Express connections between concepts and representations.
- Choose a representation based on the given context or purpose.

MA.K12.MTR.2.1:

Clarifications:
Teachers who encourage students to demonstrate understanding by representing problems in multiple ways:
- Help students make connections between concepts and representations.
- Provide opportunities for students to use manipulatives when investigating concepts.
- Guide students from concrete to pictorial to abstract representations as understanding progresses.
- Show students that various representations can have different purposes and can be useful in different situations.

Complete tasks with mathematical fluency.
Mathematicians who complete tasks with mathematical fluency:

- Select efficient and appropriate methods for solving problems within the given context.
- Maintain flexibility and accuracy while performing procedures and mental calculations.
- Complete tasks accurately and with confidence.
- Adapt procedures to apply them to a new context.
- Use feedback to improve efficiency when performing calculations.

MA.K12.MTR.3.1:

Clarifications:
Teachers who encourage students to complete tasks with mathematical fluency:
- Provide students with the flexibility to solve problems by selecting a procedure that allows them to solve efficiently and accurately.
- Offer multiple opportunities for students to practice efficient and generalizable methods.
- Provide opportunities for students to reflect on the method they used and determine if a more efficient method could have been used.

Engage in discussions that reflect on the mathematical thinking of self and others.
Mathematicians who engage in discussions that reflect on the mathematical thinking of self and others:

- Communicate mathematical ideas, vocabulary and methods effectively.
- Analyze the mathematical thinking of others.
- Compare the efficiency of a method to those expressed by others.
- Recognize errors and suggest how to correctly solve the task.
- Justify results by explaining methods and processes.
- Construct possible arguments based on evidence.

MA.K12.MTR.4.1:

Clarifications:
Teachers who encourage students to engage in discussions that reflect on the mathematical thinking of self and others:
- Establish a culture in which students ask questions of the teacher and their peers, and error is an opportunity for learning.
- Create opportunities for students to discuss their thinking with peers.
- Select, sequence and present student work to advance and deepen understanding of correct and increasingly efficient methods.
- Develop students' ability to justify methods and compare their responses to the responses of their peers.

Use patterns and structure to help understand and connect mathematical concepts.
Mathematicians who use patterns and structure to help understand and connect mathematical concepts:

- Focus on relevant details within a problem.
- Create plans and procedures to logically order events, steps or ideas to solve problems.
- Decompose a complex problem into manageable parts.
- Relate previously learned concepts to new concepts.
- Look for similarities among problems.
- Connect solutions of problems to more complicated large-scale situations.

MA.K12.MTR.5.1:

Clarifications:
Teachers who encourage students to use patterns and structure to help understand and connect mathematical concepts:
- Help students recognize the patterns in the world around them and connect these patterns to mathematical concepts.
- Support students to develop generalizations based on the similarities found among problems.
- Provide opportunities for students to create plans and procedures to solve problems.
- Develop students' ability to construct relationships between their current understanding and more sophisticated ways of thinking.

Assess the reasonableness of solutions.
Mathematicians who assess the reasonableness of solutions:

MA.K12.MTR.6.1:	• Estimate to discover possible solutions. • Use benchmark quantities to determine if a solution makes sense. • Check calculations when solving problems. • Verify possible solutions by explaining the methods used. • Evaluate results based on the given context. **Clarifications:** Teachers who encourage students to assess the reasonableness of solutions: • Have students estimate or predict solutions prior to solving. • Prompt students to continually ask, "Does this solution make sense? How do you know?" • Reinforce that students check their work as they progress within and after a task. • Strengthen students' ability to verify solutions through justifications.
MA.K12.MTR.7.1:	Apply mathematics to real-world contexts. Mathematicians who apply mathematics to real-world contexts: • Connect mathematical concepts to everyday experiences. • Use models and methods to understand, represent and solve problems. • Perform investigations to gather data or determine if a method is appropriate. • Redesign models and methods to improve accuracy or efficiency. **Clarifications:** Teachers who encourage students to apply mathematics to real-world contexts: • Provide opportunities for students to create models, both concrete and abstract, and perform investigations. • Challenge students to question the accuracy of their models and methods. • Support students as they validate conclusions by comparing them to the given situation. • Indicate how various concepts can be applied to other disciplines.
ELA.9.C.1.5:	Improve writing by considering feedback from adults, peers, and/or online editing tools, revising for clarity and cohesiveness.
ELA.9.C.2.1:	Present information orally, with a logical organization and coherent focus, with credible evidence, creating a clear perspective. **Clarifications:** *Clarification 1*: At this grade level, the emphasis is on the content, but students are still expected to follow earlier expectations: volume, pronunciation, and pacing. A clear perspective is the through-line that unites the elements of the presentation. *Clarification 2*: For further guidance, see the Secondary Oral Communication Rubric.
ELA.9.C.3.1:	Follow the rules of standard English grammar, punctuation, capitalization, and spelling appropriate to grade level. **Clarifications:** *Clarification 1*: Skills to be implemented but not yet mastered are as follows: • Add variety to writing or presentations by using parallel structure and various types of phrases and clauses. • Use knowledge of usage rules to create flow in writing and presenting. *Clarification 2*: See Convention Progression by Grade Level.
ELA.9.C.4.1:	Conduct research to answer a question, drawing on multiple reliable and valid sources, and refining the scope of the question to align with findings. **Clarifications:** *Clarification 1*: There is no requirement that students research the additional questions generated.
ELA.9.C.5.1:	Create digital presentations with coherent ideas and a clear perspective. **Clarifications:** *Clarification 1*: The presentation may be delivered live or delivered as a stand-alone digital experience.
ELA.9.V.1.1:	Integrate academic vocabulary appropriate to grade level in speaking and writing. **Clarifications:** *Clarification 1*: To integrate vocabulary, students will apply the vocabulary they have learned to authentic speaking and writing tasks independently. This use should be intentional, beyond responding to a prompt to use a word in a sentence. *Clarification 2*: Academic vocabulary appropriate to grade level refers to words that are likely to appear across subject areas for the current grade level and beyond, vital to comprehension, critical for academic discussions and writing, and usually require explicit instruction.
ELA.K12.EE.1.1:	Cite evidence to explain and justify reasoning. **Clarifications:** K-1 Students include textual evidence in their oral communication with guidance and support from adults. The evidence can consist of details from the text without naming the text. During 1st grade, students learn how to incorporate the evidence in their writing. 2-3 Students include relevant textual evidence in their written and oral communication. Students should name the text when they refer to it. In 3rd grade, students should use a combination of direct and indirect citations. 4-5 Students continue with previous skills and reference comments made by speakers and peers. Students cite texts that they've directly quoted, paraphrased, or used for information. When writing, students will use the form of citation dictated by the instructor or the style guide referenced by the instructor. 6-8 Students continue with previous skills and use a style guide to create a proper citation. 9-12 Students continue with previous skills and should be aware of existing style guides and the ways in which they differ.
ELA.K12.EE.2.1:	Read and comprehend grade-level complex texts proficiently. **Clarifications:** See Text Complexity for grade-level complexity bands and a text complexity rubric.
ELA.K12.EE.3.1:	Make inferences to support comprehension. **Clarifications:** Students will make inferences before the words infer or inference are introduced. Kindergarten students will answer questions like "Why is the girl

	smiling?" or make predictions about what will happen based on the title page. Students will use the terms and apply them in 2nd grade and beyond.
ELA.K12.EE.4.1:	Use appropriate collaborative techniques and active listening skills when engaging in discussions in a variety of situations. **Clarifications:** In kindergarten, students learn to listen to one another respectfully. In grades 1-2, students build upon these skills by justifying what they are thinking. For example: "I think _____ because _____." The collaborative conversations are becoming academic conversations. In grades 3-12, students engage in academic conversations discussing claims and justifying their reasoning, refining and applying skills. Students build on ideas, propel the conversation, and support claims and counterclaims with evidence.
ELA.K12.EE.5.1:	Use the accepted rules governing a specific format to create quality work. **Clarifications:** Students will incorporate skills learned into work products to produce quality work. For students to incorporate these skills appropriately, they must receive instruction. A 3rd grade student creating a poster board display must have instruction in how to effectively present information to do quality work.
ELA.K12.EE.6.1:	Use appropriate voice and tone when speaking or writing. **Clarifications:** In kindergarten and 1st grade, students learn the difference between formal and informal language. For example, the way we talk to our friends differs from the way we speak to adults. In 2nd grade and beyond, students practice appropriate social and academic language to discuss texts.
SS.912.E.1.13:	Explain the basic functions and characteristics of money, and describe the composition of the money supply in the United States.
SS.912.P.12.2:	Define processes involved in problem solving and decision making. **Clarifications:** Examples may include, but are not limited to, identification, analysis, solution generation, plan, implement, and evaluate.
SS.912.P.12.4:	Describe obstacles to problem solving. **Clarifications:** Examples may include, but are not limited to, fixation and functional fixedness.
SS.912.P.12.5:	Describe obstacles to decision making. **Clarifications:** Examples may include, but are not limited to, confirmation bias, counterproductive heuristics, and overconfidence.
HE.912.B.4.3:	Demonstrate strategies to prevent, manage, or resolve interpersonal conflicts without harming self or others. **Clarifications:** Effective verbal and nonverbal communication, compromise, and conflict-resolution.
HE.912.B.5.4:	Assess whether individual or collaborative decision making is needed to make a healthy decision. **Clarifications:** Planning a post-high school career/education, purchasing the family's groceries for the week, planning the weekly menu, planning appropriate activities for siblings, community planning, Internet safety, and purchasing insurance.
HE.912.B.5.5:	Examine barriers that can hinder healthy decision making. **Clarifications:** Interpersonal, financial, environmental factors, and accessibility of health information.
PE.912.C.2.20:	Identify appropriate methods to resolve physical conflict.
PE.912.L.3.3:	Identify a variety of activities that promote effective stress management.
ELD.K12.ELL.SI.1:	English language learners communicate for social and instructional purposes within the school setting.

General Course Information and Notes

GENERAL NOTES

Gaining Early Awareness and Readiness for Undergraduate Programs (GEAR UP) is a program designed to increase students' aspirations toward high school and beyond and ultimately increase the number of students who are prepared to enter and succeed in postsecondary education.

The purpose of this course is to prepare students for college readiness and success. Students will receive instruction, supported by state standards, in areas that include:

- **Student Agency** - activities that focus on student initiative, problem solving, decision making, leadership, and community involvement;
- **Rigorous Academic Preparedness -** academic success skills with activities that focus on writing, mathematics, collaboration, public speaking, and organization; and
- **College and Careers** - activities related to college preparation and building career knowledge.

This course will target students in the academic middle with the desire to attend college and the willingness to work hard. Through participation in this course, students will be well equipped to access and complete rigorous courses with the end goal being matriculation into and completion of postsecondary educational programs.

Eligibility for this course could be be determined by the student's grade 8 FSA scores and Lexile levels. Students scoring at FSA Levels 2/3 and with a Lexile level = 680 could be given priority for this course.

English Language Development (ELD) Standards Special Notes Section:

Teachers are required to provide listening, speaking, reading and writing instruction that allows English language learners (ELL) to communicate for social and instructional purposes within the school setting. For the given level of English language proficiency and with visual, graphic, or interactive support, students will interact with grade level words, expressions, sentences and discourse to process or produce language necessary for academic success. The ELD standard should specify a relevant content area concept or topic of study chosen by curriculum developers and teachers which maximizes an ELL's need for communication and social skills. To access an ELL supporting document which delineates performance definitions and descriptors, please click on the following link: cpalms.org/uploads/docs/standards/eld/SI.pdf.

QUALIFICATIONS

As well as any certification requirements listed on the course description, the following qualifications may also be acceptable for the course:

Any field when certification reflects a bachelor or higher degree.

GENERAL INFORMATION

Course Number: 1700600

Course Path: Section: Grades PreK to 12 Education Courses > **Grade Group:** Grades 9 to 12 and Adult Education Courses > **Subject:** Research and Critical Thinking > **SubSubject:** General >

Abbreviated Title: GEAR UP 1

Number of Credits: One (1) credit

Course Length: Year (Y)

Course Type: Elective Course

Course Level: 2

Course Status: Draft - Course Pending Approval

GEAR Up 2 (#1700610) 2022 - And Beyond

Course Standards

The following standards are also included in this course to support students' understanding of the course objectives.

- Evaluate the impact of decisions on others.
- Increase awareness and apply basic concepts of budgeting, spending, and making responsible financial decisions.
- Develop a support network, including peers and adults, for academic and future success.
- Demonstrate an understanding of positive self-worth and recognize limits in the emotional capacity of individuals.
- Identify personal attributes as areas of strength or weakness; Differentiate between individual strengths and weaknesses as motivators and/or limiters.
- Celebrate self-advocacy as a personal strength.
- Accept weaknesses as an opportunity for change.
- Identify personal conflict management style.
- Transform passive and aggressive statements into constructive, assertive statements.
- Hold self and peers accountable for following group norms about shared responsibility.
- Distinguish between effective and ineffective language during interactions.
- Refine usage of non-verbal communication when speaking, including body language and eye contact.

Name	Description
MA.912.AR.2.1:	Given a real-world context, write and solve one-variable multi-step linear equations.
MA.912.AR.2.5:	Solve and graph mathematical and real-world problems that are modeled with linear functions. Interpret key features and determine constraints in terms of the context. **Clarifications:** *Clarification 1*: Key features are limited to domain, range, intercepts and rate of change. *Clarification 2*: Instruction includes the use of standard form, slope-intercept form and point-slope form. *Clarification 3*: Instruction includes representing the domain, range and constraints with inequality notation, interval notation or set-builder notation. *Clarification 4*: Within the Algebra 1 course, notations for domain, range and constraints are limited to inequality and set-builder. *Clarification 5*: Within the Mathematics for Data and Financial Literacy course, problem types focus on money and business.
MA.912.AR.5.3:	Given a mathematical or real-world context, classify an exponential function as representing growth or decay. **Clarifications:** *Clarification 1:* Within the Algebra 1 course, exponential functions are limited to the forms $f(x) = ab^x$, where b is a whole number greater than 1 or a unit fraction, or $f(x) = a(1 \pm r)^x$, where $0 < r < 1$.
MA.912.DP.1.2:	Interpret data distributions represented in various ways. State whether the data is numerical or categorical, whether it is univariate or bivariate and interpret the different components and quantities in the display. **Clarifications:** *Clarification 1*: Within the Probability and Statistics course, instruction includes the use of spreadsheets and technology.
MA.912.F.1.3:	Calculate and interpret the average rate of change of a real-world situation represented graphically, algebraically or in a table over a specified interval. **Clarifications:** *Clarification 1*: Instruction includes making the connection to determining the slope of a particular line segment.
MA.912.FL.1.2:	Extend previous knowledge of ratios and proportional relationships to solve real-world problems involving money and business.
MA.912.FL.2.1:	Given assets and liabilities, calculate net worth using spreadsheets and other technology. **Clarifications:** *Clarification 1*: Instruction includes net worth for a business and for an individual. *Clarification 2*: Instruction includes understanding the difference between a capital asset and a liquid asset. *Clarification 3*: Instruction includes displaying net worth over time in a table or graph.
MA.912.FL.3.1:	Compare simple, compound and continuously compounded interest over time. **Clarifications:** *Clarification 1*: Instruction includes taking into consideration the annual percentage rate (APR) when comparing simple and compound interest.
MA.912.FL.3.3:	Solve real-world problems involving present value and future value of money
MA.912.FL.3.5:	Compare the advantages and disadvantages of using cash versus personal financing options. **Clarifications:** *Clarification 1*: Instruction includes advantages and disadvantages for a business and for an individual. *Clarification 2*: Personal financing options include debit cards, credit cards, installment plans and loans.
	Mathematicians who participate in effortful learning both individually and with others: • Analyze the problem in a way that makes sense given the task. • Ask questions that will help with solving the task.

	• Build perseverance by modifying methods as needed while solving a challenging task. • Stay engaged and maintain a positive mindset when working to solve tasks. • Help and support each other when attempting a new method or approach.
MA.K12.MTR.1.1:	**Clarifications:** Teachers who encourage students to participate actively in effortful learning both individually and with others: • Cultivate a community of growth mindset learners. • Foster perseverance in students by choosing tasks that are challenging. • Develop students' ability to analyze and problem solve. • Recognize students' effort when solving challenging problems.
	Demonstrate understanding by representing problems in multiple ways. Mathematicians who demonstrate understanding by representing problems in multiple ways: • Build understanding through modeling and using manipulatives. • Represent solutions to problems in multiple ways using objects, drawings, tables, graphs and equations. • Progress from modeling problems with objects and drawings to using algorithms and equations. • Express connections between concepts and representations. • Choose a representation based on the given context or purpose.
MA.K12.MTR.2.1:	**Clarifications:** Teachers who encourage students to demonstrate understanding by representing problems in multiple ways: • Help students make connections between concepts and representations. • Provide opportunities for students to use manipulatives when investigating concepts. • Guide students from concrete to pictorial to abstract representations as understanding progresses. • Show students that various representations can have different purposes and can be useful in different situations.
	Complete tasks with mathematical fluency. Mathematicians who complete tasks with mathematical fluency: • Select efficient and appropriate methods for solving problems within the given context. • Maintain flexibility and accuracy while performing procedures and mental calculations. • Complete tasks accurately and with confidence. • Adapt procedures to apply them to a new context. • Use feedback to improve efficiency when performing calculations.
MA.K12.MTR.3.1:	**Clarifications:** Teachers who encourage students to complete tasks with mathematical fluency: • Provide students with the flexibility to solve problems by selecting a procedure that allows them to solve efficiently and accurately. • Offer multiple opportunities for students to practice efficient and generalizable methods. • Provide opportunities for students to reflect on the method they used and determine if a more efficient method could have been used.
	Engage in discussions that reflect on the mathematical thinking of self and others. Mathematicians who engage in discussions that reflect on the mathematical thinking of self and others: • Communicate mathematical ideas, vocabulary and methods effectively. • Analyze the mathematical thinking of others. • Compare the efficiency of a method to those expressed by others. • Recognize errors and suggest how to correctly solve the task. • Justify results by explaining methods and processes. • Construct possible arguments based on evidence.
MA.K12.MTR.4.1:	**Clarifications:** Teachers who encourage students to engage in discussions that reflect on the mathematical thinking of self and others: • Establish a culture in which students ask questions of the teacher and their peers, and error is an opportunity for learning. • Create opportunities for students to discuss their thinking with peers. • Select, sequence and present student work to advance and deepen understanding of correct and increasingly efficient methods. • Develop students' ability to justify methods and compare their responses to the responses of their peers.
	Use patterns and structure to help understand and connect mathematical concepts. Mathematicians who use patterns and structure to help understand and connect mathematical concepts: • Focus on relevant details within a problem. • Create plans and procedures to logically order events, steps or ideas to solve problems. • Decompose a complex problem into manageable parts. • Relate previously learned concepts to new concepts. • Look for similarities among problems. • Connect solutions of problems to more complicated large-scale situations.
MA.K12.MTR.5.1:	**Clarifications:** Teachers who encourage students to use patterns and structure to help understand and connect mathematical concepts: • Help students recognize the patterns in the world around them and connect these patterns to mathematical concepts. • Support students to develop generalizations based on the similarities found among problems. • Provide opportunities for students to create plans and procedures to solve problems. • Develop students' ability to construct relationships between their current understanding and more sophisticated ways of thinking.
	Assess the reasonableness of solutions. Mathematicians who assess the reasonableness of solutions: • Estimate to discover possible solutions.

MA.K12.MTR.6.1:	• Use benchmark quantities to determine if a solution makes sense. • Check calculations when solving problems. • Verify possible solutions by explaining the methods used. • Evaluate results based on the given context. **Clarifications:** Teachers who encourage students to assess the reasonableness of solutions: • Have students estimate or predict solutions prior to solving. • Prompt students to continually ask, "Does this solution make sense? How do you know?" • Reinforce that students check their work as they progress within and after a task. • Strengthen students' ability to verify solutions through justifications.
MA.K12.MTR.7.1:	Apply mathematics to real-world contexts. Mathematicians who apply mathematics to real-world contexts: • Connect mathematical concepts to everyday experiences. • Use models and methods to understand, represent and solve problems. • Perform investigations to gather data or determine if a method is appropriate. • Redesign models and methods to improve accuracy or efficiency. **Clarifications:** Teachers who encourage students to apply mathematics to real-world contexts: • Provide opportunities for students to create models, both concrete and abstract, and perform investigations. • Challenge students to question the accuracy of their models and methods. • Support students as they validate conclusions by comparing them to the given situation. • Indicate how various concepts can be applied to other disciplines.
ELA.10.C.1.5:	Improve writing by considering feedback from adults, peers, and/or online editing tools, revising to address the needs of a specific audience.
ELA.10.C.2.1:	Present information orally, with a logical organization and coherent focus, with credible evidence, creating a clear perspective. **Clarifications:** *Clarification 1*: At this grade level, the emphasis is on the content, but students are still expected to follow earlier expectations: volume, pronunciation, and pacing. A clear perspective is the through-line that unites the elements of the presentation. *Clarification 2*: For further guidance, see the Secondary Oral Communication Rubric.
ELA.10.C.3.1:	Follow the rules of standard English grammar, punctuation, capitalization, and spelling appropriate to grade level. **Clarifications:** *Clarification 1*: Skills to be mastered at this grade level are as follows: • Add variety to writing or presentations by using parallel structure and various types of phrases and clauses. Skills to be implemented but not yet mastered are as follows: • Use knowledge of usage rules to create flow in writing and presenting. *Clarification 2*: See Convention Progression by Grade Level for more information.
ELA.10.C.4.1:	Conduct research to answer a question, refining the scope of the question to align with findings, and synthesizing information from multiple reliable and valid sources. **Clarifications:** *Clarification 1*: While the benchmark does require that students consult multiple sources, there is no requirement that they use every source they consult. Part of the skill in researching is discernment—being able to tell which information is relevant and which sources are trustworthy enough to include.
ELA.10.C.5.1:	Create digital presentations to improve understanding of findings, reasoning, and evidence. **Clarifications:** *Clarification 1*: The presentation may be delivered live or delivered as a stand-alone digital experience.
ELA.K12.EE.1.1:	Cite evidence to explain and justify reasoning. **Clarifications:** K-1 Students include textual evidence in their oral communication with guidance and support from adults. The evidence can consist of details from the text without naming the text. During 1st grade, students learn how to incorporate the evidence in their writing. 2-3 Students include relevant textual evidence in their written and oral communication. Students should name the text when they refer to it. In 3rd grade, students should use a combination of direct and indirect citations. 4-5 Students continue with previous skills and reference comments made by speakers and peers. Students cite texts that they've directly quoted, paraphrased, or used for information. When writing, students will use the form of citation dictated by the instructor or the style guide referenced by the instructor. 6-8 Students continue with previous skills and use a style guide to create a proper citation. 9-12 Students continue with previous skills and should be aware of existing style guides and the ways in which they differ.
ELA.K12.EE.2.1:	Read and comprehend grade-level complex texts proficiently. **Clarifications:** See Text Complexity for grade-level complexity bands and a text complexity rubric.
ELA.K12.EE.3.1:	Make inferences to support comprehension. **Clarifications:** Students will make inferences before the words infer or inference are introduced. Kindergarten students will answer questions like "Why is the girl smiling?" or make predictions about what will happen based on the title page. Students will use the terms and apply them in 2nd grade and beyond.
	Use appropriate collaborative techniques and active listening skills when engaging in discussions in a variety of situations. **Clarifications:** In kindergarten, students learn to listen to one another respectfully.

ELA.K12.EE.4.1:	In grades 1-2, students build upon these skills by justifying what they are thinking. For example: "I think _____ because _____." The collaborative conversations are becoming academic conversations. In grades 3-12, students engage in academic conversations discussing claims and justifying their reasoning, refining and applying skills. Students build on ideas, propel the conversation, and support claims and counterclaims with evidence.
ELA.K12.EE.5.1:	Use the accepted rules governing a specific format to create quality work. **Clarifications:** Students will incorporate skills learned into work products to produce quality work. For students to incorporate these skills appropriately, they must receive instruction. A 3rd grade student creating a poster board display must have instruction in how to effectively present information to do quality work.
ELA.K12.EE.6.1:	Use appropriate voice and tone when speaking or writing. **Clarifications:** In kindergarten and 1st grade, students learn the difference between formal and informal language. For example, the way we talk to our friends differs from the way we speak to adults. In 2nd grade and beyond, students practice appropriate social and academic language to discuss texts.
SS.912.E.1.13:	Explain the basic functions and characteristics of money, and describe the composition of the money supply in the United States.
SS.912.P.12.2:	Define processes involved in problem solving and decision making. **Clarifications:** Examples may include, but are not limited to, identification, analysis, solution generation, plan, implement, and evaluate.
SS.912.P.12.4:	Describe obstacles to problem solving. **Clarifications:** Examples may include, but are not limited to, fixation and functional fixedness.
SS.912.P.12.5:	Describe obstacles to decision making. **Clarifications:** Examples may include, but are not limited to, confirmation bias, counterproductive heuristics, and overconfidence.
HE.912.B.4.3:	Demonstrate strategies to prevent, manage, or resolve interpersonal conflicts without harming self or others. **Clarifications:** Effective verbal and nonverbal communication, compromise, and conflict-resolution.
HE.912.B.5.4:	Assess whether individual or collaborative decision making is needed to make a healthy decision. **Clarifications:** Planning a post-high school career/education, purchasing the family's groceries for the week, planning the weekly menu, planning appropriate activities for siblings, community planning, Internet safety, and purchasing insurance.
HE.912.B.5.5:	Examine barriers that can hinder healthy decision making. **Clarifications:** Interpersonal, financial, environmental factors, and accessibility of health information.
PE.912.C.2.20:	Identify appropriate methods to resolve physical conflict.
PE.912.L.3.3:	Identify a variety of activities that promote effective stress management.
ELD.K12.ELL.SI.1:	English language learners communicate for social and instructional purposes within the school setting.

General Course Information and Notes

GENERAL NOTES

Gaining Early Awareness and Readiness for Undergraduate Programs (GEAR UP) is a program designed to increase students' aspirations toward high school and beyond and ultimately increase the number of students who are prepared to enter and succeed in postsecondary education.

The purpose of this course is to prepare students for college readiness and success. Students will receive instruction, supported by state standards, in areas that include:

- **Student Agency** - activities that focus on student initiative, problem solving, decision making, leadership, and community involvement;
- **Rigorous Academic Preparedness -** academic success skills with activities that focus on writing, mathematics, collaboration, public speaking, and organization; and
- **College and Careers** - activities related to college preparation and building career knowledge.

This course will target students in the academic middle with the desire to attend college and the willingness to work hard. Through participation in this course, students will be well equipped to access and complete rigorous courses with the end goal being matriculation into and completion of postsecondary educational programs.

Eligibility for this course could be be determined by the student's grade 9 FSA scores and Lexile levels. Students scoring at FSA Levels 2/3 and with a Lexile level = 680 could be given priority for this course.

English Language Development (ELD) Standards Special Notes Section:

Teachers are required to provide listening, speaking, reading and writing instruction that allows English language learners (ELL) to communicate for social and instructional purposes within the school setting. For the given level of English language proficiency and with visual, graphic, or interactive support, students will interact with grade level words, expressions, sentences and discourse to process or produce language necessary for academic success. The ELD standard should specify a relevant content area concept or topic of study chosen by curriculum developers and teachers which maximizes an ELL's need for communication and social skills. To access an ELL supporting document which delineates performance definitions and descriptors, please click on the following link: cpalms.org/uploads/docs/standards/eld/SI.pdf.

QUALIFICATIONS

As well as any certification requirements listed on the course description, the following qualifications may also be acceptable for the course:

Any field when certification reflects a bachelor or higher degree.

GENERAL INFORMATION

Course Number: 1700610

Course Path: Section: Grades PreK to 12 Education Courses > **Grade Group:** Grades 9 to 12 and Adult Education Courses > **Subject:** Research and Critical Thinking > **SubSubject:** General >

Abbreviated Title: GEAR UP 2

Number of Credits: One (1) credit

Course Length: Year (Y)

Course Type: Elective Course

Course Level: 2

Course Status: Draft - Course Pending Approval

GEAR Up 3 (#1700620) 2022 - And Beyond

Course Standards

The following standards are also included in this course to support students' understanding of the course objectives.

- Evaluate the impact of decisions on others.
- Create a systematic decision-making model for personal financial decisions and circumstances.
- Maintain a strong support network for academic and career success.
- Identify mentors who influence, support, and guide future transitions and success.
- Demonstrate an understanding of positive self-worth and recognize limits in the emotional capacity of individuals.
- Identify personal attributes as areas of strength or weakness.
- Differentiate between individual strengths and weaknesses as motivators and/or limiters.
- Celebrate self-advocacy as a personal strength.
- Accept weaknesses as an opportunity for change.
- Reflect on conflict situations to strengthen ability to deal with the emotions that accompany conflict in leadership roles.
- Negotiate roles within a collaborative group through the adoption of effective elements of collaboration.
- Adjust ineffective verbal and non-verbal communication into effective communication.
- Speak effectively before whole class.

Name	Description
MA.912.AR.2.1:	Given a real-world context, write and solve one-variable multi-step linear equations.
MA.912.AR.2.5:	Solve and graph mathematical and real-world problems that are modeled with linear functions. Interpret key features and determine constraints in terms of the context. **Clarifications:** *Clarification 1*: Key features are limited to domain, range, intercepts and rate of change. *Clarification 2*: Instruction includes the use of standard form, slope-intercept form and point-slope form. *Clarification 3*: Instruction includes representing the domain, range and constraints with inequality notation, interval notation or set-builder notation. *Clarification 4*: Within the Algebra 1 course, notations for domain, range and constraints are limited to inequality and set-builder. *Clarification 5*: Within the Mathematics for Data and Financial Literacy course, problem types focus on money and business.
MA.912.AR.5.3:	Given a mathematical or real-world context, classify an exponential function as representing growth or decay. **Clarifications:** *Clarification 1:* Within the Algebra 1 course, exponential functions are limited to the forms $f(x) = ab^x$, where b is a whole number greater than 1 or a unit fraction, or $f(x) = a(1 \pm r)^x$, where $0 < r < 1$.
MA.912.DP.1.2:	Interpret data distributions represented in various ways. State whether the data is numerical or categorical, whether it is univariate or bivariate and interpret the different components and quantities in the display. **Clarifications:** *Clarification 1*: Within the Probability and Statistics course, instruction includes the use of spreadsheets and technology.
MA.912.F.1.3:	Calculate and interpret the average rate of change of a real-world situation represented graphically, algebraically or in a table over a specified interval. **Clarifications:** *Clarification 1*: Instruction includes making the connection to determining the slope of a particular line segment.
MA.912.FL.1.2:	Extend previous knowledge of ratios and proportional relationships to solve real-world problems involving money and business.
MA.912.FL.2.1:	Given assets and liabilities, calculate net worth using spreadsheets and other technology. **Clarifications:** *Clarification 1*: Instruction includes net worth for a business and for an individual. *Clarification 2*: Instruction includes understanding the difference between a capital asset and a liquid asset. *Clarification 3*: Instruction includes displaying net worth over time in a table or graph.
MA.912.FL.3.1:	Compare simple, compound and continuously compounded interest over time. **Clarifications:** *Clarification 1*: Instruction includes taking into consideration the annual percentage rate (APR) when comparing simple and compound interest.
MA.912.FL.3.3:	Solve real-world problems involving present value and future value of money
MA.912.FL.3.5:	Compare the advantages and disadvantages of using cash versus personal financing options. **Clarifications:** *Clarification 1*: Instruction includes advantages and disadvantages for a business and for an individual. *Clarification 2*: Personal financing options include debit cards, credit cards, installment plans and loans.
	Mathematicians who participate in effortful learning both individually and with others: • Analyze the problem in a way that makes sense given the task.

- Ask questions that will help with solving the task.
- Build perseverance by modifying methods as needed while solving a challenging task.
- Stay engaged and maintain a positive mindset when working to solve tasks.
- Help and support each other when attempting a new method or approach.

MA.K12.MTR.1.1:

Clarifications:
Teachers who encourage students to participate actively in effortful learning both individually and with others:
- Cultivate a community of growth mindset learners.
- Foster perseverance in students by choosing tasks that are challenging.
- Develop students' ability to analyze and problem solve.
- Recognize students' effort when solving challenging problems.

Demonstrate understanding by representing problems in multiple ways.
Mathematicians who demonstrate understanding by representing problems in multiple ways:

- Build understanding through modeling and using manipulatives.
- Represent solutions to problems in multiple ways using objects, drawings, tables, graphs and equations.
- Progress from modeling problems with objects and drawings to using algorithms and equations.
- Express connections between concepts and representations.
- Choose a representation based on the given context or purpose.

MA.K12.MTR.2.1:

Clarifications:
Teachers who encourage students to demonstrate understanding by representing problems in multiple ways:
- Help students make connections between concepts and representations.
- Provide opportunities for students to use manipulatives when investigating concepts.
- Guide students from concrete to pictorial to abstract representations as understanding progresses.
- Show students that various representations can have different purposes and can be useful in different situations.

Complete tasks with mathematical fluency.
Mathematicians who complete tasks with mathematical fluency:

- Select efficient and appropriate methods for solving problems within the given context.
- Maintain flexibility and accuracy while performing procedures and mental calculations.
- Complete tasks accurately and with confidence.
- Adapt procedures to apply them to a new context.
- Use feedback to improve efficiency when performing calculations.

MA.K12.MTR.3.1:

Clarifications:
Teachers who encourage students to complete tasks with mathematical fluency:
- Provide students with the flexibility to solve problems by selecting a procedure that allows them to solve efficiently and accurately.
- Offer multiple opportunities for students to practice efficient and generalizable methods.
- Provide opportunities for students to reflect on the method they used and determine if a more efficient method could have been used.

Engage in discussions that reflect on the mathematical thinking of self and others.
Mathematicians who engage in discussions that reflect on the mathematical thinking of self and others:

- Communicate mathematical ideas, vocabulary and methods effectively.
- Analyze the mathematical thinking of others.
- Compare the efficiency of a method to those expressed by others.
- Recognize errors and suggest how to correctly solve the task.
- Justify results by explaining methods and processes.
- Construct possible arguments based on evidence.

MA.K12.MTR.4.1:

Clarifications:
Teachers who encourage students to engage in discussions that reflect on the mathematical thinking of self and others:
- Establish a culture in which students ask questions of the teacher and their peers, and error is an opportunity for learning.
- Create opportunities for students to discuss their thinking with peers.
- Select, sequence and present student work to advance and deepen understanding of correct and increasingly efficient methods.
- Develop students' ability to justify methods and compare their responses to the responses of their peers.

Use patterns and structure to help understand and connect mathematical concepts.
Mathematicians who use patterns and structure to help understand and connect mathematical concepts:

- Focus on relevant details within a problem.
- Create plans and procedures to logically order events, steps or ideas to solve problems.
- Decompose a complex problem into manageable parts.
- Relate previously learned concepts to new concepts.
- Look for similarities among problems.
- Connect solutions of problems to more complicated large-scale situations.

MA.K12.MTR.5.1:

Clarifications:
Teachers who encourage students to use patterns and structure to help understand and connect mathematical concepts:
- Help students recognize the patterns in the world around them and connect these patterns to mathematical concepts.
- Support students to develop generalizations based on the similarities found among problems.
- Provide opportunities for students to create plans and procedures to solve problems.
- Develop students' ability to construct relationships between their current understanding and more sophisticated ways of thinking.

Assess the reasonableness of solutions.
Mathematicians who assess the reasonableness of solutions:

MA.K12.MTR.6.1:	• Estimate to discover possible solutions. • Use benchmark quantities to determine if a solution makes sense. • Check calculations when solving problems. • Verify possible solutions by explaining the methods used. • Evaluate results based on the given context. **Clarifications:** Teachers who encourage students to assess the reasonableness of solutions: • Have students estimate or predict solutions prior to solving. • Prompt students to continually ask, "Does this solution make sense? How do you know?" • Reinforce that students check their work as they progress within and after a task. • Strengthen students' ability to verify solutions through justifications.
MA.K12.MTR.7.1:	Apply mathematics to real-world contexts. Mathematicians who apply mathematics to real-world contexts: • Connect mathematical concepts to everyday experiences. • Use models and methods to understand, represent and solve problems. • Perform investigations to gather data or determine if a method is appropriate. • Redesign models and methods to improve accuracy or efficiency. **Clarifications:** Teachers who encourage students to apply mathematics to real-world contexts: • Provide opportunities for students to create models, both concrete and abstract, and perform investigations. • Challenge students to question the accuracy of their models and methods. • Support students as they validate conclusions by comparing them to the given situation. • Indicate how various concepts can be applied to other disciplines.
ELA.11.C.1.5:	Improve writing by considering feedback from adults, peers, and/or online editing tools, revising to improve clarity, structure, and style.
ELA.11.C.2.1:	Present information orally, with a logical organization, coherent focus, and credible evidence, while employing effective rhetorical devices where appropriate. **Clarifications:** *Clarification 1*: At this grade level, the emphasis is on the content, but students are still expected to follow earlier expectations: appropriate volume, pronunciation, and pacing. This benchmark introduces rhetorical devices to the benchmark, building on what students have learned in R.3.2 and giving them a chance to apply it. *Clarification 2*: For further guidance, see the Secondary Oral Communication Rubric.
ELA.11.C.3.1:	Follow the rules of standard English grammar, punctuation, capitalization, and spelling appropriate to grade level. **Clarifications:** *Clarification 1*: Skills to be mastered at this grade level are as follows: • Use knowledge of usage rules to create flow in writing and presenting. *Clarification 2*: See Convention Progression by Grade Level for more information.
ELA.11.C.4.1:	Conduct literary research to answer a question, refining the scope of the question to align with interpretations of texts, and synthesizing information from primary and secondary sources. **Clarifications:** *Clarification 1*: While the benchmark does require that students consult multiple sources, there is no requirement that they use every source they consult. Part of the skill in researching is discernment—being able to tell which information is relevant and which sources are trustworthy enough to include.
ELA.11.C.5.1:	Create digital presentations to improve the experience of the audience. **Clarifications:** *Clarification 1*: At this grade level, students are using multiple elements. The presentation may be delivered live or delivered as a stand-alone digital experience. The elements should be of different types. The elements should relate directly to the presentation and be incorporated in a way that engages the audience.
ELA.11.V.1.1:	Integrate academic vocabulary appropriate to grade level in speaking and writing. **Clarifications:** *Clarification 1*: To integrate vocabulary, students will apply the vocabulary they have learned to authentic speaking and writing tasks independently. This use should be intentional, beyond responding to a prompt to use a word in a sentence. *Clarification 2*: Academic vocabulary appropriate to grade level refers to words that are likely to appear across subject areas for the current grade level and beyond, vital to comprehension, critical for academic discussions and writing, and usually require explicit instruction.
ELA.K12.EE.1.1:	Cite evidence to explain and justify reasoning. **Clarifications:** K-1 Students include textual evidence in their oral communication with guidance and support from adults. The evidence can consist of details from the text without naming the text. During 1st grade, students learn how to incorporate the evidence in their writing. 2-3 Students include relevant textual evidence in their written and oral communication. Students should name the text when they refer to it. In 3rd grade, students should use a combination of direct and indirect citations. 4-5 Students continue with previous skills and reference comments made by speakers and peers. Students cite texts that they've directly quoted, paraphrased, or used for information. When writing, students will use the form of citation dictated by the instructor or the style guide referenced by the instructor. 6-8 Students continue with previous skills and use a style guide to create a proper citation. 9-12 Students continue with previous skills and should be aware of existing style guides and the ways in which they differ.
ELA.K12.EE.2.1:	Read and comprehend grade-level complex texts proficiently. **Clarifications:**

	See Text Complexity for grade-level complexity bands and a text complexity rubric.
ELA.K12.EE.3.1:	Make inferences to support comprehension. **Clarifications:** Students will make inferences before the words infer or inference are introduced. Kindergarten students will answer questions like "Why is the girl smiling?" or make predictions about what will happen based on the title page. Students will use the terms and apply them in 2nd grade and beyond.
ELA.K12.EE.4.1:	Use appropriate collaborative techniques and active listening skills when engaging in discussions in a variety of situations. **Clarifications:** In kindergarten, students learn to listen to one another respectfully. In grades 1-2, students build upon these skills by justifying what they are thinking. For example: "I think _____ because _____." The collaborative conversations are becoming academic conversations. In grades 3-12, students engage in academic conversations discussing claims and justifying their reasoning, refining and applying skills. Students build on ideas, propel the conversation, and support claims and counterclaims with evidence.
ELA.K12.EE.5.1:	Use the accepted rules governing a specific format to create quality work. **Clarifications:** Students will incorporate skills learned into work products to produce quality work. For students to incorporate these skills appropriately, they must receive instruction. A 3rd grade student creating a poster board display must have instruction in how to effectively present information to do quality work.
ELA.K12.EE.6.1:	Use appropriate voice and tone when speaking or writing. **Clarifications:** In kindergarten and 1st grade, students learn the difference between formal and informal language. For example, the way we talk to our friends differs from the way we speak to adults. In 2nd grade and beyond, students practice appropriate social and academic language to discuss texts.
SS.912.E.1.13:	Explain the basic functions and characteristics of money, and describe the composition of the money supply in the United States.
SS.912.P.12.2:	Define processes involved in problem solving and decision making. **Clarifications:** Examples may include, but are not limited to, identification, analysis, solution generation, plan, implement, and evaluate.
SS.912.P.12.4:	Describe obstacles to problem solving. **Clarifications:** Examples may include, but are not limited to, fixation and functional fixedness.
SS.912.P.12.5:	Describe obstacles to decision making. **Clarifications:** Examples may include, but are not limited to, confirmation bias, counterproductive heuristics, and overconfidence.
HE.912.B.4.3:	Demonstrate strategies to prevent, manage, or resolve interpersonal conflicts without harming self or others. **Clarifications:** Effective verbal and nonverbal communication, compromise, and conflict-resolution.
HE.912.B.5.4:	Assess whether individual or collaborative decision making is needed to make a healthy decision. **Clarifications:** Planning a post-high school career/education, purchasing the family's groceries for the week, planning the weekly menu, planning appropriate activities for siblings, community planning, Internet safety, and purchasing insurance.
HE.912.B.5.5:	Examine barriers that can hinder healthy decision making. **Clarifications:** Interpersonal, financial, environmental factors, and accessibility of health information.
PE.912.C.2.20:	Identify appropriate methods to resolve physical conflict.
PE.912.L.3.3:	Identify a variety of activities that promote effective stress management.
ELD.K12.ELL.SI.1:	English language learners communicate for social and instructional purposes within the school setting.

General Course Information and Notes

GENERAL NOTES

Gaining Early Awareness and Readiness for Undergraduate Programs (GEAR UP) is a program designed to increase students' aspirations toward high school and beyond and ultimately increase the number of students who are prepared to enter and succeed in postsecondary education.

The purpose of this course is to prepare students for college readiness and success. Students will receive instruction, supported by state standards, in areas that include:

- **Student Agency** - activities that focus on student initiative, problem solving, decision making, leadership, and community involvement;
- **Rigorous Academic Preparedness -** academic success skills with activities that focus on writing, mathematics, collaboration, public speaking, and organization; and
- **College and Careers** - activities related to college preparation and building career knowledge.

This course will target students in the academic middle with the desire to attend college and the willingness to work hard. Through participation in this course, students will be well equipped to access and complete rigorous courses with the end goal being matriculation into and completion of postsecondary educational programs.

Eligibility for this course could be be determined by the student's grade 10 FSA scores and Lexile levels. Students scoring at FSA Levels 2/3 and with a Lexile level = 680 could be given priority for this course.

English Language Development (ELD) Standards Special Notes Section:

Teachers are required to provide listening, speaking, reading and writing instruction that allows English language learners (ELL) to communicate for social and instructional purposes within the school setting. For the given level of English language proficiency and with visual, graphic, or interactive support, students will interact with grade level words, expressions, sentences and discourse to process or produce language necessary for academic success. The ELD standard should specify a relevant content area concept or topic of study chosen by curriculum developers and teachers which maximizes an ELL's need for communication and social skills. To access an ELL supporting document which delineates performance definitions and descriptors, please click on the following link: cpalms.org/uploads/docs/standards/eld/SI.pdf.

QUALIFICATIONS

As well as any certification requirements listed on the course description, the following qualifications may also be acceptable for the course:

Any field when certification reflects a bachelor or higher degree.

GENERAL INFORMATION

Course Number: 1700620

Course Path: Section: Grades PreK to 12 Education Courses > **Grade Group:** Grades 9 to 12 and Adult Education Courses > **Subject:** Research and Critical Thinking > **SubSubject:** General >

Abbreviated Title: GEAR UP 3

Number of Credits: One (1) credit

Course Length: Year (Y)

Course Type: Elective Course

Course Level: 2

Course Status: Draft - Course Pending Approval

GEAR Up 4 (#1700630) 2022 - And Beyond

Course Standards

The following standards are also included in this course to support students' understanding of the course objectives.

- Evaluate the impact of decisions on others.
- Make appropriate personal financial choices.
- Generate and maintain a network of support for current and future success.
- Demonstrate an understanding of positive self-worth and recognize limits in the emotional capacity of individuals.
- Identify personal attributes as areas of strength or weakness.
- Differentiate between individual strengths and weaknesses as motivators and/or limiters.
- Celebrate self-advocacy as a personal strength.
- Accept weaknesses as an opportunity for change.
- Manage and resolve conflicts with others.
- Share responsibility among group members.
- Clearly communicate verbally and non-verbally, including appropriate usage of technology.
- Demonstrate command of language and grammar usage when communicating.
- Adapt speech to a variety of contexts and communicative tasks.

Name	Description
MA.912.AR.2.1:	Given a real-world context, write and solve one-variable multi-step linear equations.
MA.912.AR.2.5:	Solve and graph mathematical and real-world problems that are modeled with linear functions. Interpret key features and determine constraints in terms of the context. **Clarifications:** *Clarification 1*: Key features are limited to domain, range, intercepts and rate of change. *Clarification 2*: Instruction includes the use of standard form, slope-intercept form and point-slope form. *Clarification 3*: Instruction includes representing the domain, range and constraints with inequality notation, interval notation or set-builder notation. *Clarification 4*: Within the Algebra 1 course, notations for domain, range and constraints are limited to inequality and set-builder. *Clarification 5*: Within the Mathematics for Data and Financial Literacy course, problem types focus on money and business.
MA.912.AR.5.3:	Given a mathematical or real-world context, classify an exponential function as representing growth or decay. **Clarifications:** *Clarification 1:* Within the Algebra 1 course, exponential functions are limited to the forms $f(x) = ab^x$, where b is a whole number greater than 1 or a unit fraction, or $f(x) = a(1 \pm r)^x$, where $0 < r < 1$.
MA.912.DP.1.2:	Interpret data distributions represented in various ways. State whether the data is numerical or categorical, whether it is univariate or bivariate and interpret the different components and quantities in the display. **Clarifications:** *Clarification 1*: Within the Probability and Statistics course, instruction includes the use of spreadsheets and technology.
MA.912.F.1.3:	Calculate and interpret the average rate of change of a real-world situation represented graphically, algebraically or in a table over a specified interval. **Clarifications:** *Clarification 1*: Instruction includes making the connection to determining the slope of a particular line segment.
MA.912.FL.1.2:	Extend previous knowledge of ratios and proportional relationships to solve real-world problems involving money and business.
MA.912.FL.2.1:	Given assets and liabilities, calculate net worth using spreadsheets and other technology. **Clarifications:** *Clarification 1*: Instruction includes net worth for a business and for an individual. *Clarification 2*: Instruction includes understanding the difference between a capital asset and a liquid asset. *Clarification 3*: Instruction includes displaying net worth over time in a table or graph.
MA.912.FL.3.1:	Compare simple, compound and continuously compounded interest over time. **Clarifications:** *Clarification 1*: Instruction includes taking into consideration the annual percentage rate (APR) when comparing simple and compound interest.
MA.912.FL.3.3:	Solve real-world problems involving present value and future value of money
MA.912.FL.3.5:	Compare the advantages and disadvantages of using cash versus personal financing options. **Clarifications:** *Clarification 1*: Instruction includes advantages and disadvantages for a business and for an individual. *Clarification 2*: Personal financing options include debit cards, credit cards, installment plans and loans.
	Mathematicians who participate in effortful learning both individually and with others: • Analyze the problem in a way that makes sense given the task.

- Ask questions that will help with solving the task.
- Build perseverance by modifying methods as needed while solving a challenging task.
- Stay engaged and maintain a positive mindset when working to solve tasks.
- Help and support each other when attempting a new method or approach.

MA.K12.MTR.1.1:

Clarifications:
Teachers who encourage students to participate actively in effortful learning both individually and with others:
- Cultivate a community of growth mindset learners.
- Foster perseverance in students by choosing tasks that are challenging.
- Develop students' ability to analyze and problem solve.
- Recognize students' effort when solving challenging problems.

Demonstrate understanding by representing problems in multiple ways.
Mathematicians who demonstrate understanding by representing problems in multiple ways:

- Build understanding through modeling and using manipulatives.
- Represent solutions to problems in multiple ways using objects, drawings, tables, graphs and equations.
- Progress from modeling problems with objects and drawings to using algorithms and equations.
- Express connections between concepts and representations.
- Choose a representation based on the given context or purpose.

MA.K12.MTR.2.1:

Clarifications:
Teachers who encourage students to demonstrate understanding by representing problems in multiple ways:
- Help students make connections between concepts and representations.
- Provide opportunities for students to use manipulatives when investigating concepts.
- Guide students from concrete to pictorial to abstract representations as understanding progresses.
- Show students that various representations can have different purposes and can be useful in different situations.

Complete tasks with mathematical fluency.
Mathematicians who complete tasks with mathematical fluency:

- Select efficient and appropriate methods for solving problems within the given context.
- Maintain flexibility and accuracy while performing procedures and mental calculations.
- Complete tasks accurately and with confidence.
- Adapt procedures to apply them to a new context.
- Use feedback to improve efficiency when performing calculations.

MA.K12.MTR.3.1:

Clarifications:
Teachers who encourage students to complete tasks with mathematical fluency:
- Provide students with the flexibility to solve problems by selecting a procedure that allows them to solve efficiently and accurately.
- Offer multiple opportunities for students to practice efficient and generalizable methods.
- Provide opportunities for students to reflect on the method they used and determine if a more efficient method could have been used.

Engage in discussions that reflect on the mathematical thinking of self and others.
Mathematicians who engage in discussions that reflect on the mathematical thinking of self and others:

- Communicate mathematical ideas, vocabulary and methods effectively.
- Analyze the mathematical thinking of others.
- Compare the efficiency of a method to those expressed by others.
- Recognize errors and suggest how to correctly solve the task.
- Justify results by explaining methods and processes.
- Construct possible arguments based on evidence.

MA.K12.MTR.4.1:

Clarifications:
Teachers who encourage students to engage in discussions that reflect on the mathematical thinking of self and others:
- Establish a culture in which students ask questions of the teacher and their peers, and error is an opportunity for learning.
- Create opportunities for students to discuss their thinking with peers.
- Select, sequence and present student work to advance and deepen understanding of correct and increasingly efficient methods.
- Develop students' ability to justify methods and compare their responses to the responses of their peers.

Use patterns and structure to help understand and connect mathematical concepts.
Mathematicians who use patterns and structure to help understand and connect mathematical concepts:

- Focus on relevant details within a problem.
- Create plans and procedures to logically order events, steps or ideas to solve problems.
- Decompose a complex problem into manageable parts.
- Relate previously learned concepts to new concepts.
- Look for similarities among problems.
- Connect solutions of problems to more complicated large-scale situations.

MA.K12.MTR.5.1:

Clarifications:
Teachers who encourage students to use patterns and structure to help understand and connect mathematical concepts:
- Help students recognize the patterns in the world around them and connect these patterns to mathematical concepts.
- Support students to develop generalizations based on the similarities found among problems.
- Provide opportunities for students to create plans and procedures to solve problems.
- Develop students' ability to construct relationships between their current understanding and more sophisticated ways of thinking.

Assess the reasonableness of solutions.
Mathematicians who assess the reasonableness of solutions:

MA.K12.MTR.6.1:	• Estimate to discover possible solutions. • Use benchmark quantities to determine if a solution makes sense. • Check calculations when solving problems. • Verify possible solutions by explaining the methods used. • Evaluate results based on the given context. **Clarifications:** Teachers who encourage students to assess the reasonableness of solutions: • Have students estimate or predict solutions prior to solving. • Prompt students to continually ask, "Does this solution make sense? How do you know?" • Reinforce that students check their work as they progress within and after a task. • Strengthen students' ability to verify solutions through justifications.
MA.K12.MTR.7.1:	Apply mathematics to real-world contexts. Mathematicians who apply mathematics to real-world contexts: • Connect mathematical concepts to everyday experiences. • Use models and methods to understand, represent and solve problems. • Perform investigations to gather data or determine if a method is appropriate. • Redesign models and methods to improve accuracy or efficiency. **Clarifications:** Teachers who encourage students to apply mathematics to real-world contexts: • Provide opportunities for students to create models, both concrete and abstract, and perform investigations. • Challenge students to question the accuracy of their models and methods. • Support students as they validate conclusions by comparing them to the given situation. • Indicate how various concepts can be applied to other disciplines.
ELA.12.C.1.5:	Improve writing by considering feedback from adults, peers, and/or online editing tools, revising to enhance purpose, clarity, structure, and style.
ELA.12.C.2.1:	Present information orally, with a logical organization, coherent focus, and credible evidence while employing effective rhetorical devices where appropriate. **Clarifications:** *Clarification 1*: At this grade level, the emphasis is on the content, but students are still expected to follow earlier expectations: appropriate volume, pronunciation, and pacing. Students will be using rhetorical devices as introduced in the 11th grade benchmark. Added to this grade level is a responsiveness to the needs of the audience and adapting to audience response. Students will read the nonverbal cues of the audience to do this. Students first learned nonverbal cues in elementary for this benchmark. *Clarification 2*: For further guidance, see the Secondary Oral Communication Rubric.
ELA.12.C.3.1:	Follow the rules of standard English grammar, punctuation, capitalization, and spelling appropriate to grade level. **Clarifications:** *Clarification 1*: See Convention Progression by Grade Level for more information.
ELA.12.C.4.1:	Conduct research on a topical issue to answer a question and synthesize information from a variety of sources. **Clarifications:** *Clarification 1*: While the benchmark does require that students consult multiple sources, there is no requirement that they use every source they consult. Part of the skill in researching is discernment—being able to tell which information is relevant and which sources are trustworthy enough to include.
ELA.12.C.5.1:	Design and evaluate digital presentations for effectiveness. **Clarifications:** *Clarification 1*: The presentation may be delivered live or delivered as a stand-alone digital experience.
ELA.K12.EE.1.1:	Cite evidence to explain and justify reasoning. **Clarifications:** K-1 Students include textual evidence in their oral communication with guidance and support from adults. The evidence can consist of details from the text without naming the text. During 1st grade, students learn how to incorporate the evidence in their writing. 2-3 Students include relevant textual evidence in their written and oral communication. Students should name the text when they refer to it. In 3rd grade, students should use a combination of direct and indirect citations. 4-5 Students continue with previous skills and reference comments made by speakers and peers. Students cite texts that they've directly quoted, paraphrased, or used for information. When writing, students will use the form of citation dictated by the instructor or the style guide referenced by the instructor. 6-8 Students continue with previous skills and use a style guide to create a proper citation. 9-12 Students continue with previous skills and should be aware of existing style guides and the ways in which they differ.
ELA.K12.EE.2.1:	Read and comprehend grade-level complex texts proficiently. **Clarifications:** See Text Complexity for grade-level complexity bands and a text complexity rubric.
ELA.K12.EE.3.1:	Make inferences to support comprehension. **Clarifications:** Students will make inferences before the words infer or inference are introduced. Kindergarten students will answer questions like "Why is the girl smiling?" or make predictions about what will happen based on the title page. Students will use the terms and apply them in 2nd grade and beyond.
	Use appropriate collaborative techniques and active listening skills when engaging in discussions in a variety of situations. **Clarifications:** In kindergarten, students learn to listen to one another respectfully.

ELA.K12.EE.4.1:	In grades 1-2, students build upon these skills by justifying what they are thinking. For example: "I think _____ because _____." The collaborative conversations are becoming academic conversations. In grades 3-12, students engage in academic conversations discussing claims and justifying their reasoning, refining and applying skills. Students build on ideas, propel the conversation, and support claims and counterclaims with evidence.
ELA.K12.EE.5.1:	Use the accepted rules governing a specific format to create quality work. **Clarifications:** Students will incorporate skills learned into work products to produce quality work. For students to incorporate these skills appropriately, they must receive instruction. A 3rd grade student creating a poster board display must have instruction in how to effectively present information to do quality work.
ELA.K12.EE.6.1:	Use appropriate voice and tone when speaking or writing. **Clarifications:** In kindergarten and 1st grade, students learn the difference between formal and informal language. For example, the way we talk to our friends differs from the way we speak to adults. In 2nd grade and beyond, students practice appropriate social and academic language to discuss texts.
SS.912.E.1.13:	Explain the basic functions and characteristics of money, and describe the composition of the money supply in the United States.
SS.912.P.12.2:	Define processes involved in problem solving and decision making. **Clarifications:** Examples may include, but are not limited to, identification, analysis, solution generation, plan, implement, and evaluate.
SS.912.P.12.4:	Describe obstacles to problem solving. **Clarifications:** Examples may include, but are not limited to, fixation and functional fixedness.
SS.912.P.12.5:	Describe obstacles to decision making. **Clarifications:** Examples may include, but are not limited to, confirmation bias, counterproductive heuristics, and overconfidence.
HE.912.B.4.3:	Demonstrate strategies to prevent, manage, or resolve interpersonal conflicts without harming self or others. **Clarifications:** Effective verbal and nonverbal communication, compromise, and conflict-resolution.
HE.912.B.5.4:	Assess whether individual or collaborative decision making is needed to make a healthy decision. **Clarifications:** Planning a post-high school career/education, purchasing the family's groceries for the week, planning the weekly menu, planning appropriate activities for siblings, community planning, Internet safety, and purchasing insurance.
HE.912.B.5.5:	Examine barriers that can hinder healthy decision making. **Clarifications:** Interpersonal, financial, environmental factors, and accessibility of health information.
PE.912.C.2.20:	Identify appropriate methods to resolve physical conflict.
PE.912.L.3.3:	Identify a variety of activities that promote effective stress management.
ELD.K12.ELL.SI.1:	English language learners communicate for social and instructional purposes within the school setting.

General Course Information and Notes

GENERAL NOTES

Gaining Early Awareness and Readiness for Undergraduate Programs (GEAR UP) is a program designed to increase students' aspirations toward high school and beyond and ultimately increase the number of students who are prepared to enter and succeed in postsecondary education.

The purpose of this course is to prepare students for college readiness and success. Students will receive instruction, supported by state standards, in areas that include:

- **Student Agency** - activities that focus on student initiative, problem solving, decision making, leadership, and community involvement;
- **Rigorous Academic Preparedness -** academic success skills with activities that focus on writing, mathematics, collaboration, public speaking, and organization; and
- **College and Careers** - activities related to college preparation and building career knowledge.

This course will target students in the academic middle with the desire to attend college and the willingness to work hard. Through participation in this course, students will be well equipped to access and complete rigorous courses with the end goal being matriculation into and completion of postsecondary educational programs.

Eligibility for this course could be be determined by the student's grade 10 FSA scores and Lexile levels. Students scoring at FSA Levels 2/3 and with a Lexile level = 680 could be given priority for this course.

English Language Development (ELD) Standards Special Notes Section:

Teachers are required to provide listening, speaking, reading and writing instruction that allows English language learners (ELL) to communicate for social and instructional purposes within the school setting. For the given level of English language proficiency and with visual, graphic, or interactive support, students will interact with grade level words, expressions, sentences and discourse to process or produce language necessary for academic success. The ELD standard should specify a relevant content area concept or topic of study chosen by curriculum developers and teachers which maximizes an ELL's need for communication and social skills. To access an ELL supporting document which delineates performance definitions and descriptors, please click on the following link: cpalms.org/uploads/docs/standards/eld/SI.pdf.

QUALIFICATIONS

As well as any certification requirements listed on the course description, the following qualifications may also be acceptable for the course:

Any field when certification reflects a bachelor or higher degree.

GENERAL INFORMATION

Course Number: 1700630

Course Path: Section: Grades PreK to 12 Education Courses > **Grade Group:** Grades 9 to 12 and Adult Education Courses > **Subject:** Research and Critical Thinking > **SubSubject:** General >

Abbreviated Title: GEAR UP 4

Number of Credits: One (1) credit

Course Length: Year (Y)

Course Type: Elective Course

Course Level: 2

Course Status: Draft - Course Pending Approval

M/J Life Science (#2000010) 2022 - And Beyond

Course Standards

Use grade appropriate Nature of Science benchmarks (i.e. if this course is offered to sixth grade students, then the SC.6.N benchmarks should be integrated into the sixth grade course, and SC.7.N and SC.8.N benchmarks should be omitted from the sixth grade course).

Name	Description
SC.6.L.14.1:	Describe and identify patterns in the hierarchical organization of organisms from atoms to molecules and cells to tissues to organs to organ systems to organisms.
SC.6.L.14.2:	Investigate and explain the components of the scientific theory of cells (cell theory): all organisms are composed of cells (single-celled or multi-cellular), all cells come from pre-existing cells, and cells are the basic unit of life.
SC.6.L.14.3:	Recognize and explore how cells of all organisms undergo similar processes to maintain homeostasis, including extracting energy from food, getting rid of waste, and reproducing.
SC.6.L.14.4:	Compare and contrast the structure and function of major organelles of plant and animal cells, including cell wall, cell membrane, nucleus, cytoplasm, chloroplasts, mitochondria, and vacuoles.
SC.6.L.14.5:	Identify and investigate the general functions of the major systems of the human body (digestive, respiratory, circulatory, reproductive, excretory, immune, nervous, and musculoskeletal) and describe ways these systems interact with each other to maintain homeostasis.
SC.6.L.14.6:	Compare and contrast types of infectious agents that may infect the human body, including viruses, bacteria, fungi, and parasites.
SC.6.L.15.1:	Analyze and describe how and why organisms are classified according to shared characteristics with emphasis on the Linnaean system combined with the concept of Domains.
SC.6.N.1.1:	Define a problem from the sixth grade curriculum, use appropriate reference materials to support scientific understanding, plan and carry out scientific investigation of various types, such as systematic observations or experiments, identify variables, collect and organize data, interpret data in charts, tables, and graphics, analyze information, make predictions, and defend conclusions.
SC.6.N.1.2:	Explain why scientific investigations should be replicable.
SC.6.N.1.3:	Explain the difference between an experiment and other types of scientific investigation, and explain the relative benefits and limitations of each.
SC.6.N.1.4:	Discuss, compare, and negotiate methods used, results obtained, and explanations among groups of students conducting the same investigation.
SC.6.N.1.5:	Recognize that science involves creativity, not just in designing experiments, but also in creating explanations that fit evidence.
SC.6.N.2.1:	Distinguish science from other activities involving thought.
SC.6.N.2.2:	Explain that scientific knowledge is durable because it is open to change as new evidence or interpretations are encountered.
SC.6.N.2.3:	Recognize that scientists who make contributions to scientific knowledge come from all kinds of backgrounds and possess varied talents, interests, and goals.
SC.6.N.3.1:	Recognize and explain that a scientific theory is a well-supported and widely accepted explanation of nature and is not simply a claim posed by an individual. Thus, the use of the term theory in science is very different than how it is used in everyday life.
SC.6.N.3.2:	Recognize and explain that a scientific law is a description of a specific relationship under given conditions in the natural world. Thus, scientific laws are different from societal laws.
SC.6.N.3.3:	Give several examples of scientific laws.
SC.6.N.3.4:	Identify the role of models in the context of the sixth grade science benchmarks.
SC.7.L.15.1:	Recognize that fossil evidence is consistent with the scientific theory of evolution that living things evolved from earlier species.
SC.7.L.15.2:	Explore the scientific theory of evolution by recognizing and explaining ways in which genetic variation and environmental factors contribute to evolution by natural selection and diversity of organisms.
SC.7.L.15.3:	Explore the scientific theory of evolution by relating how the inability of a species to adapt within a changing environment may contribute to the extinction of that species.
SC.7.L.16.1:	Understand and explain that every organism requires a set of instructions that specifies its traits, that this hereditary information (DNA) contains genes located in the chromosomes of each cell, and that heredity is the passage of these instructions from one generation to another.
SC.7.L.16.2:	Determine the probabilities for genotype and phenotype combinations using Punnett Squares and pedigrees.
SC.7.L.16.3:	Compare and contrast the general processes of sexual reproduction requiring meiosis and asexual reproduction requiring mitosis.
SC.7.L.16.4:	Recognize and explore the impact of biotechnology (cloning, genetic engineering, artificial selection) on the individual, society and the environment.
SC.7.L.17.1:	Explain and illustrate the roles of and relationships among producers, consumers, and decomposers in the process of energy transfer in a food web.
SC.7.L.17.2:	Compare and contrast the relationships among organisms such as mutualism, predation, parasitism, competition, and commensalism.
SC.7.L.17.3:	Describe and investigate various limiting factors in the local ecosystem and their impact on native populations, including food, shelter, water, space, disease, parasitism, predation, and nesting sites.
SC.7.N.1.1:	Define a problem from the seventh grade curriculum, use appropriate reference materials to support scientific understanding, plan and carry out scientific investigation of various types, such as systematic observations or experiments, identify variables, collect and organize data, interpret data in charts, tables, and graphics, analyze information, make predictions, and defend conclusions.
SC.7.N.1.2:	Differentiate replication (by others) from repetition (multiple trials).
SC.7.N.1.3:	Distinguish between an experiment (which must involve the identification and control of variables) and other forms of scientific investigation and explain that not all scientific knowledge is derived from experimentation.
SC.7.N.1.4:	Identify test variables (independent variables) and outcome variables (dependent variables) in an experiment.
SC.7.N.1.5:	Describe the methods used in the pursuit of a scientific explanation as seen in different fields of science such as biology, geology, and physics.
SC.7.N.1.6:	Explain that empirical evidence is the cumulative body of observations of a natural phenomenon on which scientific explanations are based.
SC.7.N.1.7:	Explain that scientific knowledge is the result of a great deal of debate and confirmation within the science community.
SC.7.N.2.1:	Identify an instance from the history of science in which scientific knowledge has changed when new evidence or new interpretations are encountered.
SC.7.N.3.1:	Recognize and explain the difference between theories and laws and give several examples of scientific theories and the evidence that supports them.
SC.7.N.3.2:	Identify the benefits and limitations of the use of scientific models.

SC.8.L.18.1:	Describe and investigate the process of photosynthesis, such as the roles of light, carbon dioxide, water and chlorophyll; production of food; release of oxygen.
SC.8.L.18.2:	Describe and investigate how cellular respiration breaks down food to provide energy and releases carbon dioxide.
SC.8.L.18.3:	Construct a scientific model of the carbon cycle to show how matter and energy are continuously transferred within and between organisms and their physical environment.
SC.8.L.18.4:	Cite evidence that living systems follow the Laws of Conservation of Mass and Energy.
SC.8.N.1.1:	Define a problem from the eighth grade curriculum using appropriate reference materials to support scientific understanding, plan and carry out scientific investigations of various types, such as systematic observations or experiments, identify variables, collect and organize data, interpret data in charts, tables, and graphics, analyze information, make predictions, and defend conclusions.
SC.8.N.1.2:	Design and conduct a study using repeated trials and replication.
SC.8.N.1.3:	Use phrases such as "results support" or "fail to support" in science, understanding that science does not offer conclusive 'proof' of a knowledge claim.
SC.8.N.1.4:	Explain how hypotheses are valuable if they lead to further investigations, even if they turn out not to be supported by the data.
SC.8.N.1.5:	Analyze the methods used to develop a scientific explanation as seen in different fields of science.
SC.8.N.1.6:	Understand that scientific investigations involve the collection of relevant empirical evidence, the use of logical reasoning, and the application of imagination in devising hypotheses, predictions, explanations and models to make sense of the collected evidence.
SC.8.N.2.1:	Distinguish between scientific and pseudoscientific ideas.
SC.8.N.2.2:	Discuss what characterizes science and its methods.
SC.8.N.3.1:	Select models useful in relating the results of their own investigations.
SC.8.N.3.2:	Explain why theories may be modified but are rarely discarded.
SC.8.N.4.1:	Explain that science is one of the processes that can be used to inform decision making at the community, state, national, and international levels.
SC.8.N.4.2:	Explain how political, social, and economic concerns can affect science, and vice versa.
MA.K12.MTR.1.1:	Mathematicians who participate in effortful learning both individually and with others: • Analyze the problem in a way that makes sense given the task. • Ask questions that will help with solving the task. • Build perseverance by modifying methods as needed while solving a challenging task. • Stay engaged and maintain a positive mindset when working to solve tasks. • Help and support each other when attempting a new method or approach. **Clarifications:** Teachers who encourage students to participate actively in effortful learning both individually and with others: • Cultivate a community of growth mindset learners. • Foster perseverance in students by choosing tasks that are challenging. • Develop students' ability to analyze and problem solve. • Recognize students' effort when solving challenging problems.
MA.K12.MTR.2.1:	Demonstrate understanding by representing problems in multiple ways. Mathematicians who demonstrate understanding by representing problems in multiple ways: • Build understanding through modeling and using manipulatives. • Represent solutions to problems in multiple ways using objects, drawings, tables, graphs and equations. • Progress from modeling problems with objects and drawings to using algorithms and equations. • Express connections between concepts and representations. • Choose a representation based on the given context or purpose. **Clarifications:** Teachers who encourage students to demonstrate understanding by representing problems in multiple ways: • Help students make connections between concepts and representations. • Provide opportunities for students to use manipulatives when investigating concepts. • Guide students from concrete to pictorial to abstract representations as understanding progresses. • Show students that various representations can have different purposes and can be useful in different situations.
MA.K12.MTR.3.1:	Complete tasks with mathematical fluency. Mathematicians who complete tasks with mathematical fluency: • Select efficient and appropriate methods for solving problems within the given context. • Maintain flexibility and accuracy while performing procedures and mental calculations. • Complete tasks accurately and with confidence. • Adapt procedures to apply them to a new context. • Use feedback to improve efficiency when performing calculations. **Clarifications:** Teachers who encourage students to complete tasks with mathematical fluency: • Provide students with the flexibility to solve problems by selecting a procedure that allows them to solve efficiently and accurately. • Offer multiple opportunities for students to practice efficient and generalizable methods. • Provide opportunities for students to reflect on the method they used and determine if a more efficient method could have been used.
MA.K12.MTR.4.1:	Engage in discussions that reflect on the mathematical thinking of self and others. Mathematicians who engage in discussions that reflect on the mathematical thinking of self and others: • Communicate mathematical ideas, vocabulary and methods effectively. • Analyze the mathematical thinking of others. • Compare the efficiency of a method to those expressed by others. • Recognize errors and suggest how to correctly solve the task. • Justify results by explaining methods and processes. • Construct possible arguments based on evidence. **Clarifications:**

	Teachers who encourage students to engage in discussions that reflect on the mathematical thinking of self and others: • Establish a culture in which students ask questions of the teacher and their peers, and error is an opportunity for learning. • Create opportunities for students to discuss their thinking with peers. • Select, sequence and present student work to advance and deepen understanding of correct and increasingly efficient methods. • Develop students' ability to justify methods and compare their responses to the responses of their peers.
MA.K12.MTR.5.1:	Use patterns and structure to help understand and connect mathematical concepts. Mathematicians who use patterns and structure to help understand and connect mathematical concepts: • Focus on relevant details within a problem. • Create plans and procedures to logically order events, steps or ideas to solve problems. • Decompose a complex problem into manageable parts. • Relate previously learned concepts to new concepts. • Look for similarities among problems. • Connect solutions of problems to more complicated large-scale situations. **Clarifications:** Teachers who encourage students to use patterns and structure to help understand and connect mathematical concepts: • Help students recognize the patterns in the world around them and connect these patterns to mathematical concepts. • Support students to develop generalizations based on the similarities found among problems. • Provide opportunities for students to create plans and procedures to solve problems. • Develop students' ability to construct relationships between their current understanding and more sophisticated ways of thinking.
MA.K12.MTR.6.1:	Assess the reasonableness of solutions. Mathematicians who assess the reasonableness of solutions: • Estimate to discover possible solutions. • Use benchmark quantities to determine if a solution makes sense. • Check calculations when solving problems. • Verify possible solutions by explaining the methods used. • Evaluate results based on the given context. **Clarifications:** Teachers who encourage students to assess the reasonableness of solutions: • Have students estimate or predict solutions prior to solving. • Prompt students to continually ask, "Does this solution make sense? How do you know?" • Reinforce that students check their work as they progress within and after a task. • Strengthen students' ability to verify solutions through justifications.
MA.K12.MTR.7.1:	Apply mathematics to real-world contexts. Mathematicians who apply mathematics to real-world contexts: • Connect mathematical concepts to everyday experiences. • Use models and methods to understand, represent and solve problems. • Perform investigations to gather data or determine if a method is appropriate. • Redesign models and methods to improve accuracy or efficiency. **Clarifications:** Teachers who encourage students to apply mathematics to real-world contexts: • Provide opportunities for students to create models, both concrete and abstract, and perform investigations. • Challenge students to question the accuracy of their models and methods. • Support students as they validate conclusions by comparing them to the given situation. • Indicate how various concepts can be applied to other disciplines.
ELA.K12.EE.1.1:	Cite evidence to explain and justify reasoning. **Clarifications:** K-1 Students include textual evidence in their oral communication with guidance and support from adults. The evidence can consist of details from the text without naming the text. During 1st grade, students learn how to incorporate the evidence in their writing. 2-3 Students include relevant textual evidence in their written and oral communication. Students should name the text when they refer to it. In 3rd grade, students should use a combination of direct and indirect citations. 4-5 Students continue with previous skills and reference comments made by speakers and peers. Students cite texts that they've directly quoted, paraphrased, or used for information. When writing, students will use the form of citation dictated by the instructor or the style guide referenced by the instructor. 6-8 Students continue with previous skills and use a style guide to create a proper citation. 9-12 Students continue with previous skills and should be aware of existing style guides and the ways in which they differ.
ELA.K12.EE.2.1:	Read and comprehend grade-level complex texts proficiently. **Clarifications:** See Text Complexity for grade-level complexity bands and a text complexity rubric.
ELA.K12.EE.3.1:	Make inferences to support comprehension. **Clarifications:** Students will make inferences before the words infer or inference are introduced. Kindergarten students will answer questions like "Why is the girl smiling?" or make predictions about what will happen based on the title page. Students will use the terms and apply them in 2nd grade and beyond.
	Use appropriate collaborative techniques and active listening skills when engaging in discussions in a variety of situations. **Clarifications:**

ELA.K12.EE.4.1:	In kindergarten, students learn to listen to one another respectfully. In grades 1-2, students build upon these skills by justifying what they are thinking. For example: "I think _____ because _____." The collaborative conversations are becoming academic conversations. In grades 3-12, students engage in academic conversations discussing claims and justifying their reasoning, refining and applying skills. Students build on ideas, propel the conversation, and support claims and counterclaims with evidence.
ELA.K12.EE.5.1:	Use the accepted rules governing a specific format to create quality work. **Clarifications:** Students will incorporate skills learned into work products to produce quality work. For students to incorporate these skills appropriately, they must receive instruction. A 3rd grade student creating a poster board display must have instruction in how to effectively present information to do quality work.
ELA.K12.EE.6.1:	Use appropriate voice and tone when speaking or writing. **Clarifications:** In kindergarten and 1st grade, students learn the difference between formal and informal language. For example, the way we talk to our friends differs from the way we speak to adults. In 2nd grade and beyond, students practice appropriate social and academic language to discuss texts.
HE.6.C.1.8:	Examine the likelihood of injury or illness if engaging in unhealthy/risky behaviors. **Clarifications:** Obesity related to poor nutrition and inactivity, cancer and chronic lung disease related to tobacco use, injuries caused from failure to use seat restraint, and sexually transmitted diseases caused by sexual activity.
HE.7.C.1.3:	Analyze how environmental factors affect personal health. **Clarifications:** Food refrigeration, appropriate home heating and cooling, air/water quality, and garbage/trash collection.
HE.7.C.1.7:	Describe how heredity can affect personal health. **Clarifications:** Sickle-cell anemia, diabetes, and acne.
ELD.K12.ELL.SC.1:	English language learners communicate information, ideas and concepts necessary for academic success in the content area of Science.
ELD.K12.ELL.SI.1:	English language learners communicate for social and instructional purposes within the school setting.

General Course Information and Notes

GENERAL NOTES

Laboratory investigations that include the use of scientific inquiry, research, measurement, problem solving, laboratory apparatus and technologies, experimental procedures, and safety procedures are an integral part of this course. The National Science Teachers Association (NSTA) recommends that at the middle school level, all students should have multiple opportunities every week to explore science laboratory investigations (labs). School laboratory investigations are defined by the National Research Council (NRC) as an experience in the laboratory, classroom, or the field that provides students with opportunities to interact directly with natural phenomena or with data collected by others using tools, materials, data collection techniques, and models (NRC, 2006, p. 3). Laboratory investigations in the middle school classroom should help all students develop a growing understanding of the complexity and ambiguity of empirical work, as well as the skills to calibrate and troubleshoot equipment used to make observations. Learners should understand measurement error; and have the skills to aggregate, interpret, and present the resulting data (NRC 2006, p. 77; NSTA, 2007).

Special Notes:

Instructional Practices
Teaching from a range of complex text is optimized when teachers in all subject areas implement the following strategies on a routine basis:

1. Ensuring wide reading from complex text that varies in length.
2. Making close reading and rereading of texts central to lessons.
3. Emphasizing text-specific complex questions, and cognitively complex tasks, reinforce focus on the text and cultivate independence.
4. Emphasizing students supporting answers based upon evidence from the text.
5. Providing extensive research and writing opportunities (claims and evidence).

Science and Engineering Practices (NRC *Framework for K-12 Science Education, 2010*)

- Asking questions (for science) and defining problems (for engineering).
- Developing and using models.
- Planning and carrying out investigations.
- Analyzing and interpreting data.
- Using mathematics, information and computer technology, and computational thinking.
- Constructing explanations (for science) and designing solutions (for engineering).
- Engaging in argument from evidence.
- Obtaining, evaluating, and communicating information.

English Language Development ELD Standards
Teachers are required to provide listening, speaking, reading and writing instruction that allows English language learners (ELL) to communicate information, ideas and concepts for academic success in the content area of Science. For the given level of English language proficiency and with visual, graphic, or interactive support, students will interact with grade level words, expressions, sentences and discourse to process or produce language necessary for academic success The ELD standard should specify a

relevant content area concept or topic of study chosen by curriculum developers and teachers which maximizes an ELL's need for communication and social skills. To access an ELL supporting document which delineates performance definitions and descriptors, please click on the following link: cpalms.org/uploads/docs/standards/eld/SC.pdf

Additional Instructional Resources:
A.V.E. for Success Collection is provided by the Florida Association of School Administrators: fasa.net/4DCGI/cms/review.html?Action=CMS_Document&DocID=139. Please be aware that these resources have not been reviewed by CPALMS and there may be a charge for the use of some of them in this collection.

Florida's Benchmarks for Excellent Student Thinking (B.E.S.T.) Standards
This course includes Florida's B.E.S.T. ELA Expectations (EE) and Mathematical Thinking and Reasoning Standards (MTRs) for students. Florida educators should intentionally embed these standards within the content and their instruction as applicable. For guidance on the implementation of the EEs and MTRs, please visit cpalms.org/Standards/BEST_Standards.aspx and select the appropriate B.E.S.T. Standards package.

GENERAL INFORMATION

Course Number: 2000010

Course Path: Section: Grades PreK to 12 Education Courses > **Grade Group:** Grades 6 to 8 Education Courses > **Subject:** Science > **SubSubject:** Biological Sciences >

Abbreviated Title: M/J LIF SCI

Course Length: Year (Y)

Course Attributes:

- Class Size Core Required

Course Level: 2

Course Status: Draft - Course Pending Approval

Grade Level(s): 6,7,8

Educator Certifications

Science (Secondary Grades 7-12)
Middle Grades Integrated Curriculum (Middle Grades 5-9)
Middle Grades General Science (Middle Grades 5-9)
Biology (Grades 6-12)

M/J Life Science, Advanced (#2000020) 2022 - And Beyond

Course Standards

Use grade appropriate Nature of Science benchmarks (i.e. if this course is offered to seventh grade students, then the SC.7.N benchmarks should be integrated into the seventh grade course, and SC.6.N and SC.8.N benchmarks should be omitted from the seventh grade course).

Name	Description
SC.6.L.14.1:	Describe and identify patterns in the hierarchical organization of organisms from atoms to molecules and cells to tissues to organs to organ systems to organisms.
SC.6.L.14.2:	Investigate and explain the components of the scientific theory of cells (cell theory): all organisms are composed of cells (single-celled or multi-cellular), all cells come from pre-existing cells, and cells are the basic unit of life.
SC.6.L.14.3:	Recognize and explore how cells of all organisms undergo similar processes to maintain homeostasis, including extracting energy from food, getting rid of waste, and reproducing.
SC.6.L.14.4:	Compare and contrast the structure and function of major organelles of plant and animal cells, including cell wall, cell membrane, nucleus, cytoplasm, chloroplasts, mitochondria, and vacuoles.
SC.6.L.14.5:	Identify and investigate the general functions of the major systems of the human body (digestive, respiratory, circulatory, reproductive, excretory, immune, nervous, and musculoskeletal) and describe ways these systems interact with each other to maintain homeostasis.
SC.6.L.14.6:	Compare and contrast types of infectious agents that may infect the human body, including viruses, bacteria, fungi, and parasites.
SC.6.L.15.1:	Analyze and describe how and why organisms are classified according to shared characteristics with emphasis on the Linnaean system combined with the concept of Domains.
SC.6.N.1.1:	Define a problem from the sixth grade curriculum, use appropriate reference materials to support scientific understanding, plan and carry out scientific investigation of various types, such as systematic observations or experiments, identify variables, collect and organize data, interpret data in charts, tables, and graphics, analyze information, make predictions, and defend conclusions.
SC.6.N.1.2:	Explain why scientific investigations should be replicable.
SC.6.N.1.3:	Explain the difference between an experiment and other types of scientific investigation, and explain the relative benefits and limitations of each.
SC.6.N.1.4:	Discuss, compare, and negotiate methods used, results obtained, and explanations among groups of students conducting the same investigation.
SC.6.N.1.5:	Recognize that science involves creativity, not just in designing experiments, but also in creating explanations that fit evidence.
SC.6.N.2.1:	Distinguish science from other activities involving thought.
SC.6.N.2.2:	Explain that scientific knowledge is durable because it is open to change as new evidence or interpretations are encountered.
SC.6.N.2.3:	Recognize that scientists who make contributions to scientific knowledge come from all kinds of backgrounds and possess varied talents, interests, and goals.
SC.6.N.3.1:	Recognize and explain that a scientific theory is a well-supported and widely accepted explanation of nature and is not simply a claim posed by an individual. Thus, the use of the term theory in science is very different than how it is used in everyday life.
SC.6.N.3.2:	Recognize and explain that a scientific law is a description of a specific relationship under given conditions in the natural world. Thus, scientific laws are different from societal laws.
SC.6.N.3.3:	Give several examples of scientific laws.
SC.6.N.3.4:	Identify the role of models in the context of the sixth grade science benchmarks.
SC.7.L.15.1:	Recognize that fossil evidence is consistent with the scientific theory of evolution that living things evolved from earlier species.
SC.7.L.15.2:	Explore the scientific theory of evolution by recognizing and explaining ways in which genetic variation and environmental factors contribute to evolution by natural selection and diversity of organisms.
SC.7.L.15.3:	Explore the scientific theory of evolution by relating how the inability of a species to adapt within a changing environment may contribute to the extinction of that species.
SC.7.L.16.1:	Understand and explain that every organism requires a set of instructions that specifies its traits, that this hereditary information (DNA) contains genes located in the chromosomes of each cell, and that heredity is the passage of these instructions from one generation to another.
SC.7.L.16.2:	Determine the probabilities for genotype and phenotype combinations using Punnett Squares and pedigrees.
SC.7.L.16.3:	Compare and contrast the general processes of sexual reproduction requiring meiosis and asexual reproduction requiring mitosis.
SC.7.L.16.4:	Recognize and explore the impact of biotechnology (cloning, genetic engineering, artificial selection) on the individual, society and the environment.
SC.7.L.17.1:	Explain and illustrate the roles of and relationships among producers, consumers, and decomposers in the process of energy transfer in a food web.
SC.7.L.17.2:	Compare and contrast the relationships among organisms such as mutualism, predation, parasitism, competition, and commensalism.
SC.7.L.17.3:	Describe and investigate various limiting factors in the local ecosystem and their impact on native populations, including food, shelter, water, space, disease, parasitism, predation, and nesting sites.
SC.7.N.1.1:	Define a problem from the seventh grade curriculum, use appropriate reference materials to support scientific understanding, plan and carry out scientific investigation of various types, such as systematic observations or experiments, identify variables, collect and organize data, interpret data in charts, tables, and graphics, analyze information, make predictions, and defend conclusions.
SC.7.N.1.2:	Differentiate replication (by others) from repetition (multiple trials).
SC.7.N.1.3:	Distinguish between an experiment (which must involve the identification and control of variables) and other forms of scientific investigation and explain that not all scientific knowledge is derived from experimentation.
SC.7.N.1.4:	Identify test variables (independent variables) and outcome variables (dependent variables) in an experiment.
SC.7.N.1.5:	Describe the methods used in the pursuit of a scientific explanation as seen in different fields of science such as biology, geology, and physics.
SC.7.N.1.6:	Explain that empirical evidence is the cumulative body of observations of a natural phenomenon on which scientific explanations are based.
SC.7.N.1.7:	Explain that scientific knowledge is the result of a great deal of debate and confirmation within the science community.
SC.7.N.2.1:	Identify an instance from the history of science in which scientific knowledge has changed when new evidence or new interpretations are encountered.
SC.7.N.3.1:	Recognize and explain the difference between theories and laws and give several examples of scientific theories and the evidence that supports them.
SC.7.N.3.2:	Identify the benefits and limitations of the use of scientific models.

SC.8.L.18.1:	Describe and investigate the process of photosynthesis, such as the roles of light, carbon dioxide, water and chlorophyll; production of food; release of oxygen.
SC.8.L.18.2:	Describe and investigate how cellular respiration breaks down food to provide energy and releases carbon dioxide.
SC.8.L.18.3:	Construct a scientific model of the carbon cycle to show how matter and energy are continuously transferred within and between organisms and their physical environment.
SC.8.L.18.4:	Cite evidence that living systems follow the Laws of Conservation of Mass and Energy.
SC.8.N.1.1:	Define a problem from the eighth grade curriculum using appropriate reference materials to support scientific understanding, plan and carry out scientific investigations of various types, such as systematic observations or experiments, identify variables, collect and organize data, interpret data in charts, tables, and graphics, analyze information, make predictions, and defend conclusions.
SC.8.N.1.2:	Design and conduct a study using repeated trials and replication.
SC.8.N.1.3:	Use phrases such as "results support" or "fail to support" in science, understanding that science does not offer conclusive 'proof' of a knowledge claim.
SC.8.N.1.4:	Explain how hypotheses are valuable if they lead to further investigations, even if they turn out not to be supported by the data.
SC.8.N.1.5:	Analyze the methods used to develop a scientific explanation as seen in different fields of science.
SC.8.N.1.6:	Understand that scientific investigations involve the collection of relevant empirical evidence, the use of logical reasoning, and the application of imagination in devising hypotheses, predictions, explanations and models to make sense of the collected evidence.
SC.8.N.2.1:	Distinguish between scientific and pseudoscientific ideas.
SC.8.N.2.2:	Discuss what characterizes science and its methods.
SC.8.N.3.1:	Select models useful in relating the results of their own investigations.
SC.8.N.3.2:	Explain why theories may be modified but are rarely discarded.
SC.8.N.4.1:	Explain that science is one of the processes that can be used to inform decision making at the community, state, national, and international levels.
SC.8.N.4.2:	Explain how political, social, and economic concerns can affect science, and vice versa.
SC.912.L.14.2:	Relate structure to function for the components of plant and animal cells. Explain the role of cell membranes as a highly selective barrier (passive and active transport).
SC.912.L.14.3:	Compare and contrast the general structures of plant and animal cells. Compare and contrast the general structures of prokaryotic and eukaryotic cells.
SC.912.L.15.6:	Discuss distinguishing characteristics of the domains and kingdoms of living organisms.
SC.912.L.15.13:	Describe the conditions required for natural selection, including: overproduction of offspring, inherited variation, and the struggle to survive, which result in differential reproductive success.
SC.912.L.16.2:	Discuss observed inheritance patterns caused by various modes of inheritance, including dominant, recessive, codominant, sex-linked, polygenic, and multiple alleles.
SC.912.L.16.14:	Describe the cell cycle, including the process of mitosis. Explain the role of mitosis in the formation of new cells and its importance in maintaining chromosome number during asexual reproduction.
SC.912.L.16.16:	Describe the process of meiosis, including independent assortment and crossing over. Explain how reduction division results in the formation of haploid gametes or spores.
SC.912.L.17.6:	Compare and contrast the relationships among organisms, including predation, parasitism, competition, commensalism, and mutualism.
SC.912.L.17.9:	Use a food web to identify and distinguish producers, consumers, and decomposers. Explain the pathway of energy transfer through trophic levels and the reduction of available energy at successive trophic levels.
SC.912.L.18.7:	Identify the reactants, products, and basic functions of photosynthesis.
SC.912.L.18.8:	Identify the reactants, products, and basic functions of aerobic and anaerobic cellular respiration.
SC.912.L.18.9:	Explain the interrelated nature of photosynthesis and cellular respiration.
MA.K12.MTR.1.1:	Mathematicians who participate in effortful learning both individually and with others: • Analyze the problem in a way that makes sense given the task. • Ask questions that will help with solving the task. • Build perseverance by modifying methods as needed while solving a challenging task. • Stay engaged and maintain a positive mindset when working to solve tasks. • Help and support each other when attempting a new method or approach. **Clarifications:** Teachers who encourage students to participate actively in effortful learning both individually and with others: • Cultivate a community of growth mindset learners. • Foster perseverance in students by choosing tasks that are challenging. • Develop students' ability to analyze and problem solve. • Recognize students' effort when solving challenging problems.
MA.K12.MTR.2.1:	Demonstrate understanding by representing problems in multiple ways. Mathematicians who demonstrate understanding by representing problems in multiple ways: • Build understanding through modeling and using manipulatives. • Represent solutions to problems in multiple ways using objects, drawings, tables, graphs and equations. • Progress from modeling problems with objects and drawings to using algorithms and equations. • Express connections between concepts and representations. • Choose a representation based on the given context or purpose. **Clarifications:** Teachers who encourage students to demonstrate understanding by representing problems in multiple ways: • Help students make connections between concepts and representations. • Provide opportunities for students to use manipulatives when investigating concepts. • Guide students from concrete to pictorial to abstract representations as understanding progresses. • Show students that various representations can have different purposes and can be useful in different situations.
	Complete tasks with mathematical fluency. Mathematicians who complete tasks with mathematical fluency: • Select efficient and appropriate methods for solving problems within the given context. • Maintain flexibility and accuracy while performing procedures and mental calculations. • Complete tasks accurately and with confidence.

MA.K12.MTR.3.1:	• Adapt procedures to apply them to a new context. • Use feedback to improve efficiency when performing calculations. **Clarifications:** Teachers who encourage students to complete tasks with mathematical fluency: • Provide students with the flexibility to solve problems by selecting a procedure that allows them to solve efficiently and accurately. • Offer multiple opportunities for students to practice efficient and generalizable methods. • Provide opportunities for students to reflect on the method they used and determine if a more efficient method could have been used.
MA.K12.MTR.4.1:	Engage in discussions that reflect on the mathematical thinking of self and others. Mathematicians who engage in discussions that reflect on the mathematical thinking of self and others: • Communicate mathematical ideas, vocabulary and methods effectively. • Analyze the mathematical thinking of others. • Compare the efficiency of a method to those expressed by others. • Recognize errors and suggest how to correctly solve the task. • Justify results by explaining methods and processes. • Construct possible arguments based on evidence. **Clarifications:** Teachers who encourage students to engage in discussions that reflect on the mathematical thinking of self and others: • Establish a culture in which students ask questions of the teacher and their peers, and error is an opportunity for learning. • Create opportunities for students to discuss their thinking with peers. • Select, sequence and present student work to advance and deepen understanding of correct and increasingly efficient methods. • Develop students' ability to justify methods and compare their responses to the responses of their peers.
MA.K12.MTR.5.1:	Use patterns and structure to help understand and connect mathematical concepts. Mathematicians who use patterns and structure to help understand and connect mathematical concepts: • Focus on relevant details within a problem. • Create plans and procedures to logically order events, steps or ideas to solve problems. • Decompose a complex problem into manageable parts. • Relate previously learned concepts to new concepts. • Look for similarities among problems. • Connect solutions of problems to more complicated large-scale situations. **Clarifications:** Teachers who encourage students to use patterns and structure to help understand and connect mathematical concepts: • Help students recognize the patterns in the world around them and connect these patterns to mathematical concepts. • Support students to develop generalizations based on the similarities found among problems. • Provide opportunities for students to create plans and procedures to solve problems. • Develop students' ability to construct relationships between their current understanding and more sophisticated ways of thinking.
MA.K12.MTR.6.1:	Assess the reasonableness of solutions. Mathematicians who assess the reasonableness of solutions: • Estimate to discover possible solutions. • Use benchmark quantities to determine if a solution makes sense. • Check calculations when solving problems. • Verify possible solutions by explaining the methods used. • Evaluate results based on the given context. **Clarifications:** Teachers who encourage students to assess the reasonableness of solutions: • Have students estimate or predict solutions prior to solving. • Prompt students to continually ask, "Does this solution make sense? How do you know?" • Reinforce that students check their work as they progress within and after a task. • Strengthen students' ability to verify solutions through justifications.
MA.K12.MTR.7.1:	Apply mathematics to real-world contexts. Mathematicians who apply mathematics to real-world contexts: • Connect mathematical concepts to everyday experiences. • Use models and methods to understand, represent and solve problems. • Perform investigations to gather data or determine if a method is appropriate. • Redesign models and methods to improve accuracy or efficiency. **Clarifications:** Teachers who encourage students to apply mathematics to real-world contexts: • Provide opportunities for students to create models, both concrete and abstract, and perform investigations. • Challenge students to question the accuracy of their models and methods. • Support students as they validate conclusions by comparing them to the given situation. • Indicate how various concepts can be applied to other disciplines.
ELA.K12.EE.1.1:	Cite evidence to explain and justify reasoning. **Clarifications:** K-1 Students include textual evidence in their oral communication with guidance and support from adults. The evidence can consist of details from the text without naming the text. During 1st grade, students learn how to incorporate the evidence in their writing. 2-3 Students include relevant textual evidence in their written and oral communication. Students should name the text when they refer to it. In 3rd grade, students should use a combination of direct and indirect citations. 4-5 Students continue with previous skills and reference comments made by speakers and peers. Students cite texts that they've directly

	quoted, paraphrased, or used for information. When writing, students will use the form of citation dictated by the instructor or the style guide referenced by the instructor. 6-8 Students continue with previous skills and use a style guide to create a proper citation. 9-12 Students continue with previous skills and should be aware of existing style guides and the ways in which they differ.
ELA.K12.EE.2.1:	Read and comprehend grade-level complex texts proficiently. **Clarifications:** See Text Complexity for grade-level complexity bands and a text complexity rubric.
ELA.K12.EE.3.1:	Make inferences to support comprehension. **Clarifications:** Students will make inferences before the words infer or inference are introduced. Kindergarten students will answer questions like "Why is the girl smiling?" or make predictions about what will happen based on the title page. Students will use the terms and apply them in 2nd grade and beyond.
ELA.K12.EE.4.1:	Use appropriate collaborative techniques and active listening skills when engaging in discussions in a variety of situations. **Clarifications:** In kindergarten, students learn to listen to one another respectfully. In grades 1-2, students build upon these skills by justifying what they are thinking. For example: "I think _____ because _____." The collaborative conversations are becoming academic conversations. In grades 3-12, students engage in academic conversations discussing claims and justifying their reasoning, refining and applying skills. Students build on ideas, propel the conversation, and support claims and counterclaims with evidence.
ELA.K12.EE.5.1:	Use the accepted rules governing a specific format to create quality work. **Clarifications:** Students will incorporate skills learned into work products to produce quality work. For students to incorporate these skills appropriately, they must receive instruction. A 3rd grade student creating a poster board display must have instruction in how to effectively present information to do quality work.
ELA.K12.EE.6.1:	Use appropriate voice and tone when speaking or writing. **Clarifications:** In kindergarten and 1st grade, students learn the difference between formal and informal language. For example, the way we talk to our friends differs from the way we speak to adults. In 2nd grade and beyond, students practice appropriate social and academic language to discuss texts.
HE.6.C.1.8:	Examine the likelihood of injury or illness if engaging in unhealthy/risky behaviors. **Clarifications:** Obesity related to poor nutrition and inactivity, cancer and chronic lung disease related to tobacco use, injuries caused from failure to use seat restraint, and sexually transmitted diseases caused by sexual activity.
HE.7.C.1.3:	Analyze how environmental factors affect personal health. **Clarifications:** Food refrigeration, appropriate home heating and cooling, air/water quality, and garbage/trash collection.
HE.7.C.1.7:	Describe how heredity can affect personal health. **Clarifications:** Sickle-cell anemia, diabetes, and acne.
ELD.K12.ELL.SC.1:	English language learners communicate information, ideas and concepts necessary for academic success in the content area of Science.
ELD.K12.ELL.SI.1:	English language learners communicate for social and instructional purposes within the school setting.

General Course Information and Notes

GENERAL NOTES

Laboratory investigations that include the use of scientific inquiry, research, measurement, problem solving, laboratory apparatus and technologies, experimental procedures, and safety procedures are an integral part of this course. The National Science Teachers Association (NSTA) recommends that at the middle school level, all students should have multiple opportunities every week to explore science laboratory investigations (labs). School laboratory investigations are defined by the National Research Council (NRC) as an experience in the laboratory, classroom, or the field that provides students with opportunities to interact directly with natural phenomena or with data collected by others using tools, materials, data collection techniques, and models (NRC, 2006, p. 3). Laboratory investigations in the middle school classroom should help all students develop a growing understanding of the complexity and ambiguity of empirical work, as well as the skills to calibrate and troubleshoot equipment used to make observations. Learners should understand measurement error; and have the skills to aggregate, interpret, and present the resulting data (NRC 2006, p. 77; NSTA, 2007).

Honors and Advanced Level Course Note: Advanced courses require a greater demand on students through increased academic rigor. Academic rigor is obtained through the application, analysis, evaluation, and creation of complex ideas that are often abstract and multi-faceted. Students are challenged to think and collaborate critically on the content they are learning. Honors level rigor will be achieved by increasing text complexity through text selection, focus on high-level qualitative measures, and complexity of task. Instruction will be structured to give students a deeper understanding of conceptual themes and organization within and across disciplines. Academic rigor is more than simply assigning to students a greater quantity of work.

Special Notes:

Instructional Practices
Teaching from a range of complex text is optimized when teachers in all subject areas implement the following strategies on a routine basis:

1. Ensuring wide reading from complex text that varies in length.

2. Making close reading and rereading of texts central to lessons.
3. Emphasizing text-specific complex questions, and cognitively complex tasks, reinforce focus on the text and cultivate independence.
4. Emphasizing students supporting answers based upon evidence from the text.
5. Providing extensive research and writing opportunities (claims and evidence).

Science and Engineering Practices (NRC *Framework for K-12 Science Education, 2010*)

- Asking questions (for science) and defining problems (for engineering).
- Developing and using models.
- Planning and carrying out investigations.
- Analyzing and interpreting data.
- Using mathematics, information and computer technology, and computational thinking.
- Constructing explanations (for science) and designing solutions (for engineering).
- Engaging in argument from evidence.
- Obtaining, evaluating, and communicating information.

English Language Development ELD Standards
Teachers are required to provide listening, speaking, reading and writing instruction that allows English language learners (ELL) to communicate information, ideas and concepts for academic success in the content area of Science. For the given level of English language proficiency and with visual, graphic, or interactive support, students will interact with grade level words, expressions, sentences and discourse to process or produce language necessary for academic success The ELD standard should specify a relevant content area concept or topic of study chosen by curriculum developers and teachers which maximizes an ELL's need for communication and social skills. To access an ELL supporting document which delineates performance definitions and descriptors, please click on the following link: cpalms.org/uploads/docs/standards/eld/SC.pdf

Additional Instructional Resources:
A.V.E. for Success Collection is provided by the Florida Association of School Administrators: fasa.net/4DCGI/cms/review.html?Action=CMS_Document&DocID=139. Please be aware that these resources have not been reviewed by CPALMS and there may be a charge for the use of some of them in this collection.

Florida's Benchmarks for Excellent Student Thinking (B.E.S.T.) Standards
This course includes Florida's B.E.S.T. ELA Expectations (EE) and Mathematical Thinking and Reasoning Standards (MTRs) for students. Florida educators should intentionally embed these standards within the content and their instruction as applicable. For guidance on the implementation of the EEs and MTRs, please visit cpalms.org/Standards/BEST_Standards.aspx and select the appropriate B.E.S.T. Standards package.

GENERAL INFORMATION

Course Number: 2000020

Course Path: Section: Grades PreK to 12 Education Courses > **Grade Group:** Grades 6 to 8 Education Courses > **Subject:** Science > **SubSubject:** Biological Sciences >

Abbreviated Title: M/J LIF SCI ADV

Course Length: Year (Y)

Course Attributes:

- Class Size Core Required

Course Level: 3

Course Status: Draft - Course Pending Approval

Grade Level(s): 6,7,8

Educator Certifications

Science (Secondary Grades 7-12)
Middle Grades Integrated Curriculum (Middle Grades 5-9)
Middle Grades General Science (Middle Grades 5-9)
Biology (Grades 6-12)

M/J STEM Life Science (#2000025) 2022 - And Beyond

Course Standards

Name	Description
SC.6.N.1.2:	Explain why scientific investigations should be replicable.
SC.6.N.1.3:	Explain the difference between an experiment and other types of scientific investigation, and explain the relative benefits and limitations of each.
SC.6.N.1.4:	Discuss, compare, and negotiate methods used, results obtained, and explanations among groups of students conducting the same investigation.
SC.6.N.1.5:	Recognize that science involves creativity, not just in designing experiments, but also in creating explanations that fit evidence.
SC.6.N.2.1:	Distinguish science from other activities involving thought.
SC.6.N.2.2:	Explain that scientific knowledge is durable because it is open to change as new evidence or interpretations are encountered.
SC.6.N.2.3:	Recognize that scientists who make contributions to scientific knowledge come from all kinds of backgrounds and possess varied talents, interests, and goals.
SC.6.N.3.1:	Recognize and explain that a scientific theory is a well-supported and widely accepted explanation of nature and is not simply a claim posed by an individual. Thus, the use of the term theory in science is very different than how it is used in everyday life.
SC.6.N.3.2:	Recognize and explain that a scientific law is a description of a specific relationship under given conditions in the natural world. Thus, scientific laws are different from societal laws.
SC.6.N.3.3:	Give several examples of scientific laws.
SC.6.N.3.4:	Identify the role of models in the context of the sixth grade science benchmarks.
SC.7.L.15.1:	Recognize that fossil evidence is consistent with the scientific theory of evolution that living things evolved from earlier species.
SC.7.L.15.2:	Explore the scientific theory of evolution by recognizing and explaining ways in which genetic variation and environmental factors contribute to evolution by natural selection and diversity of organisms.
SC.7.L.15.3:	Explore the scientific theory of evolution by relating how the inability of a species to adapt within a changing environment may contribute to the extinction of that species.
SC.7.L.16.1:	Understand and explain that every organism requires a set of instructions that specifies its traits, that this hereditary information (DNA) contains genes located in the chromosomes of each cell, and that heredity is the passage of these instructions from one generation to another.
SC.7.N.1.2:	Differentiate replication (by others) from repetition (multiple trials).
SC.7.N.1.3:	Distinguish between an experiment (which must involve the identification and control of variables) and other forms of scientific investigation and explain that not all scientific knowledge is derived from experimentation.
SC.7.N.1.4:	Identify test variables (independent variables) and outcome variables (dependent variables) in an experiment.
SC.7.N.1.5:	Describe the methods used in the pursuit of a scientific explanation as seen in different fields of science such as biology, geology, and physics.
SC.7.N.1.6:	Explain that empirical evidence is the cumulative body of observations of a natural phenomenon on which scientific explanations are based.
SC.7.N.1.7:	Explain that scientific knowledge is the result of a great deal of debate and confirmation within the science community.
SC.7.N.2.1:	Identify an instance from the history of science in which scientific knowledge has changed when new evidence or new interpretations are encountered.
SC.7.N.3.1:	Recognize and explain the difference between theories and laws and give several examples of scientific theories and the evidence that supports them.
SC.7.N.3.2:	Identify the benefits and limitations of the use of scientific models.
SC.8.L.18.2:	Describe and investigate how cellular respiration breaks down food to provide energy and releases carbon dioxide.
SC.8.L.18.3:	Construct a scientific model of the carbon cycle to show how matter and energy are continuously transferred within and between organisms and their physical environment.
SC.8.L.18.4:	Cite evidence that living systems follow the Laws of Conservation of Mass and Energy.
SC.8.N.1.2:	Design and conduct a study using repeated trials and replication.
SC.8.N.1.3:	Use phrases such as "results support" or "fail to support" in science, understanding that science does not offer conclusive 'proof' of a knowledge claim.
SC.8.N.1.4:	Explain how hypotheses are valuable if they lead to further investigations, even if they turn out not to be supported by the data.
SC.8.N.1.5:	Analyze the methods used to develop a scientific explanation as seen in different fields of science.
SC.8.N.1.6:	Understand that scientific investigations involve the collection of relevant empirical evidence, the use of logical reasoning, and the application of imagination in devising hypotheses, predictions, explanations and models to make sense of the collected evidence.
SC.8.N.2.1:	Distinguish between scientific and pseudoscientific ideas.
SC.8.N.2.2:	Discuss what characterizes science and its methods.
SC.8.N.3.1:	Select models useful in relating the results of their own investigations.
SC.8.N.3.2:	Explain why theories may be modified but are rarely discarded.
SC.8.N.4.1:	Explain that science is one of the processes that can be used to inform decision making at the community, state, national, and international levels.
MA.K12.MTR.1.1:	Mathematicians who participate in effortful learning both individually and with others: • Analyze the problem in a way that makes sense given the task. • Ask questions that will help with solving the task. • Build perseverance by modifying methods as needed while solving a challenging task. • Stay engaged and maintain a positive mindset when working to solve tasks. • Help and support each other when attempting a new method or approach. **Clarifications:** Teachers who encourage students to participate actively in effortful learning both individually and with others: • Cultivate a community of growth mindset learners. • Foster perseverance in students by choosing tasks that are challenging. • Develop students' ability to analyze and problem solve. • Recognize students' effort when solving challenging problems.
	Demonstrate understanding by representing problems in multiple ways.

Mathematicians who demonstrate understanding by representing problems in multiple ways:

- Build understanding through modeling and using manipulatives.
- Represent solutions to problems in multiple ways using objects, drawings, tables, graphs and equations.
- Progress from modeling problems with objects and drawings to using algorithms and equations.
- Express connections between concepts and representations.

MA.K12.MTR.2.1:

- Choose a representation based on the given context or purpose.

Clarifications:
Teachers who encourage students to demonstrate understanding by representing problems in multiple ways:

- Help students make connections between concepts and representations.
- Provide opportunities for students to use manipulatives when investigating concepts.
- Guide students from concrete to pictorial to abstract representations as understanding progresses.
- Show students that various representations can have different purposes and can be useful in different situations.

Complete tasks with mathematical fluency.
Mathematicians who complete tasks with mathematical fluency:

- Select efficient and appropriate methods for solving problems within the given context.
- Maintain flexibility and accuracy while performing procedures and mental calculations.
- Complete tasks accurately and with confidence.
- Adapt procedures to apply them to a new context.

MA.K12.MTR.3.1:

- Use feedback to improve efficiency when performing calculations.

Clarifications:
Teachers who encourage students to complete tasks with mathematical fluency:

- Provide students with the flexibility to solve problems by selecting a procedure that allows them to solve efficiently and accurately.
- Offer multiple opportunities for students to practice efficient and generalizable methods.
- Provide opportunities for students to reflect on the method they used and determine if a more efficient method could have been used.

Engage in discussions that reflect on the mathematical thinking of self and others.
Mathematicians who engage in discussions that reflect on the mathematical thinking of self and others:

- Communicate mathematical ideas, vocabulary and methods effectively.
- Analyze the mathematical thinking of others.
- Compare the efficiency of a method to those expressed by others.
- Recognize errors and suggest how to correctly solve the task.
- Justify results by explaining methods and processes.

MA.K12.MTR.4.1:

- Construct possible arguments based on evidence.

Clarifications:
Teachers who encourage students to engage in discussions that reflect on the mathematical thinking of self and others:

- Establish a culture in which students ask questions of the teacher and their peers, and error is an opportunity for learning.
- Create opportunities for students to discuss their thinking with peers.
- Select, sequence and present student work to advance and deepen understanding of correct and increasingly efficient methods.
- Develop students' ability to justify methods and compare their responses to the responses of their peers.

Use patterns and structure to help understand and connect mathematical concepts.
Mathematicians who use patterns and structure to help understand and connect mathematical concepts:

- Focus on relevant details within a problem.
- Create plans and procedures to logically order events, steps or ideas to solve problems.
- Decompose a complex problem into manageable parts.
- Relate previously learned concepts to new concepts.
- Look for similarities among problems.

MA.K12.MTR.5.1:

- Connect solutions of problems to more complicated large-scale situations.

Clarifications:
Teachers who encourage students to use patterns and structure to help understand and connect mathematical concepts:

- Help students recognize the patterns in the world around them and connect these patterns to mathematical concepts.
- Support students to develop generalizations based on the similarities found among problems.
- Provide opportunities for students to create plans and procedures to solve problems.
- Develop students' ability to construct relationships between their current understanding and more sophisticated ways of thinking.

Assess the reasonableness of solutions.
Mathematicians who assess the reasonableness of solutions:

- Estimate to discover possible solutions.
- Use benchmark quantities to determine if a solution makes sense.
- Check calculations when solving problems.
- Verify possible solutions by explaining the methods used.

MA.K12.MTR.6.1:

- Evaluate results based on the given context.

Clarifications:
Teachers who encourage students to assess the reasonableness of solutions:

- Have students estimate or predict solutions prior to solving.
- Prompt students to continually ask, "Does this solution make sense? How do you know?"
- Reinforce that students check their work as they progress within and after a task.
- Strengthen students' ability to verify solutions through justifications.

MA.K12.MTR.7.1:	Apply mathematics to real-world contexts. Mathematicians who apply mathematics to real-world contexts: • Connect mathematical concepts to everyday experiences. • Use models and methods to understand, represent and solve problems. • Perform investigations to gather data or determine if a method is appropriate. • Redesign models and methods to improve accuracy or efficiency. **Clarifications:** Teachers who encourage students to apply mathematics to real-world contexts: • Provide opportunities for students to create models, both concrete and abstract, and perform investigations. • Challenge students to question the accuracy of their models and methods. • Support students as they validate conclusions by comparing them to the given situation. • Indicate how various concepts can be applied to other disciplines.
ELA.K12.EE.1.1:	Cite evidence to explain and justify reasoning. **Clarifications:** K-1 Students include textual evidence in their oral communication with guidance and support from adults. The evidence can consist of details from the text without naming the text. During 1st grade, students learn how to incorporate the evidence in their writing. 2-3 Students include relevant textual evidence in their written and oral communication. Students should name the text when they refer to it. In 3rd grade, students should use a combination of direct and indirect citations. 4-5 Students continue with previous skills and reference comments made by speakers and peers. Students cite texts that they've directly quoted, paraphrased, or used for information. When writing, students will use the form of citation dictated by the instructor or the style guide referenced by the instructor. 6-8 Students continue with previous skills and use a style guide to create a proper citation. 9-12 Students continue with previous skills and should be aware of existing style guides and the ways in which they differ.
ELA.K12.EE.2.1:	Read and comprehend grade-level complex texts proficiently. **Clarifications:** See Text Complexity for grade-level complexity bands and a text complexity rubric.
ELA.K12.EE.3.1:	Make inferences to support comprehension. **Clarifications:** Students will make inferences before the words infer or inference are introduced. Kindergarten students will answer questions like "Why is the girl smiling?" or make predictions about what will happen based on the title page. Students will use the terms and apply them in 2nd grade and beyond.
ELA.K12.EE.4.1:	Use appropriate collaborative techniques and active listening skills when engaging in discussions in a variety of situations. **Clarifications:** In kindergarten, students learn to listen to one another respectfully. In grades 1-2, students build upon these skills by justifying what they are thinking. For example: "I think _____ because _____." The collaborative conversations are becoming academic conversations. In grades 3-12, students engage in academic conversations discussing claims and justifying their reasoning, refining and applying skills. Students build on ideas, propel the conversation, and support claims and counterclaims with evidence.
ELA.K12.EE.5.1:	Use the accepted rules governing a specific format to create quality work. **Clarifications:** Students will incorporate skills learned into work products to produce quality work. For students to incorporate these skills appropriately, they must receive instruction. A 3rd grade student creating a poster board display must have instruction in how to effectively present information to do quality work.
ELA.K12.EE.6.1:	Use appropriate voice and tone when speaking or writing. **Clarifications:** In kindergarten and 1st grade, students learn the difference between formal and informal language. For example, the way we talk to our friends differs from the way we speak to adults. In 2nd grade and beyond, students practice appropriate social and academic language to discuss texts.
HE.6.C.1.8:	Examine the likelihood of injury or illness if engaging in unhealthy/risky behaviors. **Clarifications:** Obesity related to poor nutrition and inactivity, cancer and chronic lung disease related to tobacco use, injuries caused from failure to use seat restraint, and sexually transmitted diseases caused by sexual activity.
HE.7.C.1.3:	Analyze how environmental factors affect personal health. **Clarifications:** Food refrigeration, appropriate home heating and cooling, air/water quality, and garbage/trash collection.
HE.7.C.1.7:	Describe how heredity can affect personal health. **Clarifications:** Sickle-cell anemia, diabetes, and acne.
ELD.K12.ELL.SC.1:	English language learners communicate information, ideas and concepts necessary for academic success in the content area of Science.

General Course Information and Notes

GENERAL NOTES

If this course is to be used in a STEM sequence in place of either the comprehensive or subject specific course sequences, teachers should refer to the test item specifications for the 8th grade SSA for information on tested standards which can be found at: fldoe.org/core/fileparse.php/5663/urlt/swsatisG8.pdf.

This course is an integrated Science, Technology, Engineering and Mathematics (STEM) course for middle school students. M/J STEM Life Science includes an integration of standards from science, mathematics, and english language arts (ELA) through the application to STEM problem solving using life science knowledge and science and engineering practices. Life science through applications such as biotechnology and biomedical engineering, are emphasized in this course. Laboratory investigations that include the use of scientific inquiry, research, measurement, problem solving, laboratory apparatus and technologies, experimental procedures, and safety procedures are an integral part of this course. The National Science Teachers Association (NSTA) recommends that at the middle school level, all students should have multiple opportunities every week to explore science laboratory investigations (labs). School laboratory investigations are defined by the National Research Council (NRC) as an experience in the laboratory, classroom, or the field that provides students with opportunities to interact directly with natural phenomena or with data collected by others using tools, materials, data collection techniques, and models (NRC, 2006, p. 3). Laboratory investigations in the middle school classroom should help all students develop a growing understanding of the complexity and ambiguity of empirical work, as well as the skills to calibrate and troubleshoot equipment used to make observations. Learners should understand measurement error; and have the skills to aggregate, interpret, and present the resulting data (NRC 2006, p. 77; NSTA, 2007).

Special Notes:

Instructional Practices
Teaching from a range of complex text is optimized when teachers in all subject areas implement the following strategies on a routine basis:

1. Ensuring wide reading from complex text that varies in length.
2. Making close reading and rereading of texts central to lessons.
3. Emphasizing text-specific complex questions, and cognitively complex tasks, reinforce focus on the text and cultivate independence.
4. Emphasizing students supporting answers based upon evidence from the text.
5. Providing extensive research and writing opportunities (claims and evidence).

Science and Engineering Practices (NRC *Framework for K-12 Science Education, 2010*)

- Asking questions (for science) and defining problems (for engineering).
- Developing and using models.
- Planning and carrying out investigations.
- Analyzing and interpreting data.
- Using mathematics, information and computer technology, and computational thinking.
- Constructing explanations (for science) and designing solutions (for engineering).
- Engaging in argument from evidence.
- Obtaining, evaluating, and communicating information.

ISTE Standards (iste.org/docs/pdfs/20-14_ISTE_Standards-S_PDF.pdf) should be incorporated in many contexts throughout the course.

Engineering Practices are emphasized in the course
nextgenscience.org/sites/ngss/files/Appendix%20F%20%20Science%20and%20Engineering%20Practices%20in%20the%20NGSS%20-%20FINAL%20060513.pdf

Course Standards

NOTE: Use grade appropriate Nature of Science and mathematics content benchmarks (i.e. if this course is offered to seventh grade students, then the SC.7.N benchmarks should be integrated into the course content, and SC.6.N and SC.8.N benchmarks should be omitted from the seventh grade course).

English Language Development ELD Standards
Teachers are required to provide listening, speaking, reading and writing instruction that allows English language learners (ELL) to communicate information, ideas and concepts for academic success in the content area of Science. For the given level of English language proficiency and with visual, graphic, or interactive support, students ill interact with grade level words, expressions, sentences and discourse to process or produce language necessary for academic success The ELD standard should specify a relevant content area concept or topic of study chosen by curriculum developers and teachers which maximizes an ELL's need for communication and social skills. To access an ELL supporting document which delineates performance definitions and descriptors, please click on the following link: cpalms.org/uploads/docs/standards/eld/SC.pdf.

Florida's Benchmarks for Excellent Student Thinking (B.E.S.T.) Standards
This course includes Florida's B.E.S.T. ELA Expectations (EE) and Mathematical Thinking and Reasoning Standards (MTRs) for students. Florida educators should intentionally embed these standards within the content and their instruction as applicable. For guidance on the implementation of the EEs and MTRs, please visit cpalms.org/Standards/BEST_Standards.aspx and select the appropriate B.E.S.T. Standards package.

GENERAL INFORMATION

Course Number: 2000025

Course Path: Section: Grades PreK to 12 Education Courses > **Grade Group:** Grades 6 to 8 Education Courses > **Subject:** Science > **SubSubject:** Biological

Sciences >

Abbreviated Title: M/J STEM LIFE SCI

Course Length: Year (Y)

Course Attributes:

- Class Size Core Required

Course Type: Core Academic Course

Course Level: 2

Course Status: Draft - Course Pending Approval

Grade Level(s): 6,7,8

Educator Certifications

Earth/Space Science (Grades 6-12)
Chemistry (Grades 6-12)
Physics (Grades 6-12)
Middle Grades General Science (Middle Grades 5-9)
Biology (Grades 6-12)
Middle Grades Integrated Curriculum (Middle Grades 5-9)

M/J Science Transfer (#2000220) 2022 - And Beyond

Course Standards

Name	Description
MA.K12.MTR.1.1:	Mathematicians who participate in effortful learning both individually and with others: • Analyze the problem in a way that makes sense given the task. • Ask questions that will help with solving the task. • Build perseverance by modifying methods as needed while solving a challenging task. • Stay engaged and maintain a positive mindset when working to solve tasks. • Help and support each other when attempting a new method or approach. **Clarifications:** Teachers who encourage students to participate actively in effortful learning both individually and with others: • Cultivate a community of growth mindset learners. • Foster perseverance in students by choosing tasks that are challenging. • Develop students' ability to analyze and problem solve. • Recognize students' effort when solving challenging problems.
MA.K12.MTR.2.1:	Demonstrate understanding by representing problems in multiple ways. Mathematicians who demonstrate understanding by representing problems in multiple ways: • Build understanding through modeling and using manipulatives. • Represent solutions to problems in multiple ways using objects, drawings, tables, graphs and equations. • Progress from modeling problems with objects and drawings to using algorithms and equations. • Express connections between concepts and representations. • Choose a representation based on the given context or purpose. **Clarifications:** Teachers who encourage students to demonstrate understanding by representing problems in multiple ways: • Help students make connections between concepts and representations. • Provide opportunities for students to use manipulatives when investigating concepts. • Guide students from concrete to pictorial to abstract representations as understanding progresses. • Show students that various representations can have different purposes and can be useful in different situations.
MA.K12.MTR.3.1:	Complete tasks with mathematical fluency. Mathematicians who complete tasks with mathematical fluency: • Select efficient and appropriate methods for solving problems within the given context. • Maintain flexibility and accuracy while performing procedures and mental calculations. • Complete tasks accurately and with confidence. • Adapt procedures to apply them to a new context. • Use feedback to improve efficiency when performing calculations. **Clarifications:** Teachers who encourage students to complete tasks with mathematical fluency: • Provide students with the flexibility to solve problems by selecting a procedure that allows them to solve efficiently and accurately. • Offer multiple opportunities for students to practice efficient and generalizable methods. • Provide opportunities for students to reflect on the method they used and determine if a more efficient method could have been used.
MA.K12.MTR.4.1:	Engage in discussions that reflect on the mathematical thinking of self and others. Mathematicians who engage in discussions that reflect on the mathematical thinking of self and others: • Communicate mathematical ideas, vocabulary and methods effectively. • Analyze the mathematical thinking of others. • Compare the efficiency of a method to those expressed by others. • Recognize errors and suggest how to correctly solve the task. • Justify results by explaining methods and processes. • Construct possible arguments based on evidence. **Clarifications:** Teachers who encourage students to engage in discussions that reflect on the mathematical thinking of self and others: • Establish a culture in which students ask questions of the teacher and their peers, and error is an opportunity for learning. • Create opportunities for students to discuss their thinking with peers. • Select, sequence and present student work to advance and deepen understanding of correct and increasingly efficient methods. • Develop students' ability to justify methods and compare their responses to the responses of their peers.
	Use patterns and structure to help understand and connect mathematical concepts. Mathematicians who use patterns and structure to help understand and connect mathematical concepts: • Focus on relevant details within a problem. • Create plans and procedures to logically order events, steps or ideas to solve problems. • Decompose a complex problem into manageable parts. • Relate previously learned concepts to new concepts.

MA.K12.MTR.5.1:	• Look for similarities among problems. • Connect solutions of problems to more complicated large-scale situations. **Clarifications:** Teachers who encourage students to use patterns and structure to help understand and connect mathematical concepts: • Help students recognize the patterns in the world around them and connect these patterns to mathematical concepts. • Support students to develop generalizations based on the similarities found among problems. • Provide opportunities for students to create plans and procedures to solve problems. • Develop students' ability to construct relationships between their current understanding and more sophisticated ways of thinking.
MA.K12.MTR.6.1:	Assess the reasonableness of solutions. Mathematicians who assess the reasonableness of solutions: • Estimate to discover possible solutions. • Use benchmark quantities to determine if a solution makes sense. • Check calculations when solving problems. • Verify possible solutions by explaining the methods used. • Evaluate results based on the given context. **Clarifications:** Teachers who encourage students to assess the reasonableness of solutions: • Have students estimate or predict solutions prior to solving. • Prompt students to continually ask, "Does this solution make sense? How do you know?" • Reinforce that students check their work as they progress within and after a task. • Strengthen students' ability to verify solutions through justifications.
MA.K12.MTR.7.1:	Apply mathematics to real-world contexts. Mathematicians who apply mathematics to real-world contexts: • Connect mathematical concepts to everyday experiences. • Use models and methods to understand, represent and solve problems. • Perform investigations to gather data or determine if a method is appropriate. • Redesign models and methods to improve accuracy or efficiency. **Clarifications:** Teachers who encourage students to apply mathematics to real-world contexts: • Provide opportunities for students to create models, both concrete and abstract, and perform investigations. • Challenge students to question the accuracy of their models and methods. • Support students as they validate conclusions by comparing them to the given situation. • Indicate how various concepts can be applied to other disciplines.
ELA.K12.EE.1.1:	Cite evidence to explain and justify reasoning. **Clarifications:** K-1 Students include textual evidence in their oral communication with guidance and support from adults. The evidence can consist of details from the text without naming the text. During 1st grade, students learn how to incorporate the evidence in their writing. 2-3 Students include relevant textual evidence in their written and oral communication. Students should name the text when they refer to it. In 3rd grade, students should use a combination of direct and indirect citations. 4-5 Students continue with previous skills and reference comments made by speakers and peers. Students cite texts that they've directly quoted, paraphrased, or used for information. When writing, students will use the form of citation dictated by the instructor or the style guide referenced by the instructor. 6-8 Students continue with previous skills and use a style guide to create a proper citation. 9-12 Students continue with previous skills and should be aware of existing style guides and the ways in which they differ.
ELA.K12.EE.2.1:	Read and comprehend grade-level complex texts proficiently. **Clarifications:** See Text Complexity for grade-level complexity bands and a text complexity rubric.
ELA.K12.EE.3.1:	Make inferences to support comprehension. **Clarifications:** Students will make inferences before the words infer or inference are introduced. Kindergarten students will answer questions like "Why is the girl smiling?" or make predictions about what will happen based on the title page. Students will use the terms and apply them in 2nd grade and beyond.
ELA.K12.EE.4.1:	Use appropriate collaborative techniques and active listening skills when engaging in discussions in a variety of situations. **Clarifications:** In kindergarten, students learn to listen to one another respectfully. In grades 1-2, students build upon these skills by justifying what they are thinking. For example: "I think _____ because _____." The collaborative conversations are becoming academic conversations. In grades 3-12, students engage in academic conversations discussing claims and justifying their reasoning, refining and applying skills. Students build on ideas, propel the conversation, and support claims and counterclaims with evidence.
ELA.K12.EE.5.1:	Use the accepted rules governing a specific format to create quality work. **Clarifications:** Students will incorporate skills learned into work products to produce quality work. For students to incorporate these skills appropriately, they must receive instruction. A 3rd grade student creating a poster board display must have instruction in how to effectively present information to do quality work.
	Use appropriate voice and tone when speaking or writing.

ELA.K12.EE.6.1:	**Clarifications:** In kindergarten and 1st grade, students learn the difference between formal and informal language. For example, the way we talk to our friends differs from the way we speak to adults. In 2nd grade and beyond, students practice appropriate social and academic language to discuss texts.
ELD.K12.ELL.SC.1:	English language learners communicate information, ideas and concepts necessary for academic success in the content area of Science.
ELD.K12.ELL.SI.1:	English language learners communicate for social and instructional purposes within the school setting.

General Course Information and Notes

GENERAL NOTES

SUBJECT AREA TRANSFER NUMBERS

Each course transferred into a Florida public school by an out-of-state or non-public school student should be matched with a course title and number when such course provides substantially the same content. However, a few transfer courses may not be close enough in content to be matched. For those courses a subject area transfer number is provided.

Florida's Benchmarks for Excellent Student Thinking (B.E.S.T.) Standards
This course includes Florida's B.E.S.T. ELA Expectations (EE) and Mathematical Thinking and Reasoning Standards (MTRs) for students. Florida educators should intentionally embed these standards within the content and their instruction as applicable. For guidance on the implementation of the EEs and MTRs, please visit cpalms.org/Standards/BEST_Standards.aspx and select the appropriate B.E.S.T. Standards package.

GENERAL INFORMATION

Course Number: 2000220

Course Path: Section: Grades PreK to 12 Education Courses > **Grade Group:** Grades 6 to 8 Education Courses > **Subject:** Science > **SubSubject:** Physical Sciences >
Abbreviated Title: M/J SCI TRAN
Course Length: Not Applicable

Course Type: Transfer Course
Course Status: Draft - Course Pending Approval
Grade Level(s): 6,7,8

Biology 1 (#2000310) 2022 - And Beyond

Course Standards

Name	Description
SC.912.E.7.1:	Analyze the movement of matter and energy through the different biogeochemical cycles, including water and carbon.
SC.912.L.14.1:	Describe the scientific theory of cells (cell theory) and relate the history of its discovery to the process of science.
SC.912.L.14.2:	Relate structure to function for the components of plant and animal cells. Explain the role of cell membranes as a highly selective barrier (passive and active transport).
SC.912.L.14.3:	Compare and contrast the general structures of plant and animal cells. Compare and contrast the general structures of prokaryotic and eukaryotic cells.
SC.912.L.14.4:	Compare and contrast structure and function of various types of microscopes.
SC.912.L.14.6:	Explain the significance of genetic factors, environmental factors, and pathogenic agents to health from the perspectives of both individual and public health.
SC.912.L.14.7:	Relate the structure of each of the major plant organs and tissues to physiological processes.
SC.912.L.14.26:	Identify the major parts of the brain on diagrams or models.
SC.912.L.14.36:	Describe the factors affecting blood flow through the cardiovascular system.
SC.912.L.14.52:	Explain the basic functions of the human immune system, including specific and nonspecific immune response, vaccines, and antibiotics.
SC.912.L.15.1:	Explain how the scientific theory of evolution is supported by the fossil record, comparative anatomy, comparative embryology, biogeography, molecular biology, and observed evolutionary change.
SC.912.L.15.4:	Describe how and why organisms are hierarchically classified and based on evolutionary relationships.
SC.912.L.15.5:	Explain the reasons for changes in how organisms are classified.
SC.912.L.15.6:	Discuss distinguishing characteristics of the domains and kingdoms of living organisms.
SC.912.L.15.8:	Describe the scientific explanations of the origin of life on Earth.
SC.912.L.15.10:	Identify basic trends in hominid evolution from early ancestors six million years ago to modern humans, including brain size, jaw size, language, and manufacture of tools.
SC.912.L.15.13:	Describe the conditions required for natural selection, including: overproduction of offspring, inherited variation, and the struggle to survive, which result in differential reproductive success.
SC.912.L.15.14:	Discuss mechanisms of evolutionary change other than natural selection such as genetic drift and gene flow.
SC.912.L.15.15:	Describe how mutation and genetic recombination increase genetic variation.
SC.912.L.16.1:	Use Mendel's laws of segregation and independent assortment to analyze patterns of inheritance.
SC.912.L.16.2:	Discuss observed inheritance patterns caused by various modes of inheritance, including dominant, recessive, codominant, sex-linked, polygenic, and multiple alleles.
SC.912.L.16.3:	Describe the basic process of DNA replication and how it relates to the transmission and conservation of the genetic information.
SC.912.L.16.4:	Explain how mutations in the DNA sequence may or may not result in phenotypic change. Explain how mutations in gametes may result in phenotypic changes in offspring.
SC.912.L.16.5:	Explain the basic processes of transcription and translation, and how they result in the expression of genes.
SC.912.L.16.8:	Explain the relationship between mutation, cell cycle, and uncontrolled cell growth potentially resulting in cancer.
SC.912.L.16.9:	Explain how and why the genetic code is universal and is common to almost all organisms.
SC.912.L.16.10:	Evaluate the impact of biotechnology on the individual, society and the environment, including medical and ethical issues.
SC.912.L.16.13:	Describe the basic anatomy and physiology of the human reproductive system. Describe the process of human development from fertilization to birth and major changes that occur in each trimester of pregnancy.
SC.912.L.16.14:	Describe the cell cycle, including the process of mitosis. Explain the role of mitosis in the formation of new cells and its importance in maintaining chromosome number during asexual reproduction.
SC.912.L.16.16:	Describe the process of meiosis, including independent assortment and crossing over. Explain how reduction division results in the formation of haploid gametes or spores.
SC.912.L.16.17:	Compare and contrast mitosis and meiosis and relate to the processes of sexual and asexual reproduction and their consequences for genetic variation.
SC.912.L.17.2:	Explain the general distribution of life in aquatic systems as a function of chemistry, geography, light, depth, salinity, and temperature.
SC.912.L.17.4:	Describe changes in ecosystems resulting from seasonal variations, climate change and succession.
SC.912.L.17.5:	Analyze how population size is determined by births, deaths, immigration, emigration, and limiting factors (biotic and abiotic) that determine carrying capacity.
SC.912.L.17.8:	Recognize the consequences of the losses of biodiversity due to catastrophic events, climate changes, human activity, and the introduction of invasive, non-native species.
SC.912.L.17.9:	Use a food web to identify and distinguish producers, consumers, and decomposers. Explain the pathway of energy transfer through trophic levels and the reduction of available energy at successive trophic levels.
SC.912.L.17.11:	Evaluate the costs and benefits of renewable and nonrenewable resources, such as water, energy, fossil fuels, wildlife, and forests.
SC.912.L.17.13:	Discuss the need for adequate monitoring of environmental parameters when making policy decisions.
SC.912.L.17.20:	Predict the impact of individuals on environmental systems and examine how human lifestyles affect sustainability.
SC.912.L.18.1:	Describe the basic molecular structures and primary functions of the four major categories of biological macromolecules.
SC.912.L.18.7:	Identify the reactants, products, and basic functions of photosynthesis.
SC.912.L.18.8:	Identify the reactants, products, and basic functions of aerobic and anaerobic cellular respiration.
SC.912.L.18.9:	Explain the interrelated nature of photosynthesis and cellular respiration.
SC.912.L.18.10:	Connect the role of adenosine triphosphate (ATP) to energy transfers within a cell.
SC.912.L.18.11:	Explain the role of enzymes as catalysts that lower the activation energy of biochemical reactions. Identify factors, such as pH and temperature, and their effect on enzyme activity.
SC.912.L.18.12:	Discuss the special properties of water that contribute to Earth's suitability as an environment for life: cohesive behavior, ability to moderate temperature, expansion upon freezing, and versatility as a solvent.

SC.912.N.1.1:	Define a problem based on a specific body of knowledge, for example: biology, chemistry, physics, and earth/space science, and do the following: 1. **Pose questions about the natural world,** (Articulate the purpose of the investigation and identify the relevant scientific concepts). 2. **Conduct systematic observations,** (Write procedures that are clear and replicable. Identify observables and examine relationships between test (independent) variable and outcome (dependent) variable. Employ appropriate methods for accurate and consistent observations; conduct and record measurements at appropriate levels of precision. Follow safety guidelines). 3. **Examine books and other sources of information to see what is already known,** 4. **Review what is known in light of empirical evidence,** (Examine whether available empirical evidence can be interpreted in terms of existing knowledge and models, and if not, modify or develop new models). 5. **Plan investigations,** (Design and evaluate a scientific investigation). 6. **Use tools to gather, analyze, and interpret data (this includes the use of measurement in metric and other systems, and also the generation and interpretation of graphical representations of data, including data tables and graphs),** (Collect data or evidence in an organized way. Properly use instruments, equipment, and materials (e.g., scales, probeware, meter sticks, microscopes, computers) including set-up, calibration, technique, maintenance, and storage). 7. **Pose answers, explanations, or descriptions of events,** 8. **Generate explanations that explicate or describe natural phenomena (inferences),** 9. **Use appropriate evidence and reasoning to justify these explanations to others,** 10. **Communicate results of scientific investigations, and** 11. **Evaluate the merits of the explanations produced by others.**
SC.912.N.1.3:	Recognize that the strength or usefulness of a scientific claim is evaluated through scientific argumentation, which depends on critical and logical thinking, and the active consideration of alternative scientific explanations to explain the data presented.
SC.912.N.1.4:	Identify sources of information and assess their reliability according to the strict standards of scientific investigation.
SC.912.N.1.6:	Describe how scientific inferences are drawn from scientific observations and provide examples from the content being studied.
SC.912.N.2.1:	Identify what is science, what clearly is not science, and what superficially resembles science (but fails to meet the criteria for science).
SC.912.N.2.2:	Identify which questions can be answered through science and which questions are outside the boundaries of scientific investigation, such as questions addressed by other ways of knowing, such as art, philosophy, and religion.
SC.912.N.3.1:	Explain that a scientific theory is the culmination of many scientific investigations drawing together all the current evidence concerning a substantial range of phenomena; thus, a scientific theory represents the most powerful explanation scientists have to offer.
SC.912.N.3.4:	Recognize that theories do not become laws, nor do laws become theories; theories are well supported explanations and laws are well supported descriptions.
MA.K12.MTR.1.1:	Mathematicians who participate in effortful learning both individually and with others: • Analyze the problem in a way that makes sense given the task. • Ask questions that will help with solving the task. • Build perseverance by modifying methods as needed while solving a challenging task. • Stay engaged and maintain a positive mindset when working to solve tasks. • Help and support each other when attempting a new method or approach. **Clarifications:** Teachers who encourage students to participate actively in effortful learning both individually and with others: • Cultivate a community of growth mindset learners. • Foster perseverance in students by choosing tasks that are challenging. • Develop students' ability to analyze and problem solve. • Recognize students' effort when solving challenging problems.
MA.K12.MTR.2.1:	Demonstrate understanding by representing problems in multiple ways. Mathematicians who demonstrate understanding by representing problems in multiple ways: • Build understanding through modeling and using manipulatives. • Represent solutions to problems in multiple ways using objects, drawings, tables, graphs and equations. • Progress from modeling problems with objects and drawings to using algorithms and equations. • Express connections between concepts and representations. • Choose a representation based on the given context or purpose. **Clarifications:** Teachers who encourage students to demonstrate understanding by representing problems in multiple ways: • Help students make connections between concepts and representations. • Provide opportunities for students to use manipulatives when investigating concepts. • Guide students from concrete to pictorial to abstract representations as understanding progresses. • Show students that various representations can have different purposes and can be useful in different situations.
MA.K12.MTR.3.1:	Complete tasks with mathematical fluency. Mathematicians who complete tasks with mathematical fluency: • Select efficient and appropriate methods for solving problems within the given context. • Maintain flexibility and accuracy while performing procedures and mental calculations. • Complete tasks accurately and with confidence. • Adapt procedures to apply them to a new context. • Use feedback to improve efficiency when performing calculations. **Clarifications:** Teachers who encourage students to complete tasks with mathematical fluency: • Provide students with the flexibility to solve problems by selecting a procedure that allows them to solve efficiently and accurately. • Offer multiple opportunities for students to practice efficient and generalizable methods. • Provide opportunities for students to reflect on the method they used and determine if a more efficient method could have been used.
	Engage in discussions that reflect on the mathematical thinking of self and others.

MA.K12.MTR.4.1:	Mathematicians who engage in discussions that reflect on the mathematical thinking of self and others: • Communicate mathematical ideas, vocabulary and methods effectively. • Analyze the mathematical thinking of others. • Compare the efficiency of a method to those expressed by others. • Recognize errors and suggest how to correctly solve the task. • Justify results by explaining methods and processes. • Construct possible arguments based on evidence. **Clarifications:** Teachers who encourage students to engage in discussions that reflect on the mathematical thinking of self and others: • Establish a culture in which students ask questions of the teacher and their peers, and error is an opportunity for learning. • Create opportunities for students to discuss their thinking with peers. • Select, sequence and present student work to advance and deepen understanding of correct and increasingly efficient methods. • Develop students' ability to justify methods and compare their responses to the responses of their peers.
MA.K12.MTR.5.1:	Use patterns and structure to help understand and connect mathematical concepts. Mathematicians who use patterns and structure to help understand and connect mathematical concepts: • Focus on relevant details within a problem. • Create plans and procedures to logically order events, steps or ideas to solve problems. • Decompose a complex problem into manageable parts. • Relate previously learned concepts to new concepts. • Look for similarities among problems. • Connect solutions of problems to more complicated large-scale situations. **Clarifications:** Teachers who encourage students to use patterns and structure to help understand and connect mathematical concepts: • Help students recognize the patterns in the world around them and connect these patterns to mathematical concepts. • Support students to develop generalizations based on the similarities found among problems. • Provide opportunities for students to create plans and procedures to solve problems. • Develop students' ability to construct relationships between their current understanding and more sophisticated ways of thinking.
MA.K12.MTR.6.1:	Assess the reasonableness of solutions. Mathematicians who assess the reasonableness of solutions: • Estimate to discover possible solutions. • Use benchmark quantities to determine if a solution makes sense. • Check calculations when solving problems. • Verify possible solutions by explaining the methods used. • Evaluate results based on the given context. **Clarifications:** Teachers who encourage students to assess the reasonableness of solutions: • Have students estimate or predict solutions prior to solving. • Prompt students to continually ask, "Does this solution make sense? How do you know?" • Reinforce that students check their work as they progress within and after a task. • Strengthen students' ability to verify solutions through justifications.
MA.K12.MTR.7.1:	Apply mathematics to real-world contexts. Mathematicians who apply mathematics to real-world contexts: • Connect mathematical concepts to everyday experiences. • Use models and methods to understand, represent and solve problems. • Perform investigations to gather data or determine if a method is appropriate. • Redesign models and methods to improve accuracy or efficiency. **Clarifications:** Teachers who encourage students to apply mathematics to real-world contexts: • Provide opportunities for students to create models, both concrete and abstract, and perform investigations. • Challenge students to question the accuracy of their models and methods. • Support students as they validate conclusions by comparing them to the given situation. • Indicate how various concepts can be applied to other disciplines.
ELA.K12.EE.1.1:	Cite evidence to explain and justify reasoning. **Clarifications:** K-1 Students include textual evidence in their oral communication with guidance and support from adults. The evidence can consist of details from the text without naming the text. During 1st grade, students learn how to incorporate the evidence in their writing. 2-3 Students include relevant textual evidence in their written and oral communication. Students should name the text when they refer to it. In 3rd grade, students should use a combination of direct and indirect citations. 4-5 Students continue with previous skills and reference comments made by speakers and peers. Students cite texts that they've directly quoted, paraphrased, or used for information. When writing, students will use the form of citation dictated by the instructor or the style guide referenced by the instructor. 6-8 Students continue with previous skills and use a style guide to create a proper citation. 9-12 Students continue with previous skills and should be aware of existing style guides and the ways in which they differ.
ELA.K12.EE.2.1:	Read and comprehend grade-level complex texts proficiently. **Clarifications:**

	See Text Complexity for grade-level complexity bands and a text complexity rubric.
ELA.K12.EE.3.1:	Make inferences to support comprehension. **Clarifications:** Students will make inferences before the words infer or inference are introduced. Kindergarten students will answer questions like "Why is the girl smiling?" or make predictions about what will happen based on the title page. Students will use the terms and apply them in 2nd grade and beyond.
ELA.K12.EE.4.1:	Use appropriate collaborative techniques and active listening skills when engaging in discussions in a variety of situations. **Clarifications:** In kindergarten, students learn to listen to one another respectfully. In grades 1-2, students build upon these skills by justifying what they are thinking. For example: "I think _____ because _____." The collaborative conversations are becoming academic conversations. In grades 3-12, students engage in academic conversations discussing claims and justifying their reasoning, refining and applying skills. Students build on ideas, propel the conversation, and support claims and counterclaims with evidence.
ELA.K12.EE.5.1:	Use the accepted rules governing a specific format to create quality work. **Clarifications:** Students will incorporate skills learned into work products to produce quality work. For students to incorporate these skills appropriately, they must receive instruction. A 3rd grade student creating a poster board display must have instruction in how to effectively present information to do quality work.
ELA.K12.EE.6.1:	Use appropriate voice and tone when speaking or writing. **Clarifications:** In kindergarten and 1st grade, students learn the difference between formal and informal language. For example, the way we talk to our friends differs from the way we speak to adults. In 2nd grade and beyond, students practice appropriate social and academic language to discuss texts.
HE.912.C.1.3:	Evaluate how environment and personal health are interrelated. **Clarifications:** Food options within a community; prenatal-care services; availability of recreational facilities; air quality; weather-safety awareness; and weather, air, and water conditions.
HE.912.C.1.5:	Analyze strategies for prevention, detection, and treatment of communicable and chronic diseases. **Clarifications:** Health prevention, detection, and treatment of: breast and testicular cancer, suicide, obesity, and industrial-related chronic disease.
HE.912.C.1.7:	Analyze how heredity and family history can impact personal health. **Clarifications:** Drug use, family obesity, heart disease, mental health, and non-communicable illness or disease.
ELD.K12.ELL.SC.1:	English language learners communicate information, ideas and concepts necessary for academic success in the content area of Science.
ELD.K12.ELL.SI.1:	English language learners communicate for social and instructional purposes within the school setting.

General Course Information and Notes

GENERAL NOTES

Laboratory investigations that include the use of scientific inquiry, research, measurement, problem solving, laboratory apparatus and technologies, experimental procedures, and safety procedures are an integral part of this course. The National Science Teachers Association (NSTA) recommends that at the high school level, all students should be in the science lab or field, collecting data every week. School laboratory investigations (labs) are defined by the National Research Council (NRC) as an experience in the laboratory, classroom, or the field that provides students with opportunities to interact directly with natural phenomena or with data collected by others using tools, materials, data collection techniques, and models (NRC, 2006, p. 3). Laboratory investigations in the high school classroom should help all students develop a growing understanding of the complexity and ambiguity of empirical work, as well as the skills to calibrate and troubleshoot equipment used to make observations. Learners should understand measurement error; and have the skills to aggregate, interpret, and present the resulting data (National Research Council, 2006, p.77; NSTA, 2007).

Special Notes:

Instructional Practices
Teaching from a range of complex text is optimized when teachers in all subject areas implement the following strategies on a routine basis:

1. Ensuring wide reading from complex text that varies in length.
2. Making close reading and rereading of texts central to lessons.
3. Emphasizing text-specific complex questions, and cognitively complex tasks, reinforce focus on the text and cultivate independence.
4. Emphasizing students supporting answers based upon evidence from the text.
5. Providing extensive research and writing opportunities (claims and evidence).

Science and Engineering Practices (NRC *Framework for K-12 Science Education, 2010*)

- Asking questions (for science) and defining problems (for engineering).
- Developing and using models.
- Planning and carrying out investigations.
- Analyzing and interpreting data.
- Using mathematics, information and computer technology, and computational thinking.
- Constructing explanations (for science) and designing solutions (for engineering).
- Engaging in argument from evidence.

- Obtaining, evaluating, and communicating information.

Florida's Benchmarks for Excellent Student Thinking (B.E.S.T.) Standards
This course includes Florida's B.E.S.T. ELA Expectations (EE) and Mathematical Thinking and Reasoning Standards (MTRs) for students. Florida educators should intentionally embed these standards within the content and their instruction as applicable. For guidance on the implementation of the EEs and MTRs, please visit cpalms.org/Standards/BEST_Standards.aspx and select the appropriate B.E.S.T. Standards package.

English Language Development ELD Standards Special Notes Section:
Teachers are required to provide listening, speaking, reading and writing instruction that allows English language learners (ELL) to communicate information, ideas and concepts for academic success in the content area of Science. For the given level of English language proficiency and with visual, graphic, or interactive support, students will interact with grade level words, expressions, sentences and discourse to process or produce language necessary for academic success The ELD standard should specify a relevant content area concept or topic of study chosen by curriculum developers and teachers which maximizes an ELL's need for communication and social skills. To access an ELL supporting document which delineates performance definitions and descriptors, please click on the following link: cpalms.org/uploads/docs/standards/eld/SC.pdf

Additional Instructional Resources:
A.V.E. for Success Collection is provided by the Florida Association of School Administrators: fasa.net/4DCGI/cms/review.html?Action=CMS_Document&DocID=139. Please be aware that these resources have not been reviewed by CPALMS and there may be a charge for the use of some of them in this collection.

GENERAL INFORMATION

Course Number: 2000310

Course Path: Section: Grades PreK to 12 Education Courses > **Grade Group:** Grades 9 to 12 and Adult Education Courses > **Subject:** Science > **SubSubject:** Biological Sciences > **Abbreviated Title:** BIO 1

Number of Credits: One (1) credit

Course Length: Year (Y)

Course Attributes:
- Class Size Core Required

Course Type: Core Academic Course

Course Level: 2

Course Status: Draft - Course Pending Approval

Grade Level(s): 9,10,11,12

Graduation Requirement: Biology

Educator Certifications

Science (Secondary Grades 7-12)
Biology (Grades 6-12)
Middle Grades General Science (Middle Grades 5-9)

Equivalent Courses

2000320-Biology 1 Honors
2000430-Biology Technology
2000322-Cambridge Pre-AICE Biology IGCSE Level
2000800-Florida's Preinternational Baccalaureate Biology 1

Biology 1 for Credit Recovery (#2000315) 2022 - And Beyond

Course Standards

Name	Description
SC.912.E.7.1:	Analyze the movement of matter and energy through the different biogeochemical cycles, including water and carbon.
SC.912.L.14.1:	Describe the scientific theory of cells (cell theory) and relate the history of its discovery to the process of science.
SC.912.L.14.2:	Relate structure to function for the components of plant and animal cells. Explain the role of cell membranes as a highly selective barrier (passive and active transport).
SC.912.L.14.3:	Compare and contrast the general structures of plant and animal cells. Compare and contrast the general structures of prokaryotic and eukaryotic cells.
SC.912.L.14.4:	Compare and contrast structure and function of various types of microscopes.
SC.912.L.14.6:	Explain the significance of genetic factors, environmental factors, and pathogenic agents to health from the perspectives of both individual and public health.
SC.912.L.14.7:	Relate the structure of each of the major plant organs and tissues to physiological processes.
SC.912.L.14.26:	Identify the major parts of the brain on diagrams or models.
SC.912.L.14.36:	Describe the factors affecting blood flow through the cardiovascular system.
SC.912.L.14.52:	Explain the basic functions of the human immune system, including specific and nonspecific immune response, vaccines, and antibiotics.
SC.912.L.15.1:	Explain how the scientific theory of evolution is supported by the fossil record, comparative anatomy, comparative embryology, biogeography, molecular biology, and observed evolutionary change.
SC.912.L.15.4:	Describe how and why organisms are hierarchically classified and based on evolutionary relationships.
SC.912.L.15.5:	Explain the reasons for changes in how organisms are classified.
SC.912.L.15.6:	Discuss distinguishing characteristics of the domains and kingdoms of living organisms.
SC.912.L.15.8:	Describe the scientific explanations of the origin of life on Earth.
SC.912.L.15.10:	Identify basic trends in hominid evolution from early ancestors six million years ago to modern humans, including brain size, jaw size, language, and manufacture of tools.
SC.912.L.15.13:	Describe the conditions required for natural selection, including: overproduction of offspring, inherited variation, and the struggle to survive, which result in differential reproductive success.
SC.912.L.15.14:	Discuss mechanisms of evolutionary change other than natural selection such as genetic drift and gene flow.
SC.912.L.15.15:	Describe how mutation and genetic recombination increase genetic variation.
SC.912.L.16.1:	Use Mendel's laws of segregation and independent assortment to analyze patterns of inheritance.
SC.912.L.16.2:	Discuss observed inheritance patterns caused by various modes of inheritance, including dominant, recessive, codominant, sex-linked, polygenic, and multiple alleles.
SC.912.L.16.3:	Describe the basic process of DNA replication and how it relates to the transmission and conservation of the genetic information.
SC.912.L.16.4:	Explain how mutations in the DNA sequence may or may not result in phenotypic change. Explain how mutations in gametes may result in phenotypic changes in offspring.
SC.912.L.16.5:	Explain the basic processes of transcription and translation, and how they result in the expression of genes.
SC.912.L.16.8:	Explain the relationship between mutation, cell cycle, and uncontrolled cell growth potentially resulting in cancer.
SC.912.L.16.9:	Explain how and why the genetic code is universal and is common to almost all organisms.
SC.912.L.16.10:	Evaluate the impact of biotechnology on the individual, society and the environment, including medical and ethical issues.
SC.912.L.16.13:	Describe the basic anatomy and physiology of the human reproductive system. Describe the process of human development from fertilization to birth and major changes that occur in each trimester of pregnancy.
SC.912.L.16.14:	Describe the cell cycle, including the process of mitosis. Explain the role of mitosis in the formation of new cells and its importance in maintaining chromosome number during asexual reproduction.
SC.912.L.16.16:	Describe the process of meiosis, including independent assortment and crossing over. Explain how reduction division results in the formation of haploid gametes or spores.
SC.912.L.16.17:	Compare and contrast mitosis and meiosis and relate to the processes of sexual and asexual reproduction and their consequences for genetic variation.
SC.912.L.17.2:	Explain the general distribution of life in aquatic systems as a function of chemistry, geography, light, depth, salinity, and temperature.
SC.912.L.17.4:	Describe changes in ecosystems resulting from seasonal variations, climate change and succession.
SC.912.L.17.5:	Analyze how population size is determined by births, deaths, immigration, emigration, and limiting factors (biotic and abiotic) that determine carrying capacity.
SC.912.L.17.8:	Recognize the consequences of the losses of biodiversity due to catastrophic events, climate changes, human activity, and the introduction of invasive, non-native species.
SC.912.L.17.9:	Use a food web to identify and distinguish producers, consumers, and decomposers. Explain the pathway of energy transfer through trophic levels and the reduction of available energy at successive trophic levels.
SC.912.L.17.11:	Evaluate the costs and benefits of renewable and nonrenewable resources, such as water, energy, fossil fuels, wildlife, and forests.
SC.912.L.17.13:	Discuss the need for adequate monitoring of environmental parameters when making policy decisions.
SC.912.L.17.20:	Predict the impact of individuals on environmental systems and examine how human lifestyles affect sustainability.
SC.912.L.18.1:	Describe the basic molecular structures and primary functions of the four major categories of biological macromolecules.
SC.912.L.18.7:	Identify the reactants, products, and basic functions of photosynthesis.
SC.912.L.18.8:	Identify the reactants, products, and basic functions of aerobic and anaerobic cellular respiration.
SC.912.L.18.9:	Explain the interrelated nature of photosynthesis and cellular respiration.
SC.912.L.18.10:	Connect the role of adenosine triphosphate (ATP) to energy transfers within a cell.
SC.912.L.18.11:	Explain the role of enzymes as catalysts that lower the activation energy of biochemical reactions. Identify factors, such as pH and temperature, and their effect on enzyme activity.
SC.912.L.18.12:	Discuss the special properties of water that contribute to Earth's suitability as an environment for life: cohesive behavior, ability to moderate temperature, expansion upon freezing, and versatility as a solvent.

SC.912.N.1.1:	Define a problem based on a specific body of knowledge, for example: biology, chemistry, physics, and earth/space science, and do the following: 1. **Pose questions about the natural world,** (Articulate the purpose of the investigation and identify the relevant scientific concepts). 2. **Conduct systematic observations,** (Write procedures that are clear and replicable. Identify observables and examine relationships between test (independent) variable and outcome (dependent) variable. Employ appropriate methods for accurate and consistent observations; conduct and record measurements at appropriate levels of precision. Follow safety guidelines). 3. **Examine books and other sources of information to see what is already known,** 4. **Review what is known in light of empirical evidence,** (Examine whether available empirical evidence can be interpreted in terms of existing knowledge and models, and if not, modify or develop new models). 5. **Plan investigations,** (Design and evaluate a scientific investigation). 6. **Use tools to gather, analyze, and interpret data (this includes the use of measurement in metric and other systems, and also the generation and interpretation of graphical representations of data, including data tables and graphs),** (Collect data or evidence in an organized way. Properly use instruments, equipment, and materials (e.g., scales, probeware, meter sticks, microscopes, computers) including set-up, calibration, technique, maintenance, and storage). 7. **Pose answers, explanations, or descriptions of events,** 8. **Generate explanations that explicate or describe natural phenomena (inferences),** 9. **Use appropriate evidence and reasoning to justify these explanations to others,** 10. **Communicate results of scientific investigations, and** 11. **Evaluate the merits of the explanations produced by others.**
SC.912.N.1.3:	Recognize that the strength or usefulness of a scientific claim is evaluated through scientific argumentation, which depends on critical and logical thinking, and the active consideration of alternative scientific explanations to explain the data presented.
SC.912.N.1.4:	Identify sources of information and assess their reliability according to the strict standards of scientific investigation.
SC.912.N.1.6:	Describe how scientific inferences are drawn from scientific observations and provide examples from the content being studied.
SC.912.N.2.1:	Identify what is science, what clearly is not science, and what superficially resembles science (but fails to meet the criteria for science).
SC.912.N.2.2:	Identify which questions can be answered through science and which questions are outside the boundaries of scientific investigation, such as questions addressed by other ways of knowing, such as art, philosophy, and religion.
SC.912.N.3.1:	Explain that a scientific theory is the culmination of many scientific investigations drawing together all the current evidence concerning a substantial range of phenomena; thus, a scientific theory represents the most powerful explanation scientists have to offer.
SC.912.N.3.4:	Recognize that theories do not become laws, nor do laws become theories; theories are well supported explanations and laws are well supported descriptions.
MA.K12.MTR.1.1:	Mathematicians who participate in effortful learning both individually and with others: • Analyze the problem in a way that makes sense given the task. • Ask questions that will help with solving the task. • Build perseverance by modifying methods as needed while solving a challenging task. • Stay engaged and maintain a positive mindset when working to solve tasks. • Help and support each other when attempting a new method or approach. **Clarifications:** Teachers who encourage students to participate actively in effortful learning both individually and with others: • Cultivate a community of growth mindset learners. • Foster perseverance in students by choosing tasks that are challenging. • Develop students' ability to analyze and problem solve. • Recognize students' effort when solving challenging problems.
MA.K12.MTR.2.1:	Demonstrate understanding by representing problems in multiple ways. Mathematicians who demonstrate understanding by representing problems in multiple ways: • Build understanding through modeling and using manipulatives. • Represent solutions to problems in multiple ways using objects, drawings, tables, graphs and equations. • Progress from modeling problems with objects and drawings to using algorithms and equations. • Express connections between concepts and representations. • Choose a representation based on the given context or purpose. **Clarifications:** Teachers who encourage students to demonstrate understanding by representing problems in multiple ways: • Help students make connections between concepts and representations. • Provide opportunities for students to use manipulatives when investigating concepts. • Guide students from concrete to pictorial to abstract representations as understanding progresses. • Show students that various representations can have different purposes and can be useful in different situations.
MA.K12.MTR.3.1:	Complete tasks with mathematical fluency. Mathematicians who complete tasks with mathematical fluency: • Select efficient and appropriate methods for solving problems within the given context. • Maintain flexibility and accuracy while performing procedures and mental calculations. • Complete tasks accurately and with confidence. • Adapt procedures to apply them to a new context. • Use feedback to improve efficiency when performing calculations. **Clarifications:** Teachers who encourage students to complete tasks with mathematical fluency: • Provide students with the flexibility to solve problems by selecting a procedure that allows them to solve efficiently and accurately. • Offer multiple opportunities for students to practice efficient and generalizable methods. • Provide opportunities for students to reflect on the method they used and determine if a more efficient method could have been used.
	Engage in discussions that reflect on the mathematical thinking of self and others.

MA.K12.MTR.4.1:	Mathematicians who engage in discussions that reflect on the mathematical thinking of self and others: • Communicate mathematical ideas, vocabulary and methods effectively. • Analyze the mathematical thinking of others. • Compare the efficiency of a method to those expressed by others. • Recognize errors and suggest how to correctly solve the task. • Justify results by explaining methods and processes. • Construct possible arguments based on evidence. **Clarifications:** Teachers who encourage students to engage in discussions that reflect on the mathematical thinking of self and others: • Establish a culture in which students ask questions of the teacher and their peers, and error is an opportunity for learning. • Create opportunities for students to discuss their thinking with peers. • Select, sequence and present student work to advance and deepen understanding of correct and increasingly efficient methods. • Develop students' ability to justify methods and compare their responses to the responses of their peers.
MA.K12.MTR.5.1:	Use patterns and structure to help understand and connect mathematical concepts. Mathematicians who use patterns and structure to help understand and connect mathematical concepts: • Focus on relevant details within a problem. • Create plans and procedures to logically order events, steps or ideas to solve problems. • Decompose a complex problem into manageable parts. • Relate previously learned concepts to new concepts. • Look for similarities among problems. • Connect solutions of problems to more complicated large-scale situations. **Clarifications:** Teachers who encourage students to use patterns and structure to help understand and connect mathematical concepts: • Help students recognize the patterns in the world around them and connect these patterns to mathematical concepts. • Support students to develop generalizations based on the similarities found among problems. • Provide opportunities for students to create plans and procedures to solve problems. • Develop students' ability to construct relationships between their current understanding and more sophisticated ways of thinking.
MA.K12.MTR.6.1:	Assess the reasonableness of solutions. Mathematicians who assess the reasonableness of solutions: • Estimate to discover possible solutions. • Use benchmark quantities to determine if a solution makes sense. • Check calculations when solving problems. • Verify possible solutions by explaining the methods used. • Evaluate results based on the given context. **Clarifications:** Teachers who encourage students to assess the reasonableness of solutions: • Have students estimate or predict solutions prior to solving. • Prompt students to continually ask, "Does this solution make sense? How do you know?" • Reinforce that students check their work as they progress within and after a task. • Strengthen students' ability to verify solutions through justifications.
MA.K12.MTR.7.1:	Apply mathematics to real-world contexts. Mathematicians who apply mathematics to real-world contexts: • Connect mathematical concepts to everyday experiences. • Use models and methods to understand, represent and solve problems. • Perform investigations to gather data or determine if a method is appropriate. • Redesign models and methods to improve accuracy or efficiency. **Clarifications:** Teachers who encourage students to apply mathematics to real-world contexts: • Provide opportunities for students to create models, both concrete and abstract, and perform investigations. • Challenge students to question the accuracy of their models and methods. • Support students as they validate conclusions by comparing them to the given situation. • Indicate how various concepts can be applied to other disciplines.
ELA.K12.EE.1.1:	Cite evidence to explain and justify reasoning. **Clarifications:** K-1 Students include textual evidence in their oral communication with guidance and support from adults. The evidence can consist of details from the text without naming the text. During 1st grade, students learn how to incorporate the evidence in their writing. 2-3 Students include relevant textual evidence in their written and oral communication. Students should name the text when they refer to it. In 3rd grade, students should use a combination of direct and indirect citations. 4-5 Students continue with previous skills and reference comments made by speakers and peers. Students cite texts that they've directly quoted, paraphrased, or used for information. When writing, students will use the form of citation dictated by the instructor or the style guide referenced by the instructor. 6-8 Students continue with previous skills and use a style guide to create a proper citation. 9-12 Students continue with previous skills and should be aware of existing style guides and the ways in which they differ.
ELA.K12.EE.2.1:	Read and comprehend grade-level complex texts proficiently. **Clarifications:**

	See Text Complexity for grade-level complexity bands and a text complexity rubric.
ELA.K12.EE.3.1:	Make inferences to support comprehension. **Clarifications:** Students will make inferences before the words infer or inference are introduced. Kindergarten students will answer questions like "Why is the girl smiling?" or make predictions about what will happen based on the title page. Students will use the terms and apply them in 2nd grade and beyond.
ELA.K12.EE.4.1:	Use appropriate collaborative techniques and active listening skills when engaging in discussions in a variety of situations. **Clarifications:** In kindergarten, students learn to listen to one another respectfully. In grades 1-2, students build upon these skills by justifying what they are thinking. For example: "I think _____ because _____." The collaborative conversations are becoming academic conversations. In grades 3-12, students engage in academic conversations discussing claims and justifying their reasoning, refining and applying skills. Students build on ideas, propel the conversation, and support claims and counterclaims with evidence.
ELA.K12.EE.5.1:	Use the accepted rules governing a specific format to create quality work. **Clarifications:** Students will incorporate skills learned into work products to produce quality work. For students to incorporate these skills appropriately, they must receive instruction. A 3rd grade student creating a poster board display must have instruction in how to effectively present information to do quality work.
ELA.K12.EE.6.1:	Use appropriate voice and tone when speaking or writing. **Clarifications:** In kindergarten and 1st grade, students learn the difference between formal and informal language. For example, the way we talk to our friends differs from the way we speak to adults. In 2nd grade and beyond, students practice appropriate social and academic language to discuss texts.
HE.912.C.1.3:	Evaluate how environment and personal health are interrelated. **Clarifications:** Food options within a community; prenatal-care services; availability of recreational facilities; air quality; weather-safety awareness; and weather, air, and water conditions.
HE.912.C.1.5:	Analyze strategies for prevention, detection, and treatment of communicable and chronic diseases. **Clarifications:** Health prevention, detection, and treatment of: breast and testicular cancer, suicide, obesity, and industrial-related chronic disease.
HE.912.C.1.7:	Analyze how heredity and family history can impact personal health. **Clarifications:** Drug use, family obesity, heart disease, mental health, and non-communicable illness or disease.
ELD.K12.ELL.SC.1:	English language learners communicate information, ideas and concepts necessary for academic success in the content area of Science.
ELD.K12.ELL.SI.1:	English language learners communicate for social and instructional purposes within the school setting.

General Course Information and Notes

GENERAL NOTES

Special Notes: Credit Recovery courses are credit bearing courses with specific content requirements defined by Next Generation Sunshine State Standards and/or Florida Standards. Students enrolled in a Credit Recovery course must have previously attempted the corresponding course (and/or End-of-Course assessment) since the course requirements for the Credit Recovery course are exactly the same as the previously attempted corresponding course. For example, Geometry (1206310) and Geometry for Credit Recovery (1206315) have identical content requirements. It is important to note that Credit Recovery courses are not bound by Section 1003.436(1)(a), Florida Statutes, requiring a minimum of 135 hours of bona fide instruction (120 hours in a school/district implementing block scheduling) in a designed course of study that contains student performance standards, since the students have previously attempted successful completion of the corresponding course. Additionally, Credit Recovery courses should ONLY be used for credit recovery, grade forgiveness, or remediation for students needing to prepare for an End-of-Course assessment retake.

Special Notes:
Instructional Practices
Teaching from a range of complex text is optimized when teachers in all subject areas implement the following strategies on a routine basis:

1. Ensuring wide reading from complex text that varies in length.
2. Making close reading and rereading of texts central to lessons.
3. Emphasizing text-specific complex questions, and cognitively complex tasks, reinforce focus on the text and cultivate independence.
4. Emphasizing students supporting answers based upon evidence from the text.
5. Providing extensive research and writing opportunities (claims and evidence).

Science and Engineering Practices (NRC *Framework for K-12 Science Education, 2010*)

- Asking questions (for science) and defining problems (for engineering).
- Developing and using models.
- Planning and carrying out investigations.
- Analyzing and interpreting data.
- Using mathematics, information and computer technology, and computational thinking.
- Constructing explanations (for science) and designing solutions (for engineering).
- Engaging in argument from evidence.

- Obtaining, evaluating, and communicating information.

Florida's Benchmarks for Excellent Student Thinking (B.E.S.T.) Standards
This course includes Florida's B.E.S.T. ELA Expectations (EE) and Mathematical Thinking and Reasoning Standards (MTRs) for students. Florida educators should intentionally embed these standards within the content and their instruction as applicable. For guidance on the implementation of the EEs and MTRs, please visit cpalms.org/Standards/BEST_Standards.aspx and select the appropriate B.E.S.T. Standards package.

English Language Development ELD Standards Special Notes Section:
Teachers are required to provide listening, speaking, reading and writing instruction that allows English language learners (ELL) to communicate information, ideas and concepts for academic success in the content area of Science. For the given level of English language proficiency and with visual, graphic, or interactive support, students will interact with grade level words, expressions, sentences and discourse to process or produce language necessary for academic success The ELD standard should specify a relevant content area concept or topic of study chosen by curriculum developers and teachers which maximizes an ELL's need for communication and social skills. To access an ELL supporting document which delineates performance definitions and descriptors, please click on the following link: cpalms.org/uploads/docs/standards/eld/SC.pdf

GENERAL INFORMATION

Course Number: 2000315

Course Path: Section: Grades PreK to 12 Education Courses > **Grade Group:** Grades 9 to 12 and Adult Education Courses > **Subject:** Science > **SubSubject:** Biological Sciences > **Abbreviated Title:** BIO 1 CR

Number of Credits: One (1) credit

Course Length: Credit Recovery (R)

Course Type: Elective Course

Course Level: 2

Course Status: Draft - Course Pending Approval

Grade Level(s): 9,10,11,12

Educator Certifications

Science (Secondary Grades 7-12)
Biology (Grades 6-12)
Middle Grades General Science (Middle Grades 5-9)

Biology 1 Honors (#2000320) 2022 - And Beyond

Course Standards

Name	Description
SC.912.E.7.1:	Analyze the movement of matter and energy through the different biogeochemical cycles, including water and carbon.
SC.912.L.14.1:	Describe the scientific theory of cells (cell theory) and relate the history of its discovery to the process of science.
SC.912.L.14.2:	Relate structure to function for the components of plant and animal cells. Explain the role of cell membranes as a highly selective barrier (passive and active transport).
SC.912.L.14.3:	Compare and contrast the general structures of plant and animal cells. Compare and contrast the general structures of prokaryotic and eukaryotic cells.
SC.912.L.14.4:	Compare and contrast structure and function of various types of microscopes.
SC.912.L.14.5:	Explain the evidence supporting the scientific theory of the origin of eukaryotic cells (endosymbiosis).
SC.912.L.14.6:	Explain the significance of genetic factors, environmental factors, and pathogenic agents to health from the perspectives of both individual and public health.
SC.912.L.14.7:	Relate the structure of each of the major plant organs and tissues to physiological processes.
SC.912.L.14.26:	Identify the major parts of the brain on diagrams or models.
SC.912.L.14.27:	Identify the functions of the major parts of the brain, including the meninges, medulla, pons, midbrain, hypothalamus, thalamus, cerebellum and cerebrum.
SC.912.L.14.36:	Describe the factors affecting blood flow through the cardiovascular system.
SC.912.L.14.52:	Explain the basic functions of the human immune system, including specific and nonspecific immune response, vaccines, and antibiotics.
SC.912.L.15.1:	Explain how the scientific theory of evolution is supported by the fossil record, comparative anatomy, comparative embryology, biogeography, molecular biology, and observed evolutionary change.
SC.912.L.15.2:	Discuss the use of molecular clocks to estimate how long ago various groups of organisms diverged evolutionarily from one another.
SC.912.L.15.3:	Describe how biological diversity is increased by the origin of new species and how it is decreased by the natural process of extinction.
SC.912.L.15.4:	Describe how and why organisms are hierarchically classified and based on evolutionary relationships.
SC.912.L.15.5:	Explain the reasons for changes in how organisms are classified.
SC.912.L.15.6:	Discuss distinguishing characteristics of the domains and kingdoms of living organisms.
SC.912.L.15.8:	Describe the scientific explanations of the origin of life on Earth.
SC.912.L.15.10:	Identify basic trends in hominid evolution from early ancestors six million years ago to modern humans, including brain size, jaw size, language, and manufacture of tools.
SC.912.L.15.13:	Describe the conditions required for natural selection, including: overproduction of offspring, inherited variation, and the struggle to survive, which result in differential reproductive success.
SC.912.L.15.14:	Discuss mechanisms of evolutionary change other than natural selection such as genetic drift and gene flow.
SC.912.L.15.15:	Describe how mutation and genetic recombination increase genetic variation.
SC.912.L.16.1:	Use Mendel's laws of segregation and independent assortment to analyze patterns of inheritance.
SC.912.L.16.2:	Discuss observed inheritance patterns caused by various modes of inheritance, including dominant, recessive, codominant, sex-linked, polygenic, and multiple alleles.
SC.912.L.16.3:	Describe the basic process of DNA replication and how it relates to the transmission and conservation of the genetic information.
SC.912.L.16.4:	Explain how mutations in the DNA sequence may or may not result in phenotypic change. Explain how mutations in gametes may result in phenotypic changes in offspring.
SC.912.L.16.5:	Explain the basic processes of transcription and translation, and how they result in the expression of genes.
SC.912.L.16.8:	Explain the relationship between mutation, cell cycle, and uncontrolled cell growth potentially resulting in cancer.
SC.912.L.16.9:	Explain how and why the genetic code is universal and is common to almost all organisms.
SC.912.L.16.10:	Evaluate the impact of biotechnology on the individual, society and the environment, including medical and ethical issues.
SC.912.L.16.12:	Describe how basic DNA technology (restriction digestion by endonucleases, gel electrophoresis, polymerase chain reaction, ligation, and transformation) is used to construct recombinant DNA molecules (DNA cloning).
SC.912.L.16.13:	Describe the basic anatomy and physiology of the human reproductive system. Describe the process of human development from fertilization to birth and major changes that occur in each trimester of pregnancy.
SC.912.L.16.14:	Describe the cell cycle, including the process of mitosis. Explain the role of mitosis in the formation of new cells and its importance in maintaining chromosome number during asexual reproduction.
SC.912.L.16.15:	Compare and contrast binary fission and mitotic cell division.
SC.912.L.16.16:	Describe the process of meiosis, including independent assortment and crossing over. Explain how reduction division results in the formation of haploid gametes or spores.
SC.912.L.16.17:	Compare and contrast mitosis and meiosis and relate to the processes of sexual and asexual reproduction and their consequences for genetic variation.
SC.912.L.17.2:	Explain the general distribution of life in aquatic systems as a function of chemistry, geography, light, depth, salinity, and temperature.
SC.912.L.17.4:	Describe changes in ecosystems resulting from seasonal variations, climate change and succession.
SC.912.L.17.5:	Analyze how population size is determined by births, deaths, immigration, emigration, and limiting factors (biotic and abiotic) that determine carrying capacity.
SC.912.L.17.8:	Recognize the consequences of the losses of biodiversity due to catastrophic events, climate changes, human activity, and the introduction of invasive, non-native species.
SC.912.L.17.9:	Use a food web to identify and distinguish producers, consumers, and decomposers. Explain the pathway of energy transfer through trophic levels and the reduction of available energy at successive trophic levels.
SC.912.L.17.11:	Evaluate the costs and benefits of renewable and nonrenewable resources, such as water, energy, fossil fuels, wildlife, and forests.
SC.912.L.17.16:	Discuss the large-scale environmental impacts resulting from human activity, including waste spills, oil spills, runoff, greenhouse gases, ozone depletion, and surface and groundwater pollution.
SC.912.L.17.20:	Predict the impact of individuals on environmental systems and examine how human lifestyles affect sustainability.

SC.912.L.18.1:	Describe the basic molecular structures and primary functions of the four major categories of biological macromolecules.
SC.912.L.18.2:	Describe the important structural characteristics of monosaccharides, disaccharides, and polysaccharides and explain the functions of carbohydrates in living things.
SC.912.L.18.3:	Describe the structures of fatty acids, triglycerides, phospholipids, and steroids. Explain the functions of lipids in living organisms. Identify some reactions that fatty acids undergo. Relate the structure and function of cell membranes.
SC.912.L.18.4:	Describe the structures of proteins and amino acids. Explain the functions of proteins in living organisms. Identify some reactions that amino acids undergo. Relate the structure and function of enzymes.
SC.912.L.18.7:	Identify the reactants, products, and basic functions of photosynthesis.
SC.912.L.18.8:	Identify the reactants, products, and basic functions of aerobic and anaerobic cellular respiration.
SC.912.L.18.9:	Explain the interrelated nature of photosynthesis and cellular respiration.
SC.912.L.18.10:	Connect the role of adenosine triphosphate (ATP) to energy transfers within a cell.
SC.912.L.18.11:	Explain the role of enzymes as catalysts that lower the activation energy of biochemical reactions. Identify factors, such as pH and temperature, and their effect on enzyme activity.
SC.912.L.18.12:	Discuss the special properties of water that contribute to Earth's suitability as an environment for life: cohesive behavior, ability to moderate temperature, expansion upon freezing, and versatility as a solvent.
SC.912.N.1.1:	Define a problem based on a specific body of knowledge, for example: biology, chemistry, physics, and earth/space science, and do the following: 1. **Pose questions about the natural world,** (Articulate the purpose of the investigation and identify the relevant scientific concepts). 2. **Conduct systematic observations,** (Write procedures that are clear and replicable. Identify observables and examine relationships between test (independent) variable and outcome (dependent) variable. Employ appropriate methods for accurate and consistent observations; conduct and record measurements at appropriate levels of precision. Follow safety guidelines). 3. **Examine books and other sources of information to see what is already known,** 4. **Review what is known in light of empirical evidence,** (Examine whether available empirical evidence can be interpreted in terms of existing knowledge and models, and if not, modify or develop new models). 5. **Plan investigations,** (Design and evaluate a scientific investigation). 6. **Use tools to gather, analyze, and interpret data (this includes the use of measurement in metric and other systems, and also the generation and interpretation of graphical representations of data, including data tables and graphs),** (Collect data or evidence in an organized way. Properly use instruments, equipment, and materials (e.g., scales, probeware, meter sticks, microscopes, computers) including set-up, calibration, technique, maintenance, and storage). 7. **Pose answers, explanations, or descriptions of events,** 8. **Generate explanations that explicate or describe natural phenomena (inferences),** 9. **Use appropriate evidence and reasoning to justify these explanations to others,** 10. **Communicate results of scientific investigations, and** 11. **Evaluate the merits of the explanations produced by others.**
SC.912.N.1.3:	Recognize that the strength or usefulness of a scientific claim is evaluated through scientific argumentation, which depends on critical and logical thinking, and the active consideration of alternative scientific explanations to explain the data presented.
SC.912.N.1.4:	Identify sources of information and assess their reliability according to the strict standards of scientific investigation.
SC.912.N.1.6:	Describe how scientific inferences are drawn from scientific observations and provide examples from the content being studied.
SC.912.N.2.1:	Identify what is science, what clearly is not science, and what superficially resembles science (but fails to meet the criteria for science).
SC.912.N.2.2:	Identify which questions can be answered through science and which questions are outside the boundaries of scientific investigation, such as questions addressed by other ways of knowing, such as art, philosophy, and religion.
SC.912.N.2.4:	Explain that scientific knowledge is both durable and robust and open to change. Scientific knowledge can change because it is often examined and re-examined by new investigations and scientific argumentation. Because of these frequent examinations, scientific knowledge becomes stronger, leading to its durability.
SC.912.N.3.1:	Explain that a scientific theory is the culmination of many scientific investigations drawing together all the current evidence concerning a substantial range of phenomena; thus, a scientific theory represents the most powerful explanation scientists have to offer.
SC.912.N.3.4:	Recognize that theories do not become laws, nor do laws become theories; theories are well supported explanations and laws are well supported descriptions.
SC.912.P.8.7:	Interpret formula representations of molecules and compounds in terms of composition and structure.
SC.912.P.10.1:	Differentiate among the various forms of energy and recognize that they can be transformed from one form to others.
MA.K12.MTR.1.1:	Mathematicians who participate in effortful learning both individually and with others: • Analyze the problem in a way that makes sense given the task. • Ask questions that will help with solving the task. • Build perseverance by modifying methods as needed while solving a challenging task. • Stay engaged and maintain a positive mindset when working to solve tasks. • Help and support each other when attempting a new method or approach. **Clarifications:** Teachers who encourage students to participate actively in effortful learning both individually and with others: • Cultivate a community of growth mindset learners. • Foster perseverance in students by choosing tasks that are challenging. • Develop students' ability to analyze and problem solve. • Recognize students' effort when solving challenging problems.
MA.K12.MTR.2.1:	Demonstrate understanding by representing problems in multiple ways. Mathematicians who demonstrate understanding by representing problems in multiple ways: • Build understanding through modeling and using manipulatives. • Represent solutions to problems in multiple ways using objects, drawings, tables, graphs and equations. • Progress from modeling problems with objects and drawings to using algorithms and equations. • Express connections between concepts and representations. • Choose a representation based on the given context or purpose. **Clarifications:**

Teachers who encourage students to demonstrate understanding by representing problems in multiple ways:

- Help students make connections between concepts and representations.
- Provide opportunities for students to use manipulatives when investigating concepts.
- Guide students from concrete to pictorial to abstract representations as understanding progresses.
- Show students that various representations can have different purposes and can be useful in different situations.

MA.K12.MTR.3.1:

Complete tasks with mathematical fluency.
Mathematicians who complete tasks with mathematical fluency:

- Select efficient and appropriate methods for solving problems within the given context.
- Maintain flexibility and accuracy while performing procedures and mental calculations.
- Complete tasks accurately and with confidence.
- Adapt procedures to apply them to a new context.
- Use feedback to improve efficiency when performing calculations.

Clarifications:
Teachers who encourage students to complete tasks with mathematical fluency:

- Provide students with the flexibility to solve problems by selecting a procedure that allows them to solve efficiently and accurately.
- Offer multiple opportunities for students to practice efficient and generalizable methods.
- Provide opportunities for students to reflect on the method they used and determine if a more efficient method could have been used.

MA.K12.MTR.4.1:

Engage in discussions that reflect on the mathematical thinking of self and others.
Mathematicians who engage in discussions that reflect on the mathematical thinking of self and others:

- Communicate mathematical ideas, vocabulary and methods effectively.
- Analyze the mathematical thinking of others.
- Compare the efficiency of a method to those expressed by others.
- Recognize errors and suggest how to correctly solve the task.
- Justify results by explaining methods and processes.
- Construct possible arguments based on evidence.

Clarifications:
Teachers who encourage students to engage in discussions that reflect on the mathematical thinking of self and others:

- Establish a culture in which students ask questions of the teacher and their peers, and error is an opportunity for learning.
- Create opportunities for students to discuss their thinking with peers.
- Select, sequence and present student work to advance and deepen understanding of correct and increasingly efficient methods.
- Develop students' ability to justify methods and compare their responses to the responses of their peers.

MA.K12.MTR.5.1:

Use patterns and structure to help understand and connect mathematical concepts.
Mathematicians who use patterns and structure to help understand and connect mathematical concepts:

- Focus on relevant details within a problem.
- Create plans and procedures to logically order events, steps or ideas to solve problems.
- Decompose a complex problem into manageable parts.
- Relate previously learned concepts to new concepts.
- Look for similarities among problems.
- Connect solutions of problems to more complicated large-scale situations.

Clarifications:
Teachers who encourage students to use patterns and structure to help understand and connect mathematical concepts:

- Help students recognize the patterns in the world around them and connect these patterns to mathematical concepts.
- Support students to develop generalizations based on the similarities found among problems.
- Provide opportunities for students to create plans and procedures to solve problems.
- Develop students' ability to construct relationships between their current understanding and more sophisticated ways of thinking.

MA.K12.MTR.6.1:

Assess the reasonableness of solutions.
Mathematicians who assess the reasonableness of solutions:

- Estimate to discover possible solutions.
- Use benchmark quantities to determine if a solution makes sense.
- Check calculations when solving problems.
- Verify possible solutions by explaining the methods used.
- Evaluate results based on the given context.

Clarifications:
Teachers who encourage students to assess the reasonableness of solutions:

- Have students estimate or predict solutions prior to solving.
- Prompt students to continually ask, "Does this solution make sense? How do you know?"
- Reinforce that students check their work as they progress within and after a task.
- Strengthen students' ability to verify solutions through justifications.

MA.K12.MTR.7.1:

Apply mathematics to real-world contexts.
Mathematicians who apply mathematics to real-world contexts:

- Connect mathematical concepts to everyday experiences.
- Use models and methods to understand, represent and solve problems.
- Perform investigations to gather data or determine if a method is appropriate. • Redesign models and methods to improve accuracy or efficiency.

Clarifications:
Teachers who encourage students to apply mathematics to real-world contexts:

- Provide opportunities for students to create models, both concrete and abstract, and perform investigations.

	• Challenge students to question the accuracy of their models and methods. • Support students as they validate conclusions by comparing them to the given situation. • Indicate how various concepts can be applied to other disciplines.
ELA.K12.EE.1.1:	Cite evidence to explain and justify reasoning. **Clarifications:** K-1 Students include textual evidence in their oral communication with guidance and support from adults. The evidence can consist of details from the text without naming the text. During 1st grade, students learn how to incorporate the evidence in their writing. 2-3 Students include relevant textual evidence in their written and oral communication. Students should name the text when they refer to it. In 3rd grade, students should use a combination of direct and indirect citations. 4-5 Students continue with previous skills and reference comments made by speakers and peers. Students cite texts that they've directly quoted, paraphrased, or used for information. When writing, students will use the form of citation dictated by the instructor or the style guide referenced by the instructor. 6-8 Students continue with previous skills and use a style guide to create a proper citation. 9-12 Students continue with previous skills and should be aware of existing style guides and the ways in which they differ.
ELA.K12.EE.2.1:	Read and comprehend grade-level complex texts proficiently. **Clarifications:** See Text Complexity for grade-level complexity bands and a text complexity rubric.
ELA.K12.EE.3.1:	Make inferences to support comprehension. **Clarifications:** Students will make inferences before the words infer or inference are introduced. Kindergarten students will answer questions like "Why is the girl smiling?" or make predictions about what will happen based on the title page. Students will use the terms and apply them in 2nd grade and beyond.
ELA.K12.EE.4.1:	Use appropriate collaborative techniques and active listening skills when engaging in discussions in a variety of situations. **Clarifications:** In kindergarten, students learn to listen to one another respectfully. In grades 1-2, students build upon these skills by justifying what they are thinking. For example: "I think _____ because _____." The collaborative conversations are becoming academic conversations. In grades 3-12, students engage in academic conversations discussing claims and justifying their reasoning, refining and applying skills. Students build on ideas, propel the conversation, and support claims and counterclaims with evidence.
ELA.K12.EE.5.1:	Use the accepted rules governing a specific format to create quality work. **Clarifications:** Students will incorporate skills learned into work products to produce quality work. For students to incorporate these skills appropriately, they must receive instruction. A 3rd grade student creating a poster board display must have instruction in how to effectively present information to do quality work.
ELA.K12.EE.6.1:	Use appropriate voice and tone when speaking or writing. **Clarifications:** In kindergarten and 1st grade, students learn the difference between formal and informal language. For example, the way we talk to our friends differs from the way we speak to adults. In 2nd grade and beyond, students practice appropriate social and academic language to discuss texts.
HE.912.C.1.3:	Evaluate how environment and personal health are interrelated. **Clarifications:** Food options within a community; prenatal-care services; availability of recreational facilities; air quality; weather-safety awareness; and weather, air, and water conditions.
HE.912.C.1.5:	Analyze strategies for prevention, detection, and treatment of communicable and chronic diseases. **Clarifications:** Health prevention, detection, and treatment of: breast and testicular cancer, suicide, obesity, and industrial-related chronic disease.
HE.912.C.1.7:	Analyze how heredity and family history can impact personal health. **Clarifications:** Drug use, family obesity, heart disease, mental health, and non-communicable illness or disease.
HE.912.C.1.8:	Assess the degree of susceptibility to injury, illness, or death if engaging in unhealthy/risky behaviors. **Clarifications:** Risks associated with alcohol abuse, including poison, date rape, and death; cancer and chronic lung disease related to tobacco use; overdose from drug use; child abuse or neglect; and dating violence.
ELD.K12.ELL.SC.1:	English language learners communicate information, ideas and concepts necessary for academic success in the content area of Science.
ELD.K12.ELL.SI.1:	English language learners communicate for social and instructional purposes within the school setting.

General Course Information and Notes

GENERAL NOTES

While the content focus of this course is consistent with the Biology I course, students will explore these concepts in greater depth. In general, the academic pace and rigor will be greatly increased for honors level course work. Laboratory investigations that include the use of scientific inquiry, research, measurement, problem solving, laboratory

apparatus and technologies, experimental procedures, and safety procedures are an integral part of this course. The National Science Teachers Association (NSTA) recommends that at the high school level, all students should be in the science lab or field, collecting data every week. School laboratory investigations (labs) are defined by the National Research Council (NRC) as an experience in the laboratory, classroom, or the field that provides students with opportunities to interact directly with natural phenomena or with data collected by others using tools, materials, data collection techniques, and models (NRC, 2006, p. 3). Laboratory investigations in the high school classroom should help all students develop a growing understanding of the complexity and ambiguity of empirical work, as well as the skills to calibrate and troubleshoot equipment used to make observations. Learners should understand measurement error; and have the skills to aggregate, interpret, and present the resulting data (National Research Council, 2006, p.77; NSTA, 2007).

Honors and Advanced Level Course Note: Advanced courses require a greater demand on students through increased academic rigor. Academic rigor is obtained through the application, analysis, evaluation, and creation of complex ideas that are often abstract and multi-faceted. Students are challenged to think and collaborate critically on the content they are learning. Honors level rigor will be achieved by increasing text complexity through text selection, focus on high-level qualitative measures, and complexity of task. Instruction will be structured to give students a deeper understanding of conceptual themes and organization within and across disciplines. Academic rigor is more than simply assigning to students a greater quantity of work.

Special Notes:

Instructional Practices
Teaching from a range of complex text is optimized when teachers in all subject areas implement the following strategies on a routine basis:

1. Ensuring wide reading from complex text that varies in length.
2. Making close reading and rereading of texts central to lessons.
3. Emphasizing text-specific complex questions, and cognitively complex tasks, reinforce focus on the text and cultivate independence.
4. Emphasizing students supporting answers based upon evidence from the text.
5. Providing extensive research and writing opportunities (claims and evidence).

Science and Engineering Practices (NRC *Framework for K-12 Science Education, 2010*)

- Asking questions (for science) and defining problems (for engineering).
- Developing and using models.
- Planning and carrying out investigations.
- Analyzing and interpreting data.
- Using mathematics, information and computer technology, and computational thinking.
- Constructing explanations (for science) and designing solutions (for engineering).
- Engaging in argument from evidence.
- Obtaining, evaluating, and communicating information.

English Language Development ELD Standards
Teachers are required to provide listening, speaking, reading and writing instruction that allows English language learners (ELL) to communicate information, ideas and concepts for academic success in the content area of Science. For the given level of English language proficiency and with visual, graphic, or interactive support, students will interact with grade level words, expressions, sentences and discourse to process or produce language necessary for academic success The ELD standard should specify a relevant content area concept or topic of study chosen by curriculum developers and teachers which maximizes an ELL's need for communication and social skills. To access an ELL supporting document which delineates performance definitions and descriptors, please click on the following link: cpalms.org/uploads/docs/standards/eld/SC.pdf

Additional Instructional Resources:
A.V.E. for Success Collection is provided by the Florida Association of School Administrators: fasa.net/4DCGI/cms/review.html?Action=CMS_Document&DocID=139. Please be aware that these resources have not been reviewed by CPALMS and there may be a charge for the use of some of them in this collection.

Florida's Benchmarks for Excellent Student Thinking (B.E.S.T.) Standards
This course includes Florida's B.E.S.T. ELA Expectations (EE) and Mathematical Thinking and Reasoning Standards (MTRs) for students. Florida educators should intentionally embed these standards within the content and their instruction as applicable. For guidance on the implementation of the EEs and MTRs, please visit cpalms.org/Standards/BEST_Standards.aspx and select the appropriate B.E.S.T. Standards package.

GENERAL INFORMATION

Course Number: 2000320

Course Path: Section: Grades PreK to 12 Education Courses > **Grade Group:** Grades 9 to 12 and Adult Education Courses > **Subject:** Science > **SubSubject:** Biological Sciences >

Abbreviated Title: BIO 1 HON

Number of Credits: One (1) credit

Course Length: Year (Y)

Course Attributes:

- Honors
- Class Size Core Required

Course Type: Core Academic Course

Course Level: 3

Course Status: Draft - Course Pending Approval

Grade Level(s): 9,10,11,12

Graduation Requirement: Biology

Educator Certifications

Science (Secondary Grades 7-12)
Biology (Grades 6-12)
Middle Grades General Science (Middle Grades 5-9)

Equivalent Courses

2000310-Biology 1

Biology 2 Honors (#2000330) 2022 - And Beyond

Course Standards

Name	Description
SC.912.L.14.6:	Explain the significance of genetic factors, environmental factors, and pathogenic agents to health from the perspectives of both individual and public health.
SC.912.L.14.8:	Explain alternation of generations in plants.
SC.912.L.14.9:	Relate the major structure of fungi to their functions.
SC.912.L.14.50:	Describe the structure of vertebrate sensory organs. Relate structure to function in vertebrate sensory systems.
SC.912.L.14.53:	Discuss basic classification and characteristics of plants. Identify bryophytes, pteridophytes, gymnosperms, and angiosperms.
SC.912.L.15.1:	Explain how the scientific theory of evolution is supported by the fossil record, comparative anatomy, comparative embryology, biogeography, molecular biology, and observed evolutionary change.
SC.912.L.15.4:	Describe how and why organisms are hierarchically classified and based on evolutionary relationships.
SC.912.L.15.5:	Explain the reasons for changes in how organisms are classified.
SC.912.L.15.7:	Discuss distinguishing characteristics of vertebrate and representative invertebrate phyla, and chordate classes using typical examples.
SC.912.L.15.8:	Describe the scientific explanations of the origin of life on Earth.
SC.912.L.15.9:	Explain the role of reproductive isolation in the process of speciation.
SC.912.L.15.11:	Discuss specific fossil hominids and what they show about human evolution.
SC.912.L.16.6:	Discuss the mechanisms for regulation of gene expression in prokaryotes and eukaryotes at transcription and translation level.
SC.912.L.16.7:	Describe how viruses and bacteria transfer genetic material between cells and the role of this process in biotechnology.
SC.912.L.16.11:	Discuss the technologies associated with forensic medicine and DNA identification, including restriction fragment length polymorphism (RFLP) analysis.
SC.912.L.16.12:	Describe how basic DNA technology (restriction digestion by endonucleases, gel electrophoresis, polymerase chain reaction, ligation, and transformation) is used to construct recombinant DNA molecules (DNA cloning).
SC.912.L.16.15:	Compare and contrast binary fission and mitotic cell division.
SC.912.L.17.1:	Discuss the characteristics of populations, such as number of individuals, age structure, density, and pattern of distribution.
SC.912.L.17.3:	Discuss how various oceanic and freshwater processes, such as currents, tides, and waves, affect the abundance of aquatic organisms.
SC.912.L.17.6:	Compare and contrast the relationships among organisms, including predation, parasitism, competition, commensalism, and mutualism.
SC.912.L.17.7:	Characterize the biotic and abiotic components that define freshwater systems, marine systems and terrestrial systems.
SC.912.L.17.8:	Recognize the consequences of the losses of biodiversity due to catastrophic events, climate changes, human activity, and the introduction of invasive, non-native species.
SC.912.L.17.9:	Use a food web to identify and distinguish producers, consumers, and decomposers. Explain the pathway of energy transfer through trophic levels and the reduction of available energy at successive trophic levels.
SC.912.L.17.10:	Diagram and explain the biogeochemical cycles of an ecosystem, including water, carbon, and nitrogen cycle.
SC.912.L.17.11:	Evaluate the costs and benefits of renewable and nonrenewable resources, such as water, energy, fossil fuels, wildlife, and forests.
SC.912.L.17.12:	Discuss the political, social, and environmental consequences of sustainable use of land.
SC.912.L.17.13:	Discuss the need for adequate monitoring of environmental parameters when making policy decisions.
SC.912.L.17.14:	Assess the need for adequate waste management strategies.
SC.912.L.17.15:	Discuss the effects of technology on environmental quality.
SC.912.L.17.16:	Discuss the large-scale environmental impacts resulting from human activity, including waste spills, oil spills, runoff, greenhouse gases, ozone depletion, and surface and groundwater pollution.
SC.912.L.17.17:	Assess the effectiveness of innovative methods of protecting the environment.
SC.912.L.17.18:	Describe how human population size and resource use relate to environmental quality.
SC.912.L.17.19:	Describe how different natural resources are produced and how their rates of use and renewal limit availability.
SC.912.L.17.20:	Predict the impact of individuals on environmental systems and examine how human lifestyles affect sustainability.
SC.912.L.18.1:	Describe the basic molecular structures and primary functions of the four major categories of biological macromolecules.
SC.912.L.18.5:	Discuss the use of chemiosmotic gradients for ATP production in chloroplasts and mitochondria.
SC.912.L.18.7:	Identify the reactants, products, and basic functions of photosynthesis.
SC.912.L.18.8:	Identify the reactants, products, and basic functions of aerobic and anaerobic cellular respiration.
SC.912.L.18.9:	Explain the interrelated nature of photosynthesis and cellular respiration.
SC.912.L.18.10:	Connect the role of adenosine triphosphate (ATP) to energy transfers within a cell.
SC.912.L.18.11:	Explain the role of enzymes as catalysts that lower the activation energy of biochemical reactions. Identify factors, such as pH and temperature, and their effect on enzyme activity.
SC.912.L.18.12:	Discuss the special properties of water that contribute to Earth's suitability as an environment for life: cohesive behavior, ability to moderate temperature, expansion upon freezing, and versatility as a solvent.
SC.912.N.1.1:	Define a problem based on a specific body of knowledge, for example: biology, chemistry, physics, and earth/space science, and do the following: 1. **Pose questions about the natural world,** (Articulate the purpose of the investigation and identify the relevant scientific concepts). 2. **Conduct systematic observations,** (Write procedures that are clear and replicable. Identify observables and examine relationships between test (independent) variable and outcome (dependent) variable. Employ appropriate methods for accurate and consistent observations; conduct and record measurements at appropriate levels of precision. Follow safety guidelines). 3. **Examine books and other sources of information to see what is already known,** 4. **Review what is known in light of empirical evidence,** (Examine whether available empirical evidence can be interpreted in terms of existing knowledge and models, and if not, modify or develop new models). 5. **Plan investigations,** (Design and evaluate a scientific investigation). 6. **Use tools to gather, analyze, and interpret data (this includes the use of measurement in metric and other systems, and also the generation and interpretation of graphical representations of data, including data tables and graphs),** (Collect data or evidence in an

	organized way. Properly use instruments, equipment, and materials (e.g., scales, probeware, meter sticks, microscopes, computers) including set-up, calibration, technique, maintenance, and storage). 7. **Pose answers, explanations, or descriptions of events,** 8. **Generate explanations that explicate or describe natural phenomena (inferences),** 9. **Use appropriate evidence and reasoning to justify these explanations to others,** 10. **Communicate results of scientific investigations, and** 11. **Evaluate the merits of the explanations produced by others.**
SC.912.N.1.4:	Identify sources of information and assess their reliability according to the strict standards of scientific investigation.
SC.912.N.1.5:	Describe and provide examples of how similar investigations conducted in many parts of the world result in the same outcome.
SC.912.N.1.7:	Recognize the role of creativity in constructing scientific questions, methods and explanations.
SC.912.N.2.1:	Identify what is science, what clearly is not science, and what superficially resembles science (but fails to meet the criteria for science).
SC.912.N.2.2:	Identify which questions can be answered through science and which questions are outside the boundaries of scientific investigation, such as questions addressed by other ways of knowing, such as art, philosophy, and religion.
SC.912.N.2.4:	Explain that scientific knowledge is both durable and robust and open to change. Scientific knowledge can change because it is often examined and re-examined by new investigations and scientific argumentation. Because of these frequent examinations, scientific knowledge becomes stronger, leading to its durability.
SC.912.N.2.5:	Describe instances in which scientists' varied backgrounds, talents, interests, and goals influence the inferences and thus the explanations that they make about observations of natural phenomena and describe that competing interpretations (explanations) of scientists are a strength of science as they are a source of new, testable ideas that have the potential to add new evidence to support one or another of the explanations.
SC.912.N.3.1:	Explain that a scientific theory is the culmination of many scientific investigations drawing together all the current evidence concerning a substantial range of phenomena; thus, a scientific theory represents the most powerful explanation scientists have to offer.
SC.912.N.3.2:	Describe the role consensus plays in the historical development of a theory in any one of the disciplines of science.
SC.912.N.4.2:	Weigh the merits of alternative strategies for solving a specific societal problem by comparing a number of different costs and benefits, such as human, economic, and environmental.
SC.912.P.8.10:	Describe oxidation-reduction reactions in living and non-living systems.
SC.912.P.10.1:	Differentiate among the various forms of energy and recognize that they can be transformed from one form to others.
MA.K12.MTR.1.1:	Mathematicians who participate in effortful learning both individually and with others: • Analyze the problem in a way that makes sense given the task. • Ask questions that will help with solving the task. • Build perseverance by modifying methods as needed while solving a challenging task. • Stay engaged and maintain a positive mindset when working to solve tasks. • Help and support each other when attempting a new method or approach. **Clarifications:** Teachers who encourage students to participate actively in effortful learning both individually and with others: • Cultivate a community of growth mindset learners. • Foster perseverance in students by choosing tasks that are challenging. • Develop students' ability to analyze and problem solve. • Recognize students' effort when solving challenging problems.
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MA.K12.MTR.3.1:	Complete tasks with mathematical fluency. Mathematicians who complete tasks with mathematical fluency: • Select efficient and appropriate methods for solving problems within the given context. • Maintain flexibility and accuracy while performing procedures and mental calculations. • Complete tasks accurately and with confidence. • Adapt procedures to apply them to a new context. • Use feedback to improve efficiency when performing calculations. **Clarifications:** Teachers who encourage students to complete tasks with mathematical fluency: • Provide students with the flexibility to solve problems by selecting a procedure that allows them to solve efficiently and accurately. • Offer multiple opportunities for students to practice efficient and generalizable methods. • Provide opportunities for students to reflect on the method they used and determine if a more efficient method could have been used.
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ELD.K12.ELL.SI.1:	English language learners communicate for social and instructional purposes within the school setting.

General Course Information and Notes

GENERAL NOTES

Laboratory investigations that include the use of scientific inquiry, research, measurement, problem solving, laboratory apparatus and technologies, experimental procedures, and safety procedures are an integral part of this course. The National Science Teachers Association (NSTA) recommends that at the high school level, all students should be in the science lab or field, collecting data every week. School laboratory investigations (labs) are defined by the National Research Council (NRC) as an experience in the laboratory, classroom, or the field that provides students with opportunities to interact directly with natural phenomena or with data collected by others using tools, materials, data collection techniques, and models (NRC, 2006, p. 3). Laboratory investigations in the high school classroom should help all students develop a growing understanding of the complexity and ambiguity of empirical work, as well as the skills to calibrate and troubleshoot equipment used to make observations. Learners should understand measurement error; and have the skills to aggregate, interpret, and present the resulting data (National Research Council, 2006, p.77; NSTA, 2007).

Honors and Advanced Level Course Note: Advanced courses require a greater demand on students through increased academic rigor. Academic rigor is obtained through the application, analysis, evaluation, and creation of complex ideas that are often abstract and multi-faceted. Students are challenged to think and collaborate critically on the content they are learning. Honors level rigor will be achieved by increasing text complexity through text selection, focus on high-level qualitative measures, and complexity of task. Instruction will be structured to give students a deeper understanding of conceptual themes and organization within and across disciplines. Academic rigor is more than simply assigning to students a greater quantity of work.

Special Notes:
Instructional Practices
Teaching from a range of complex text is optimized when teachers in all subject areas implement the following strategies on a routine basis:

1. Ensuring wide reading from complex text that varies in length.
2. Making close reading and rereading of texts central to lessons.
3. Emphasizing text-specific complex questions, and cognitively complex tasks, reinforce focus on the text and cultivate independence.
4. Emphasizing students supporting answers based upon evidence from the text.
5. Providing extensive research and writing opportunities (claims and evidence).

Science and Engineering Practices (NRC *Framework for K-12 Science Education, 2010*)

- Asking questions (for science) and defining problems (for engineering).
- Developing and using models.
- Planning and carrying out investigations.
- Analyzing and interpreting data.
- Using mathematics, information and computer technology, and computational thinking.
- Constructing explanations (for science) and designing solutions (for engineering).
- Engaging in argument from evidence.

- Obtaining, evaluating, and communicating information.

Florida's Benchmarks for Excellent Student Thinking (B.E.S.T.) Standards
This course includes Florida's B.E.S.T. ELA Expectations (EE) and Mathematical Thinking and Reasoning Standards (MTRs) for students. Florida educators should intentionally embed these standards within the content and their instruction as applicable. For guidance on the implementation of the EEs and MTRs, please visit cpalms.org/Standards/BEST_Standards.aspx and select the appropriate B.E.S.T. Standards package.

English Language Development ELD Standards Special Notes Section:
Teachers are required to provide listening, speaking, reading and writing instruction that allows English language learners (ELL) to communicate information, ideas and concepts for academic success in the content area of Science. For the given level of English language proficiency and with visual, graphic, or interactive support, students will interact with grade level words, expressions, sentences and discourse to process or produce language necessary for academic success The ELD standard should specify a relevant content area concept or topic of study chosen by curriculum developers and teachers which maximizes an ELL's need for communication and social skills. To access an ELL supporting document which delineates performance definitions and descriptors, please click on the following link: cpalms.org/uploads/docs/standards/eld/SC.pdf

GENERAL INFORMATION

Course Number: 2000330

Course Path: Section: Grades PreK to 12 Education Courses > **Grade Group:** Grades 9 to 12 and Adult Education Courses > **Subject:** Science > **SubSubject:** Biological Sciences > **Abbreviated Title:** BIO 2 HON

Number of Credits: One (1) credit

Course Length: Year (Y)

Course Attributes:
- Honors

Course Type: Core Academic Course

Course Level: 3

Course Status: Draft - Course Pending Approval

Grade Level(s): 9,10,11,12

Graduation Requirement: District-Determined

Educator Certifications

Science (Secondary Grades 7-12)
Biology (Grades 6-12)

Anatomy and Physiology (#2000350) 2022 - And Beyond

Course Standards

Name	Description
SC.912.L.14.11:	Classify and state the defining characteristics of epithelial tissue, connective tissue, muscle tissue, and nervous tissue.
SC.912.L.14.12:	Describe the anatomy and histology of bone tissue.
SC.912.L.14.13:	Distinguish between bones of the axial skeleton and the appendicular skeleton.
SC.912.L.14.14:	Identify the major bones of the axial and appendicular skeleton.
SC.912.L.14.16:	Describe the anatomy and histology, including ultrastructure, of muscle tissue.
SC.912.L.14.17:	List the steps involved in the sliding filament of muscle contraction.
SC.912.L.14.18:	Describe signal transmission across a myoneural junction.
SC.912.L.14.20:	Identify the major muscles of the human on a model or diagram.
SC.912.L.14.21:	Describe the anatomy, histology, and physiology of the central and peripheral nervous systems and name the major divisions of the nervous system.
SC.912.L.14.23:	Identify the parts of a reflex arc.
SC.912.L.14.24:	Identify the general parts of a synapse and describe the physiology of signal transmission across a synapse.
SC.912.L.14.25:	Identify the major parts of a cross section through the spinal cord.
SC.912.L.14.26:	Identify the major parts of the brain on diagrams or models.
SC.912.L.14.28:	Identify the major functions of the spinal cord.
SC.912.L.14.29:	Define the terms endocrine and exocrine.
SC.912.L.14.30:	Compare endocrine and neural controls of physiology.
SC.912.L.14.32:	Describe the anatomy and physiology of the endocrine system.
SC.912.L.14.33:	Describe the basic anatomy and physiology of the reproductive system.
SC.912.L.14.34:	Describe the composition and physiology of blood, including that of the plasma and the formed elements.
SC.912.L.14.35:	Describe the steps in hemostasis, including the mechanism of coagulation. Include the basis for blood typing and transfusion reactions.
SC.912.L.14.36:	Describe the factors affecting blood flow through the cardiovascular system.
SC.912.L.14.38:	Describe normal heart sounds and what they mean.
SC.912.L.14.39:	Describe hypertension and some of the factors that produce it.
SC.912.L.14.41:	Describe fetal circulation and changes that occur to the circulatory system at birth.
SC.912.L.14.42:	Describe the anatomy and the physiology of the lymph system.
SC.912.L.14.44:	Describe the physiology of the respiratory system including the mechanisms of ventilation, gas exchange, gas transport and the mechanisms that control the rate of ventilation.
SC.912.L.14.46:	Describe the physiology of the digestive system, including mechanical digestion, chemical digestion, absorption and the neural and hormonal mechanisms of control.
SC.912.L.14.47:	Describe the physiology of urine formation by the kidney.
SC.912.L.14.49:	Identify the major functions associated with the sympathetic and parasympathetic nervous systems.
SC.912.L.14.50:	Describe the structure of vertebrate sensory organs. Relate structure to function in vertebrate sensory systems.
SC.912.L.14.51:	Describe the function of the vertebrate integumentary system.
SC.912.L.14.52:	Explain the basic functions of the human immune system, including specific and nonspecific immune response, vaccines, and antibiotics.
SC.912.L.16.8:	Explain the relationship between mutation, cell cycle, and uncontrolled cell growth potentially resulting in cancer.
SC.912.L.18.1:	Describe the basic molecular structures and primary functions of the four major categories of biological macromolecules.
SC.912.L.18.11:	Explain the role of enzymes as catalysts that lower the activation energy of biochemical reactions. Identify factors, such as pH and temperature, and their effect on enzyme activity.
SC.912.N.1.1:	Define a problem based on a specific body of knowledge, for example: biology, chemistry, physics, and earth/space science, and do the following: 1. **Pose questions about the natural world,** (Articulate the purpose of the investigation and identify the relevant scientific concepts). 2. **Conduct systematic observations,** (Write procedures that are clear and replicable. Identify observables and examine relationships between test (independent) variable and outcome (dependent) variable. Employ appropriate methods for accurate and consistent observations; conduct and record measurements at appropriate levels of precision. Follow safety guidelines). 3. **Examine books and other sources of information to see what is already known,** 4. **Review what is known in light of empirical evidence,** (Examine whether available empirical evidence can be interpreted in terms of existing knowledge and models, and if not, modify or develop new models). 5. **Plan investigations,** (Design and evaluate a scientific investigation). 6. **Use tools to gather, analyze, and interpret data (this includes the use of measurement in metric and other systems, and also the generation and interpretation of graphical representations of data, including data tables and graphs),** (Collect data or evidence in an organized way. Properly use instruments, equipment, and materials (e.g., scales, probeware, meter sticks, microscopes, computers) including set-up, calibration, technique, maintenance, and storage). 7. **Pose answers, explanations, or descriptions of events,** 8. **Generate explanations that explicate or describe natural phenomena (inferences),** 9. **Use appropriate evidence and reasoning to justify these explanations to others,** 10. **Communicate results of scientific investigations, and** 11. **Evaluate the merits of the explanations produced by others.**
SC.912.N.1.2:	Describe and explain what characterizes science and its methods.
	Mathematicians who participate in effortful learning both individually and with others: • Analyze the problem in a way that makes sense given the task. • Ask questions that will help with solving the task.

- Build perseverance by modifying methods as needed while solving a challenging task.
- Stay engaged and maintain a positive mindset when working to solve tasks.
- Help and support each other when attempting a new method or approach.

MA.K12.MTR.1.1:

Clarifications:
Teachers who encourage students to participate actively in effortful learning both individually and with others:
- Cultivate a community of growth mindset learners.
- Foster perseverance in students by choosing tasks that are challenging.
- Develop students' ability to analyze and problem solve.
- Recognize students' effort when solving challenging problems.

Demonstrate understanding by representing problems in multiple ways.
Mathematicians who demonstrate understanding by representing problems in multiple ways:

- Build understanding through modeling and using manipulatives.
- Represent solutions to problems in multiple ways using objects, drawings, tables, graphs and equations.
- Progress from modeling problems with objects and drawings to using algorithms and equations.
- Express connections between concepts and representations.
- Choose a representation based on the given context or purpose.

MA.K12.MTR.2.1:

Clarifications:
Teachers who encourage students to demonstrate understanding by representing problems in multiple ways:
- Help students make connections between concepts and representations.
- Provide opportunities for students to use manipulatives when investigating concepts.
- Guide students from concrete to pictorial to abstract representations as understanding progresses.
- Show students that various representations can have different purposes and can be useful in different situations.

Complete tasks with mathematical fluency.
Mathematicians who complete tasks with mathematical fluency:

- Select efficient and appropriate methods for solving problems within the given context.
- Maintain flexibility and accuracy while performing procedures and mental calculations.
- Complete tasks accurately and with confidence.
- Adapt procedures to apply them to a new context.
- Use feedback to improve efficiency when performing calculations.

MA.K12.MTR.3.1:

Clarifications:
Teachers who encourage students to complete tasks with mathematical fluency:
- Provide students with the flexibility to solve problems by selecting a procedure that allows them to solve efficiently and accurately.
- Offer multiple opportunities for students to practice efficient and generalizable methods.
- Provide opportunities for students to reflect on the method they used and determine if a more efficient method could have been used.

Engage in discussions that reflect on the mathematical thinking of self and others.
Mathematicians who engage in discussions that reflect on the mathematical thinking of self and others:

- Communicate mathematical ideas, vocabulary and methods effectively.
- Analyze the mathematical thinking of others.
- Compare the efficiency of a method to those expressed by others.
- Recognize errors and suggest how to correctly solve the task.
- Justify results by explaining methods and processes.
- Construct possible arguments based on evidence.

MA.K12.MTR.4.1:

Clarifications:
Teachers who encourage students to engage in discussions that reflect on the mathematical thinking of self and others:
- Establish a culture in which students ask questions of the teacher and their peers, and error is an opportunity for learning.
- Create opportunities for students to discuss their thinking with peers.
- Select, sequence and present student work to advance and deepen understanding of correct and increasingly efficient methods.
- Develop students' ability to justify methods and compare their responses to the responses of their peers.

Use patterns and structure to help understand and connect mathematical concepts.
Mathematicians who use patterns and structure to help understand and connect mathematical concepts:

- Focus on relevant details within a problem.
- Create plans and procedures to logically order events, steps or ideas to solve problems.
- Decompose a complex problem into manageable parts.
- Relate previously learned concepts to new concepts.
- Look for similarities among problems.
- Connect solutions of problems to more complicated large-scale situations.

MA.K12.MTR.5.1:

Clarifications:
Teachers who encourage students to use patterns and structure to help understand and connect mathematical concepts:
- Help students recognize the patterns in the world around them and connect these patterns to mathematical concepts.
- Support students to develop generalizations based on the similarities found among problems.
- Provide opportunities for students to create plans and procedures to solve problems.
- Develop students' ability to construct relationships between their current understanding and more sophisticated ways of thinking.

Assess the reasonableness of solutions.
Mathematicians who assess the reasonableness of solutions:

- Estimate to discover possible solutions.

MA.K12.MTR.6.1:	• Use benchmark quantities to determine if a solution makes sense. • Check calculations when solving problems. • Verify possible solutions by explaining the methods used. • Evaluate results based on the given context. **Clarifications:** Teachers who encourage students to assess the reasonableness of solutions: • Have students estimate or predict solutions prior to solving. • Prompt students to continually ask, "Does this solution make sense? How do you know?" • Reinforce that students check their work as they progress within and after a task. • Strengthen students' ability to verify solutions through justifications.
MA.K12.MTR.7.1:	Apply mathematics to real-world contexts. Mathematicians who apply mathematics to real-world contexts: • Connect mathematical concepts to everyday experiences. • Use models and methods to understand, represent and solve problems. • Perform investigations to gather data or determine if a method is appropriate. • Redesign models and methods to improve accuracy or efficiency. **Clarifications:** Teachers who encourage students to apply mathematics to real-world contexts: • Provide opportunities for students to create models, both concrete and abstract, and perform investigations. • Challenge students to question the accuracy of their models and methods. • Support students as they validate conclusions by comparing them to the given situation. • Indicate how various concepts can be applied to other disciplines.
ELA.K12.EE.1.1:	Cite evidence to explain and justify reasoning. **Clarifications:** K-1 Students include textual evidence in their oral communication with guidance and support from adults. The evidence can consist of details from the text without naming the text. During 1st grade, students learn how to incorporate the evidence in their writing. 2-3 Students include relevant textual evidence in their written and oral communication. Students should name the text when they refer to it. In 3rd grade, students should use a combination of direct and indirect citations. 4-5 Students continue with previous skills and reference comments made by speakers and peers. Students cite texts that they've directly quoted, paraphrased, or used for information. When writing, students will use the form of citation dictated by the instructor or the style guide referenced by the instructor. 6-8 Students continue with previous skills and use a style guide to create a proper citation. 9-12 Students continue with previous skills and should be aware of existing style guides and the ways in which they differ.
ELA.K12.EE.2.1:	Read and comprehend grade-level complex texts proficiently. **Clarifications:** See Text Complexity for grade-level complexity bands and a text complexity rubric.
ELA.K12.EE.3.1:	Make inferences to support comprehension. **Clarifications:** Students will make inferences before the words infer or inference are introduced. Kindergarten students will answer questions like "Why is the girl smiling?" or make predictions about what will happen based on the title page. Students will use the terms and apply them in 2nd grade and beyond.
ELA.K12.EE.4.1:	Use appropriate collaborative techniques and active listening skills when engaging in discussions in a variety of situations. **Clarifications:** In kindergarten, students learn to listen to one another respectfully. In grades 1-2, students build upon these skills by justifying what they are thinking. For example: "I think _____ because _____." The collaborative conversations are becoming academic conversations. In grades 3-12, students engage in academic conversations discussing claims and justifying their reasoning, refining and applying skills. Students build on ideas, propel the conversation, and support claims and counterclaims with evidence.
ELA.K12.EE.5.1:	Use the accepted rules governing a specific format to create quality work. **Clarifications:** Students will incorporate skills learned into work products to produce quality work. For students to incorporate these skills appropriately, they must receive instruction. A 3rd grade student creating a poster board display must have instruction in how to effectively present information to do quality work.
ELA.K12.EE.6.1:	Use appropriate voice and tone when speaking or writing. **Clarifications:** In kindergarten and 1st grade, students learn the difference between formal and informal language. For example, the way we talk to our friends differs from the way we speak to adults. In 2nd grade and beyond, students practice appropriate social and academic language to discuss texts.
HE.912.C.1.3:	Evaluate how environment and personal health are interrelated. **Clarifications:** Food options within a community; prenatal-care services; availability of recreational facilities; air quality; weather-safety awareness; and weather, air, and water conditions.
HE.912.C.1.5:	Analyze strategies for prevention, detection, and treatment of communicable and chronic diseases. **Clarifications:** Health prevention, detection, and treatment of: breast and testicular cancer, suicide, obesity, and industrial-related chronic disease.
	Analyze how heredity and family history can impact personal health.

HE.912.C.1.7:	**Clarifications:** Drug use, family obesity, heart disease, mental health, and non-communicable illness or disease.
ELD.K12.ELL.SC.1:	English language learners communicate information, ideas and concepts necessary for academic success in the content area of Science.
ELD.K12.ELL.SI.1:	English language learners communicate for social and instructional purposes within the school setting.

General Course Information and Notes

GENERAL NOTES

Laboratory investigations that include the use of scientific inquiry, research, measurement, problem solving, laboratory apparatus and technologies, experimental procedures, and safety procedures are an integral part of this course. The National Science Teachers Association (NSTA) recommends that at the high school level, all students should be in the science lab or field, collecting data every week. School laboratory investigations (labs) are defined by the National Research Council (NRC) as an experience in the laboratory, classroom, or the field that provides students with opportunities to interact directly with natural phenomena or with data collected by others using tools, materials, data collection techniques, and models (NRC, 2006, p. 3). Laboratory investigations in the high school classroom should help all students develop a growing understanding of the complexity and ambiguity of empirical work, as well as the skills to calibrate and troubleshoot equipment used to make observations. Learners should understand measurement error; and have the skills to aggregate, interpret, and present the resulting data (National Research Council, 2006, p.77; NSTA, 2007).

Special Notes:

Instructional Practices

Teaching from a range of complex text is optimized when teachers in all subject areas implement the following strategies on a routine basis:

1. Ensuring wide reading from complex text that varies in length.
2. Making close reading and rereading of texts central to lessons.
3. Emphasizing text-specific complex questions, and cognitively complex tasks, reinforce focus on the text and cultivate independence.
4. Emphasizing students supporting answers based upon evidence from the text.
5. Providing extensive research and writing opportunities (claims and evidence).

Science and Engineering Practices (NRC *Framework for K-12 Science Education, 2010*)

- Asking questions (for science) and defining problems (for engineering).
- Developing and using models.
- Planning and carrying out investigations.
- Analyzing and interpreting data.
- Using mathematics, information and computer technology, and computational thinking.
- Constructing explanations (for science) and designing solutions (for engineering).
- Engaging in argument from evidence.
- Obtaining, evaluating, and communicating information.

Florida's Benchmarks for Excellent Student Thinking (B.E.S.T.) Standards

This course includes Florida's B.E.S.T. ELA Expectations (EE) and Mathematical Thinking and Reasoning Standards (MTRs) for students. Florida educators should intentionally embed these standards within the content and their instruction as applicable. For guidance on the implementation of the EEs and MTRs, please visit cpalms.org/Standards/BEST_Standards.aspx and select the appropriate B.E.S.T. Standards package.

English Language Development ELD Standards Special Notes Section:

Teachers are required to provide listening, speaking, reading and writing instruction that allows English language learners (ELL) to communicate information, ideas and concepts for academic success in the content area of Science. For the given level of English language proficiency and with visual, graphic, or interactive support, students will interact with grade level words, expressions, sentences and discourse to process or produce language necessary for academic success The ELD standard should specify a relevant content area concept or topic of study chosen by curriculum developers and teachers which maximizes an ELL's need for communication and social skills. To access an ELL supporting document which delineates performance definitions and descriptors, please click on the following link: cpalms.org/uploads/docs/standards/eld/SC.pdf

Additional Instructional Resources:

A.V.E. for Success Collection is provided by the Florida Association of School Administrators: fasa.net/4DCGI/cms/review.html?Action=CMS_Document&DocID=139. Please be aware that these resources have not been reviewed by CPALMS and there may be a charge for the use of some of them in this collection.

GENERAL INFORMATION

Course Number: 2000350

Course Path: Section: Grades PreK to 12 Education Courses > **Grade Group:** Grades 9 to 12 and Adult Education Courses > **Subject:** Science > **SubSubject:** Biological Sciences > **Abbreviated Title:** ANAT PHYSIO

Number of Credits: One (1) credit

Course Length: Year (Y)

Course Type: Core Academic Course

Course Level: 2

Course Status: Draft - Course Pending Approval

Grade Level(s): 9,10,11,12,30,31

Graduation Requirement: Equally Rigorous Science

Educator Certifications

Science (Secondary Grades 7-12)
Biology (Grades 6-12)
Health (Elementary and Secondary Grades K-12)
Health Education (Secondary Grades 7-12)

Anatomy and Physiology Honors (#2000360) 2022 - And Beyond

Course Standards

Name	Description
SC.912.L.14.11:	Classify and state the defining characteristics of epithelial tissue, connective tissue, muscle tissue, and nervous tissue.
SC.912.L.14.12:	Describe the anatomy and histology of bone tissue.
SC.912.L.14.13:	Distinguish between bones of the axial skeleton and the appendicular skeleton.
SC.912.L.14.14:	Identify the major bones of the axial and appendicular skeleton.
SC.912.L.14.15:	Identify major markings (such as foramina, fossae, tubercles, etc.) on a skeleton. Explain why these markings are important.
SC.912.L.14.16:	Describe the anatomy and histology, including ultrastructure, of muscle tissue.
SC.912.L.14.17:	List the steps involved in the sliding filament of muscle contraction.
SC.912.L.14.18:	Describe signal transmission across a myoneural junction.
SC.912.L.14.19:	Explain the physiology of skeletal muscle.
SC.912.L.14.20:	Identify the major muscles of the human on a model or diagram.
SC.912.L.14.21:	Describe the anatomy, histology, and physiology of the central and peripheral nervous systems and name the major divisions of the nervous system.
SC.912.L.14.22:	Describe the physiology of nerve conduction, including the generator potential, action potential, and the synapse.
SC.912.L.14.23:	Identify the parts of a reflex arc.
SC.912.L.14.25:	Identify the major parts of a cross section through the spinal cord.
SC.912.L.14.27:	Identify the functions of the major parts of the brain, including the meninges, medulla, pons, midbrain, hypothalamus, thalamus, cerebellum and cerebrum.
SC.912.L.14.28:	Identify the major functions of the spinal cord.
SC.912.L.14.29:	Define the terms endocrine and exocrine.
SC.912.L.14.30:	Compare endocrine and neural controls of physiology.
SC.912.L.14.31:	Describe the physiology of hormones including the different types and the mechanisms of their action.
SC.912.L.14.34:	Describe the composition and physiology of blood, including that of the plasma and the formed elements.
SC.912.L.14.35:	Describe the steps in hemostasis, including the mechanism of coagulation. Include the basis for blood typing and transfusion reactions.
SC.912.L.14.36:	Describe the factors affecting blood flow through the cardiovascular system.
SC.912.L.14.37:	Explain the components of an electrocardiogram.
SC.912.L.14.38:	Describe normal heart sounds and what they mean.
SC.912.L.14.39:	Describe hypertension and some of the factors that produce it.
SC.912.L.14.40:	Describe the histology of the major arteries and veins of systemic, pulmonary, hepatic portal, and coronary circulation.
SC.912.L.14.41:	Describe fetal circulation and changes that occur to the circulatory system at birth.
SC.912.L.14.42:	Describe the anatomy and the physiology of the lymph system.
SC.912.L.14.43:	Describe the histology of the respiratory system.
SC.912.L.14.44:	Describe the physiology of the respiratory system including the mechanisms of ventilation, gas exchange, gas transport and the mechanisms that control the rate of ventilation.
SC.912.L.14.45:	Describe the histology of the alimentary canal and its associated accessory organs.
SC.912.L.14.46:	Describe the physiology of the digestive system, including mechanical digestion, chemical digestion, absorption and the neural and hormonal mechanisms of control.
SC.912.L.14.47:	Describe the physiology of urine formation by the kidney.
SC.912.L.14.48:	Describe the anatomy, histology, and physiology of the ureters, the urinary bladder and the urethra.
SC.912.L.14.49:	Identify the major functions associated with the sympathetic and parasympathetic nervous systems.
SC.912.L.14.50:	Describe the structure of vertebrate sensory organs. Relate structure to function in vertebrate sensory systems.
SC.912.L.14.51:	Describe the function of the vertebrate integumentary system.
SC.912.L.14.52:	Explain the basic functions of the human immune system, including specific and nonspecific immune response, vaccines, and antibiotics.
SC.912.L.16.8:	Explain the relationship between mutation, cell cycle, and uncontrolled cell growth potentially resulting in cancer.
SC.912.L.16.10:	Evaluate the impact of biotechnology on the individual, society and the environment, including medical and ethical issues.
SC.912.L.16.13:	Describe the basic anatomy and physiology of the human reproductive system. Describe the process of human development from fertilization to birth and major changes that occur in each trimester of pregnancy.
SC.912.L.18.2:	Describe the important structural characteristics of monosaccharides, disaccharides, and polysaccharides and explain the functions of carbohydrates in living things.
SC.912.L.18.3:	Describe the structures of fatty acids, triglycerides, phospholipids, and steroids. Explain the functions of lipids in living organisms. Identify some reactions that fatty acids undergo. Relate the structure and function of cell membranes.
SC.912.L.18.4:	Describe the structures of proteins and amino acids. Explain the functions of proteins in living organisms. Identify some reactions that amino acids undergo. Relate the structure and function of enzymes.
SC.912.L.18.6:	Discuss the role of anaerobic respiration in living things and in human society.
SC.912.L.18.8:	Identify the reactants, products, and basic functions of aerobic and anaerobic cellular respiration.
SC.912.L.18.11:	Explain the role of enzymes as catalysts that lower the activation energy of biochemical reactions. Identify factors, such as pH and temperature, and their effect on enzyme activity.
	Define a problem based on a specific body of knowledge, for example: biology, chemistry, physics, and earth/space science, and do the following: 1. **Pose questions about the natural world,** (Articulate the purpose of the investigation and identify the relevant scientific concepts). 2. **Conduct systematic observations,** (Write procedures that are clear and replicable. Identify observables and examine relationships between test (independent) variable and outcome (dependent) variable. Employ appropriate methods for accurate and consistent observations; conduct and record measurements at appropriate levels of precision. Follow safety guidelines). 3. **Examine books and other sources of information to see what is already known,**

SC.912.N.1.1:	4. **Review what is known in light of empirical evidence,** (Examine whether available empirical evidence can be interpreted in terms of existing knowledge and models, and if not, modify or develop new models). 5. **Plan investigations,** (Design and evaluate a scientific investigation). 6. **Use tools to gather, analyze, and interpret data (this includes the use of measurement in metric and other systems, and also the generation and interpretation of graphical representations of data, including data tables and graphs),** (Collect data or evidence in an organized way. Properly use instruments, equipment, and materials (e.g., scales, probeware, meter sticks, microscopes, computers) including set-up, calibration, technique, maintenance, and storage). 7. **Pose answers, explanations, or descriptions of events,** 8. **Generate explanations that explicate or describe natural phenomena (inferences),** 9. **Use appropriate evidence and reasoning to justify these explanations to others,** 10. **Communicate results of scientific investigations, and** 11. **Evaluate the merits of the explanations produced by others.**
SC.912.N.1.2:	Describe and explain what characterizes science and its methods.
MA.K12.MTR.1.1:	Mathematicians who participate in effortful learning both individually and with others: • Analyze the problem in a way that makes sense given the task. • Ask questions that will help with solving the task. • Build perseverance by modifying methods as needed while solving a challenging task. • Stay engaged and maintain a positive mindset when working to solve tasks. • Help and support each other when attempting a new method or approach. **Clarifications:** Teachers who encourage students to participate actively in effortful learning both individually and with others: • Cultivate a community of growth mindset learners. • Foster perseverance in students by choosing tasks that are challenging. • Develop students' ability to analyze and problem solve. • Recognize students' effort when solving challenging problems.
MA.K12.MTR.2.1:	Demonstrate understanding by representing problems in multiple ways. Mathematicians who demonstrate understanding by representing problems in multiple ways: • Build understanding through modeling and using manipulatives. • Represent solutions to problems in multiple ways using objects, drawings, tables, graphs and equations. • Progress from modeling problems with objects and drawings to using algorithms and equations. • Express connections between concepts and representations. • Choose a representation based on the given context or purpose. **Clarifications:** Teachers who encourage students to demonstrate understanding by representing problems in multiple ways: • Help students make connections between concepts and representations. • Provide opportunities for students to use manipulatives when investigating concepts. • Guide students from concrete to pictorial to abstract representations as understanding progresses. • Show students that various representations can have different purposes and can be useful in different situations.
MA.K12.MTR.3.1:	Complete tasks with mathematical fluency. Mathematicians who complete tasks with mathematical fluency: • Select efficient and appropriate methods for solving problems within the given context. • Maintain flexibility and accuracy while performing procedures and mental calculations. • Complete tasks accurately and with confidence. • Adapt procedures to apply them to a new context. • Use feedback to improve efficiency when performing calculations. **Clarifications:** Teachers who encourage students to complete tasks with mathematical fluency: • Provide students with the flexibility to solve problems by selecting a procedure that allows them to solve efficiently and accurately. • Offer multiple opportunities for students to practice efficient and generalizable methods. • Provide opportunities for students to reflect on the method they used and determine if a more efficient method could have been used.
MA.K12.MTR.4.1:	Engage in discussions that reflect on the mathematical thinking of self and others. Mathematicians who engage in discussions that reflect on the mathematical thinking of self and others: • Communicate mathematical ideas, vocabulary and methods effectively. • Analyze the mathematical thinking of others. • Compare the efficiency of a method to those expressed by others. • Recognize errors and suggest how to correctly solve the task. • Justify results by explaining methods and processes. • Construct possible arguments based on evidence. **Clarifications:** Teachers who encourage students to engage in discussions that reflect on the mathematical thinking of self and others: • Establish a culture in which students ask questions of the teacher and their peers, and error is an opportunity for learning. • Create opportunities for students to discuss their thinking with peers. • Select, sequence and present student work to advance and deepen understanding of correct and increasingly efficient methods. • Develop students' ability to justify methods and compare their responses to the responses of their peers.
	Use patterns and structure to help understand and connect mathematical concepts. Mathematicians who use patterns and structure to help understand and connect mathematical concepts:

MA.K12.MTR.5.1:	• Focus on relevant details within a problem. • Create plans and procedures to logically order events, steps or ideas to solve problems. • Decompose a complex problem into manageable parts. • Relate previously learned concepts to new concepts. • Look for similarities among problems. • Connect solutions of problems to more complicated large-scale situations. **Clarifications:** Teachers who encourage students to use patterns and structure to help understand and connect mathematical concepts: • Help students recognize the patterns in the world around them and connect these patterns to mathematical concepts. • Support students to develop generalizations based on the similarities found among problems. • Provide opportunities for students to create plans and procedures to solve problems. • Develop students' ability to construct relationships between their current understanding and more sophisticated ways of thinking.
MA.K12.MTR.6.1:	Assess the reasonableness of solutions. Mathematicians who assess the reasonableness of solutions: • Estimate to discover possible solutions. • Use benchmark quantities to determine if a solution makes sense. • Check calculations when solving problems. • Verify possible solutions by explaining the methods used. • Evaluate results based on the given context. **Clarifications:** Teachers who encourage students to assess the reasonableness of solutions: • Have students estimate or predict solutions prior to solving. • Prompt students to continually ask, "Does this solution make sense? How do you know?" • Reinforce that students check their work as they progress within and after a task. • Strengthen students' ability to verify solutions through justifications.
MA.K12.MTR.7.1:	Apply mathematics to real-world contexts. Mathematicians who apply mathematics to real-world contexts: • Connect mathematical concepts to everyday experiences. • Use models and methods to understand, represent and solve problems. • Perform investigations to gather data or determine if a method is appropriate. • Redesign models and methods to improve accuracy or efficiency. **Clarifications:** Teachers who encourage students to apply mathematics to real-world contexts: • Provide opportunities for students to create models, both concrete and abstract, and perform investigations. • Challenge students to question the accuracy of their models and methods. • Support students as they validate conclusions by comparing them to the given situation. • Indicate how various concepts can be applied to other disciplines.
ELA.K12.EE.1.1:	Cite evidence to explain and justify reasoning. **Clarifications:** K-1 Students include textual evidence in their oral communication with guidance and support from adults. The evidence can consist of details from the text without naming the text. During 1st grade, students learn how to incorporate the evidence in their writing. 2-3 Students include relevant textual evidence in their written and oral communication. Students should name the text when they refer to it. In 3rd grade, students should use a combination of direct and indirect citations. 4-5 Students continue with previous skills and reference comments made by speakers and peers. Students cite texts that they've directly quoted, paraphrased, or used for information. When writing, students will use the form of citation dictated by the instructor or the style guide referenced by the instructor. 6-8 Students continue with previous skills and use a style guide to create a proper citation. 9-12 Students continue with previous skills and should be aware of existing style guides and the ways in which they differ.
ELA.K12.EE.2.1:	Read and comprehend grade-level complex texts proficiently. **Clarifications:** See Text Complexity for grade-level complexity bands and a text complexity rubric.
ELA.K12.EE.3.1:	Make inferences to support comprehension. **Clarifications:** Students will make inferences before the words infer or inference are introduced. Kindergarten students will answer questions like "Why is the girl smiling?" or make predictions about what will happen based on the title page. Students will use the terms and apply them in 2nd grade and beyond.
ELA.K12.EE.4.1:	Use appropriate collaborative techniques and active listening skills when engaging in discussions in a variety of situations. **Clarifications:** In kindergarten, students learn to listen to one another respectfully. In grades 1-2, students build upon these skills by justifying what they are thinking. For example: "I think _____ because _____." The collaborative conversations are becoming academic conversations. In grades 3-12, students engage in academic conversations discussing claims and justifying their reasoning, refining and applying skills. Students build on ideas, propel the conversation, and support claims and counterclaims with evidence.
	Use the accepted rules governing a specific format to create quality work. **Clarifications:**

ELA.K12.EE.5.1:	Students will incorporate skills learned into work products to produce quality work. For students to incorporate these skills appropriately, they must receive instruction. A 3rd grade student creating a poster board display must have instruction in how to effectively present information to do quality work.
ELA.K12.EE.6.1:	Use appropriate voice and tone when speaking or writing. **Clarifications:** In kindergarten and 1st grade, students learn the difference between formal and informal language. For example, the way we talk to our friends differs from the way we speak to adults. In 2nd grade and beyond, students practice appropriate social and academic language to discuss texts.
HE.912.C.1.3:	Evaluate how environment and personal health are interrelated. **Clarifications:** Food options within a community; prenatal-care services; availability of recreational facilities; air quality; weather-safety awareness; and weather, air, and water conditions.
HE.912.C.1.5:	Analyze strategies for prevention, detection, and treatment of communicable and chronic diseases. **Clarifications:** Health prevention, detection, and treatment of: breast and testicular cancer, suicide, obesity, and industrial-related chronic disease.
HE.912.C.1.7:	Analyze how heredity and family history can impact personal health. **Clarifications:** Drug use, family obesity, heart disease, mental health, and non-communicable illness or disease.
ELD.K12.ELL.SC.1:	English language learners communicate information, ideas and concepts necessary for academic success in the content area of Science.
ELD.K12.ELL.SI.1:	English language learners communicate for social and instructional purposes within the school setting.

General Course Information and Notes

GENERAL NOTES

While the content focus of this course is consistent with the Anatomy and Physiology course, students will explore these concepts in greater depth. In general, the academic pace and rigor will be greatly increased for honors level course work. Laboratory investigations that include the use of scientific inquiry, research, measurement, problem solving, laboratory apparatus and technologies, experimental procedures, and safety procedures are an integral part of this course. The National Science Teachers Association (NSTA) recommends that at the high school level, all students should be in the science lab or field, collecting data every week. School laboratory investigations (labs) are defined by the National Research Council (NRC) as an experience in the laboratory, classroom, or the field that provides students with opportunities to interact directly with natural phenomena or with data collected by others using tools, materials, data collection techniques, and models (NRC, 2006, p. 3). Laboratory investigations in the high school classroom should help all students develop a growing understanding of the complexity and ambiguity of empirical work, as well as the skills to calibrate and troubleshoot equipment used to make observations. Learners should understand measurement error; and have the skills to aggregate, interpret, and present the resulting data (National Research Council, 2006, p.77; NSTA, 2007).

Honors and Advanced Level Course Note: Advanced courses require a greater demand on students through increased academic rigor. Academic rigor is obtained through the application, analysis, evaluation, and creation of complex ideas that are often abstract and multi-faceted. Students are challenged to think and collaborate critically on the content they are learning. Honors level rigor will be achieved by increasing text complexity through text selection, focus on high-level qualitative measures, and complexity of task. Instruction will be structured to give students a deeper understanding of conceptual themes and organization within and across disciplines. Academic rigor is more than simply assigning to students a greater quantity of work.

Special Notes:
Instructional Practices
Teaching from a range of complex text is optimized when teachers in all subject areas implement the following strategies on a routine basis:

1. Ensuring wide reading from complex text that varies in length.
2. Making close reading and rereading of texts central to lessons.
3. Emphasizing text-specific complex questions, and cognitively complex tasks, reinforce focus on the text and cultivate independence.
4. Emphasizing students supporting answers based upon evidence from the text.
5. Providing extensive research and writing opportunities (claims and evidence).

Science and Engineering Practices (NRC *Framework for K-12 Science Education, 2010*)

- Asking questions (for science) and defining problems (for engineering).
- Developing and using models.
- Planning and carrying out investigations.
- Analyzing and interpreting data.
- Using mathematics, information and computer technology, and computational thinking.
- Constructing explanations (for science) and designing solutions (for engineering).
- Engaging in argument from evidence.
- Obtaining, evaluating, and communicating information.

Florida's Benchmarks for Excellent Student Thinking (B.E.S.T.) Standards
This course includes Florida's B.E.S.T. ELA Expectations (EE) and Mathematical Thinking and Reasoning Standards (MTRs) for students. Florida educators should intentionally embed these standards within the content and their instruction as applicable. For guidance on the implementation of the EEs and MTRs, please visit cpalms.org/Standards/BEST_Standards.aspx and select the appropriate B.E.S.T. Standards package.

English Language Development ELD Standards Special Notes Section:

Teachers are required to provide listening, speaking, reading and writing instruction that allows English language learners (ELL) to communicate information, ideas and concepts for academic success in the content area of Science. For the given level of English language proficiency and with visual, graphic, or interactive support, students will interact with grade level words, expressions, sentences and discourse to process or produce language necessary for academic success The ELD standard should specify a relevant content area concept or topic of study chosen by curriculum developers and teachers which maximizes an ELL's need for communication and social skills. To access an ELL supporting document which delineates performance definitions and descriptors, please click on the following link: cpalms.org/uploads/docs/standards/eld/SC.pdf

Additional Instructional Resources:
A.V.E. for Success Collection is provided by the Florida Association of School Administrators: fasa.net/4DCGI/cms/review.html?Action=CMS_Document&DocID=139. Please be aware that these resources have not been reviewed by CPALMS and there may be a charge for the use of some of them in this collection.

GENERAL INFORMATION

Course Number: 2000360

Course Path: Section: Grades PreK to 12 Education Courses > **Grade Group:** Grades 9 to 12 and Adult Education Courses > **Subject:** Science > **SubSubject:** Biological Sciences >

Abbreviated Title: ANAT PHYSIO HON

Number of Credits: One (1) credit

Course Length: Year (Y)

Course Attributes:

- Honors

Course Type: Core Academic Course

Course Level: 3

Course Status: Draft - Course Pending Approval

Grade Level(s): 9,10,11,12

Graduation Requirement: Equally Rigorous Science

Educator Certifications

Science (Secondary Grades 7-12)
Biology (Grades 6-12)
Health (Elementary and Secondary Grades K-12)
Health Education (Secondary Grades 7-12)

Botany (#2000370) 2022 - And Beyond

Course Standards

Name	Description
SC.912.L.14.2:	Relate structure to function for the components of plant and animal cells. Explain the role of cell membranes as a highly selective barrier (passive and active transport).
SC.912.L.14.3:	Compare and contrast the general structures of plant and animal cells. Compare and contrast the general structures of prokaryotic and eukaryotic cells.
SC.912.L.14.5:	Explain the evidence supporting the scientific theory of the origin of eukaryotic cells (endosymbiosis).
SC.912.L.14.7:	Relate the structure of each of the major plant organs and tissues to physiological processes.
SC.912.L.14.8:	Explain alternation of generations in plants.
SC.912.L.14.9:	Relate the major structure of fungi to their functions.
SC.912.L.14.10:	Discuss the relationship between the evolution of land plants and their anatomy.
SC.912.L.14.53:	Discuss basic classification and characteristics of plants. Identify bryophytes, pteridophytes, gymnosperms, and angiosperms.
SC.912.L.15.1:	Explain how the scientific theory of evolution is supported by the fossil record, comparative anatomy, comparative embryology, biogeography, molecular biology, and observed evolutionary change.
SC.912.L.15.3:	Describe how biological diversity is increased by the origin of new species and how it is decreased by the natural process of extinction.
SC.912.L.15.4:	Describe how and why organisms are hierarchically classified and based on evolutionary relationships.
SC.912.L.15.5:	Explain the reasons for changes in how organisms are classified.
SC.912.L.15.6:	Discuss distinguishing characteristics of the domains and kingdoms of living organisms.
SC.912.L.16.1:	Use Mendel's laws of segregation and independent assortment to analyze patterns of inheritance.
SC.912.L.16.2:	Discuss observed inheritance patterns caused by various modes of inheritance, including dominant, recessive, codominant, sex-linked, polygenic, and multiple alleles.
SC.912.L.17.4:	Describe changes in ecosystems resulting from seasonal variations, climate change and succession.
SC.912.L.17.6:	Compare and contrast the relationships among organisms, including predation, parasitism, competition, commensalism, and mutualism.
SC.912.L.17.7:	Characterize the biotic and abiotic components that define freshwater systems, marine systems and terrestrial systems.
SC.912.L.17.8:	Recognize the consequences of the losses of biodiversity due to catastrophic events, climate changes, human activity, and the introduction of invasive, non-native species.
SC.912.L.17.9:	Use a food web to identify and distinguish producers, consumers, and decomposers. Explain the pathway of energy transfer through trophic levels and the reduction of available energy at successive trophic levels.
SC.912.L.17.10:	Diagram and explain the biogeochemical cycles of an ecosystem, including water, carbon, and nitrogen cycle.
SC.912.L.18.1:	Describe the basic molecular structures and primary functions of the four major categories of biological macromolecules.
SC.912.L.18.5:	Discuss the use of chemiosmotic gradients for ATP production in chloroplasts and mitochondria.
SC.912.L.18.7:	Identify the reactants, products, and basic functions of photosynthesis.
SC.912.L.18.8:	Identify the reactants, products, and basic functions of aerobic and anaerobic cellular respiration.
SC.912.L.18.9:	Explain the interrelated nature of photosynthesis and cellular respiration.
SC.912.L.18.10:	Connect the role of adenosine triphosphate (ATP) to energy transfers within a cell.
SC.912.L.18.11:	Explain the role of enzymes as catalysts that lower the activation energy of biochemical reactions. Identify factors, such as pH and temperature, and their effect on enzyme activity.
SC.912.L.18.12:	Discuss the special properties of water that contribute to Earth's suitability as an environment for life: cohesive behavior, ability to moderate temperature, expansion upon freezing, and versatility as a solvent.
SC.912.N.1.1:	Define a problem based on a specific body of knowledge, for example: biology, chemistry, physics, and earth/space science, and do the following: 1. **Pose questions about the natural world,** (Articulate the purpose of the investigation and identify the relevant scientific concepts). 2. **Conduct systematic observations,** (Write procedures that are clear and replicable. Identify observables and examine relationships between test (independent) variable and outcome (dependent) variable. Employ appropriate methods for accurate and consistent observations; conduct and record measurements at appropriate levels of precision. Follow safety guidelines). 3. **Examine books and other sources of information to see what is already known,** 4. **Review what is known in light of empirical evidence,** (Examine whether available empirical evidence can be interpreted in terms of existing knowledge and models, and if not, modify or develop new models). 5. **Plan investigations,** (Design and evaluate a scientific investigation). 6. **Use tools to gather, analyze, and interpret data (this includes the use of measurement in metric and other systems, and also the generation and interpretation of graphical representations of data, including data tables and graphs),** (Collect data or evidence in an organized way. Properly use instruments, equipment, and materials (e.g., scales, probeware, meter sticks, microscopes, computers) including set-up, calibration, technique, maintenance, and storage). 7. **Pose answers, explanations, or descriptions of events,** 8. **Generate explanations that explicate or describe natural phenomena (inferences),** 9. **Use appropriate evidence and reasoning to justify these explanations to others,** 10. **Communicate results of scientific investigations, and** 11. **Evaluate the merits of the explanations produced by others.**
SC.912.N.1.2:	Describe and explain what characterizes science and its methods.
SC.912.N.2.4:	Explain that scientific knowledge is both durable and robust and open to change. Scientific knowledge can change because it is often examined and re-examined by new investigations and scientific argumentation. Because of these frequent examinations, scientific knowledge becomes stronger, leading to its durability.
SC.912.P.8.12:	Describe the properties of the carbon atom that make the diversity of carbon compounds possible.
SC.912.P.10.1:	Differentiate among the various forms of energy and recognize that they can be transformed from one form to others.

SC.912.P.10.18:	Explore the theory of electromagnetism by comparing and contrasting the different parts of the electromagnetic spectrum in terms of wavelength, frequency, and energy, and relate them to phenomena and applications.
SC.912.P.12.12:	Explain how various factors, such as concentration, temperature, and presence of a catalyst affect the rate of a chemical reaction.
MA.K12.MTR.1.1:	Mathematicians who participate in effortful learning both individually and with others: • Analyze the problem in a way that makes sense given the task. • Ask questions that will help with solving the task. • Build perseverance by modifying methods as needed while solving a challenging task. • Stay engaged and maintain a positive mindset when working to solve tasks. • Help and support each other when attempting a new method or approach. **Clarifications:** Teachers who encourage students to participate actively in effortful learning both individually and with others: • Cultivate a community of growth mindset learners. • Foster perseverance in students by choosing tasks that are challenging. • Develop students' ability to analyze and problem solve. • Recognize students' effort when solving challenging problems.
MA.K12.MTR.2.1:	Demonstrate understanding by representing problems in multiple ways. Mathematicians who demonstrate understanding by representing problems in multiple ways: • Build understanding through modeling and using manipulatives. • Represent solutions to problems in multiple ways using objects, drawings, tables, graphs and equations. • Progress from modeling problems with objects and drawings to using algorithms and equations. • Express connections between concepts and representations. • Choose a representation based on the given context or purpose. **Clarifications:** Teachers who encourage students to demonstrate understanding by representing problems in multiple ways: • Help students make connections between concepts and representations. • Provide opportunities for students to use manipulatives when investigating concepts. • Guide students from concrete to pictorial to abstract representations as understanding progresses. • Show students that various representations can have different purposes and can be useful in different situations.
MA.K12.MTR.3.1:	Complete tasks with mathematical fluency. Mathematicians who complete tasks with mathematical fluency: • Select efficient and appropriate methods for solving problems within the given context. • Maintain flexibility and accuracy while performing procedures and mental calculations. • Complete tasks accurately and with confidence. • Adapt procedures to apply them to a new context. • Use feedback to improve efficiency when performing calculations. **Clarifications:** Teachers who encourage students to complete tasks with mathematical fluency: • Provide students with the flexibility to solve problems by selecting a procedure that allows them to solve efficiently and accurately. • Offer multiple opportunities for students to practice efficient and generalizable methods. • Provide opportunities for students to reflect on the method they used and determine if a more efficient method could have been used.
MA.K12.MTR.4.1:	Engage in discussions that reflect on the mathematical thinking of self and others. Mathematicians who engage in discussions that reflect on the mathematical thinking of self and others: • Communicate mathematical ideas, vocabulary and methods effectively. • Analyze the mathematical thinking of others. • Compare the efficiency of a method to those expressed by others. • Recognize errors and suggest how to correctly solve the task. • Justify results by explaining methods and processes. • Construct possible arguments based on evidence. **Clarifications:** Teachers who encourage students to engage in discussions that reflect on the mathematical thinking of self and others: • Establish a culture in which students ask questions of the teacher and their peers, and error is an opportunity for learning. • Create opportunities for students to discuss their thinking with peers. • Select, sequence and present student work to advance and deepen understanding of correct and increasingly efficient methods. • Develop students' ability to justify methods and compare their responses to the responses of their peers.
MA.K12.MTR.5.1:	Use patterns and structure to help understand and connect mathematical concepts. Mathematicians who use patterns and structure to help understand and connect mathematical concepts: • Focus on relevant details within a problem. • Create plans and procedures to logically order events, steps or ideas to solve problems. • Decompose a complex problem into manageable parts. • Relate previously learned concepts to new concepts. • Look for similarities among problems. • Connect solutions of problems to more complicated large-scale situations. **Clarifications:** Teachers who encourage students to use patterns and structure to help understand and connect mathematical concepts: • Help students recognize the patterns in the world around them and connect these patterns to mathematical concepts. • Support students to develop generalizations based on the similarities found among problems.

	• Provide opportunities for students to create plans and procedures to solve problems. • Develop students' ability to construct relationships between their current understanding and more sophisticated ways of thinking.
MA.K12.MTR.6.1:	Assess the reasonableness of solutions. Mathematicians who assess the reasonableness of solutions: • Estimate to discover possible solutions. • Use benchmark quantities to determine if a solution makes sense. • Check calculations when solving problems. • Verify possible solutions by explaining the methods used. • Evaluate results based on the given context. **Clarifications:** Teachers who encourage students to assess the reasonableness of solutions: • Have students estimate or predict solutions prior to solving. • Prompt students to continually ask, "Does this solution make sense? How do you know?" • Reinforce that students check their work as they progress within and after a task. • Strengthen students' ability to verify solutions through justifications.
MA.K12.MTR.7.1:	Apply mathematics to real-world contexts. Mathematicians who apply mathematics to real-world contexts: • Connect mathematical concepts to everyday experiences. • Use models and methods to understand, represent and solve problems. • Perform investigations to gather data or determine if a method is appropriate. • Redesign models and methods to improve accuracy or efficiency. **Clarifications:** Teachers who encourage students to apply mathematics to real-world contexts: • Provide opportunities for students to create models, both concrete and abstract, and perform investigations. • Challenge students to question the accuracy of their models and methods. • Support students as they validate conclusions by comparing them to the given situation. • Indicate how various concepts can be applied to other disciplines.
ELA.K12.EE.1.1:	Cite evidence to explain and justify reasoning. **Clarifications:** K-1 Students include textual evidence in their oral communication with guidance and support from adults. The evidence can consist of details from the text without naming the text. During 1st grade, students learn how to incorporate the evidence in their writing. 2-3 Students include relevant textual evidence in their written and oral communication. Students should name the text when they refer to it. In 3rd grade, students should use a combination of direct and indirect citations. 4-5 Students continue with previous skills and reference comments made by speakers and peers. Students cite texts that they've directly quoted, paraphrased, or used for information. When writing, students will use the form of citation dictated by the instructor or the style guide referenced by the instructor. 6-8 Students continue with previous skills and use a style guide to create a proper citation. 9-12 Students continue with previous skills and should be aware of existing style guides and the ways in which they differ.
ELA.K12.EE.2.1:	Read and comprehend grade-level complex texts proficiently. **Clarifications:** See Text Complexity for grade-level complexity bands and a text complexity rubric.
ELA.K12.EE.3.1:	Make inferences to support comprehension. **Clarifications:** Students will make inferences before the words infer or inference are introduced. Kindergarten students will answer questions like "Why is the girl smiling?" or make predictions about what will happen based on the title page. Students will use the terms and apply them in 2nd grade and beyond.
ELA.K12.EE.4.1:	Use appropriate collaborative techniques and active listening skills when engaging in discussions in a variety of situations. **Clarifications:** In kindergarten, students learn to listen to one another respectfully. In grades 1-2, students build upon these skills by justifying what they are thinking. For example: "I think _____ because _____." The collaborative conversations are becoming academic conversations. In grades 3-12, students engage in academic conversations discussing claims and justifying their reasoning, refining and applying skills. Students build on ideas, propel the conversation, and support claims and counterclaims with evidence.
ELA.K12.EE.5.1:	Use the accepted rules governing a specific format to create quality work. **Clarifications:** Students will incorporate skills learned into work products to produce quality work. For students to incorporate these skills appropriately, they must receive instruction. A 3rd grade student creating a poster board display must have instruction in how to effectively present information to do quality work.
ELA.K12.EE.6.1:	Use appropriate voice and tone when speaking or writing. **Clarifications:** In kindergarten and 1st grade, students learn the difference between formal and informal language. For example, the way we talk to our friends differs from the way we speak to adults. In 2nd grade and beyond, students practice appropriate social and academic language to discuss texts.
ELD.K12.ELL.SC.1:	English language learners communicate information, ideas and concepts necessary for academic success in the content area of Science.
ELD.K12.ELL.SI.1:	English language learners communicate for social and instructional purposes within the school setting.

General Course Information and Notes

GENERAL NOTES

Laboratory investigations that include the use of scientific inquiry, research, measurement, problem solving, laboratory apparatus and technologies, experimental procedures, and safety procedures are an integral part of this course. The National Science Teachers Association (NSTA) recommends that at the high school level, all students should be in the science lab or field, collecting data every week. School laboratory investigations (labs) are defined by the National Research Council (NRC) as an experience in the laboratory, classroom, or the field that provides students with opportunities to interact directly with natural phenomena or with data collected by others using tools, materials, data collection techniques, and models (NRC, 2006, p. 3). Laboratory investigations in the high school classroom should help all students develop a growing understanding of the complexity and ambiguity of empirical work, as well as the skills to calibrate and troubleshoot equipment used to make observations. Learners should understand measurement error; and have the skills to aggregate, interpret, and present the resulting data (National Research Council, 2006, p.77; NSTA, 2007).

Special Notes:
Instructional Practices
Teaching from a range of complex text is optimized when teachers in all subject areas implement the following strategies on a routine basis:

1. Ensuring wide reading from complex text that varies in length.
2. Making close reading and rereading of texts central to lessons.
3. Emphasizing text-specific complex questions, and cognitively complex tasks, reinforce focus on the text and cultivate independence.
4. Emphasizing students supporting answers based upon evidence from the text.
5. Providing extensive research and writing opportunities (claims and evidence).

Science and Engineering Practices (NRC *Framework for K-12 Science Education, 2010*)

- Asking questions (for science) and defining problems (for engineering).
- Developing and using models.
- Planning and carrying out investigations.
- Analyzing and interpreting data.
- Using mathematics, information and computer technology, and computational thinking.
- Constructing explanations (for science) and designing solutions (for engineering).
- Engaging in argument from evidence.
- Obtaining, evaluating, and communicating information.

Florida's Benchmarks for Excellent Student Thinking (B.E.S.T.) Standards
This course includes Florida's B.E.S.T. ELA Expectations (EE) and Mathematical Thinking and Reasoning Standards (MTRs) for students. Florida educators should intentionally embed these standards within the content and their instruction as applicable. For guidance on the implementation of the EEs and MTRs, please visit cpalms.org/Standards/BEST_Standards.aspx and select the appropriate B.E.S.T. Standards package.

English Language Development ELD Standards Special Notes Section:
Teachers are required to provide listening, speaking, reading and writing instruction that allows English language learners (ELL) to communicate information, ideas and concepts for academic success in the content area of Science. For the given level of English language proficiency and with visual, graphic, or interactive support, students will interact with grade level words, expressions, sentences and discourse to process or produce language necessary for academic success The ELD standard should specify a relevant content area concept or topic of study chosen by curriculum developers and teachers which maximizes an ELL's need for communication and social skills. To access an ELL supporting document which delineates performance definitions and descriptors, please click on the following link: cpalms.org/uploads/docs/standards/eld/SC.pdf

GENERAL INFORMATION

Course Number: 2000370

Course Path: Section: Grades PreK to 12 Education Courses > **Grade Group:** Grades 9 to 12 and Adult Education Courses > **Subject:** Science > **SubSubject:** Biological Sciences > **Abbreviated Title:** BOTANY

Number of Credits: One (1) credit

Course Length: Year (Y)

Course Type: Elective Course

Course Level: 2

Course Status: Draft - Course Pending Approval

Grade Level(s): 9,10,11,12

Educator Certifications

Science (Secondary Grades 7-12)
Biology (Grades 6-12)

Ecology (#2000380) 2022 - And Beyond

Course Standards

Name	Description
SC.912.L.15.12:	List the conditions for Hardy-Weinberg equilibrium in a population and why these conditions are not likely to appear in nature. Use the Hardy-Weinberg equation to predict genotypes in a population from observed phenotypes.
SC.912.L.15.13:	Describe the conditions required for natural selection, including: overproduction of offspring, inherited variation, and the struggle to survive, which result in differential reproductive success.
SC.912.L.15.14:	Discuss mechanisms of evolutionary change other than natural selection such as genetic drift and gene flow.
SC.912.L.15.15:	Describe how mutation and genetic recombination increase genetic variation.
SC.912.L.17.1:	Discuss the characteristics of populations, such as number of individuals, age structure, density, and pattern of distribution.
SC.912.L.17.2:	Explain the general distribution of life in aquatic systems as a function of chemistry, geography, light, depth, salinity, and temperature.
SC.912.L.17.3:	Discuss how various oceanic and freshwater processes, such as currents, tides, and waves, affect the abundance of aquatic organisms.
SC.912.L.17.4:	Describe changes in ecosystems resulting from seasonal variations, climate change and succession.
SC.912.L.17.5:	Analyze how population size is determined by births, deaths, immigration, emigration, and limiting factors (biotic and abiotic) that determine carrying capacity.
SC.912.L.17.6:	Compare and contrast the relationships among organisms, including predation, parasitism, competition, commensalism, and mutualism.
SC.912.L.17.7:	Characterize the biotic and abiotic components that define freshwater systems, marine systems and terrestrial systems.
SC.912.L.17.8:	Recognize the consequences of the losses of biodiversity due to catastrophic events, climate changes, human activity, and the introduction of invasive, non-native species.
SC.912.L.17.9:	Use a food web to identify and distinguish producers, consumers, and decomposers. Explain the pathway of energy transfer through trophic levels and the reduction of available energy at successive trophic levels.
SC.912.L.17.10:	Diagram and explain the biogeochemical cycles of an ecosystem, including water, carbon, and nitrogen cycle.
SC.912.L.17.11:	Evaluate the costs and benefits of renewable and nonrenewable resources, such as water, energy, fossil fuels, wildlife, and forests.
SC.912.L.17.16:	Discuss the large-scale environmental impacts resulting from human activity, including waste spills, oil spills, runoff, greenhouse gases, ozone depletion, and surface and groundwater pollution.
SC.912.L.17.17:	Assess the effectiveness of innovative methods of protecting the environment.
SC.912.L.17.19:	Describe how different natural resources are produced and how their rates of use and renewal limit availability.
SC.912.N.1.1:	Define a problem based on a specific body of knowledge, for example: biology, chemistry, physics, and earth/space science, and do the following: 1. **Pose questions about the natural world,** (Articulate the purpose of the investigation and identify the relevant scientific concepts). 2. **Conduct systematic observations,** (Write procedures that are clear and replicable. Identify observables and examine relationships between test (independent) variable and outcome (dependent) variable. Employ appropriate methods for accurate and consistent observations; conduct and record measurements at appropriate levels of precision. Follow safety guidelines). 3. **Examine books and other sources of information to see what is already known,** 4. **Review what is known in light of empirical evidence,** (Examine whether available empirical evidence can be interpreted in terms of existing knowledge and models, and if not, modify or develop new models). 5. **Plan investigations,** (Design and evaluate a scientific investigation). 6. **Use tools to gather, analyze, and interpret data (this includes the use of measurement in metric and other systems, and also the generation and interpretation of graphical representations of data, including data tables and graphs),** (Collect data or evidence in an organized way. Properly use instruments, equipment, and materials (e.g., scales, probeware, meter sticks, microscopes, computers) including set-up, calibration, technique, maintenance, and storage). 7. **Pose answers, explanations, or descriptions of events,** 8. **Generate explanations that explicate or describe natural phenomena (inferences),** 9. **Use appropriate evidence and reasoning to justify these explanations to others,** 10. **Communicate results of scientific investigations, and** 11. **Evaluate the merits of the explanations produced by others.**
SC.912.N.1.2:	Describe and explain what characterizes science and its methods.
SC.912.N.1.3:	Recognize that the strength or usefulness of a scientific claim is evaluated through scientific argumentation, which depends on critical and logical thinking, and the active consideration of alternative scientific explanations to explain the data presented.
SC.912.N.1.4:	Identify sources of information and assess their reliability according to the strict standards of scientific investigation.
SC.912.N.1.5:	Describe and provide examples of how similar investigations conducted in many parts of the world result in the same outcome.
SC.912.N.1.6:	Describe how scientific inferences are drawn from scientific observations and provide examples from the content being studied.
SC.912.N.1.7:	Recognize the role of creativity in constructing scientific questions, methods and explanations.
SC.912.N.2.1:	Identify what is science, what clearly is not science, and what superficially resembles science (but fails to meet the criteria for science).
SC.912.N.2.4:	Explain that scientific knowledge is both durable and robust and open to change. Scientific knowledge can change because it is often examined and re-examined by new investigations and scientific argumentation. Because of these frequent examinations, scientific knowledge becomes stronger, leading to its durability.
SC.912.N.2.5:	Describe instances in which scientists' varied backgrounds, talents, interests, and goals influence the inferences and thus the explanations that they make about observations of natural phenomena and describe that competing interpretations (explanations) of scientists are a strength of science as they are a source of new, testable ideas that have the potential to add new evidence to support one or another of the explanations.
SC.912.N.3.1:	Explain that a scientific theory is the culmination of many scientific investigations drawing together all the current evidence concerning a substantial range of phenomena; thus, a scientific theory represents the most powerful explanation scientists have to offer.
SC.912.N.3.5:	Describe the function of models in science, and identify the wide range of models used in science.
SC.912.N.4.1:	Explain how scientific knowledge and reasoning provide an empirically-based perspective to inform society's decision making.

SC.912.N.4.2:	Weigh the merits of alternative strategies for solving a specific societal problem by comparing a number of different costs and benefits, such as human, economic, and environmental.
SC.912.P.10.1:	Differentiate among the various forms of energy and recognize that they can be transformed from one form to others.
SC.912.P.10.2:	Explore the Law of Conservation of Energy by differentiating among open, closed, and isolated systems and explain that the total energy in an isolated system is a conserved quantity.
MA.K12.MTR.1.1:	Mathematicians who participate in effortful learning both individually and with others: • Analyze the problem in a way that makes sense given the task. • Ask questions that will help with solving the task. • Build perseverance by modifying methods as needed while solving a challenging task. • Stay engaged and maintain a positive mindset when working to solve tasks. • Help and support each other when attempting a new method or approach. **Clarifications:** Teachers who encourage students to participate actively in effortful learning both individually and with others: • Cultivate a community of growth mindset learners. • Foster perseverance in students by choosing tasks that are challenging. • Develop students' ability to analyze and problem solve. • Recognize students' effort when solving challenging problems.
MA.K12.MTR.2.1:	Demonstrate understanding by representing problems in multiple ways. Mathematicians who demonstrate understanding by representing problems in multiple ways: • Build understanding through modeling and using manipulatives. • Represent solutions to problems in multiple ways using objects, drawings, tables, graphs and equations. • Progress from modeling problems with objects and drawings to using algorithms and equations. • Express connections between concepts and representations. • Choose a representation based on the given context or purpose. **Clarifications:** Teachers who encourage students to demonstrate understanding by representing problems in multiple ways: • Help students make connections between concepts and representations. • Provide opportunities for students to use manipulatives when investigating concepts. • Guide students from concrete to pictorial to abstract representations as understanding progresses. • Show students that various representations can have different purposes and can be useful in different situations.
MA.K12.MTR.3.1:	Complete tasks with mathematical fluency. Mathematicians who complete tasks with mathematical fluency: • Select efficient and appropriate methods for solving problems within the given context. • Maintain flexibility and accuracy while performing procedures and mental calculations. • Complete tasks accurately and with confidence. • Adapt procedures to apply them to a new context. • Use feedback to improve efficiency when performing calculations. **Clarifications:** Teachers who encourage students to complete tasks with mathematical fluency: • Provide students with the flexibility to solve problems by selecting a procedure that allows them to solve efficiently and accurately. • Offer multiple opportunities for students to practice efficient and generalizable methods. • Provide opportunities for students to reflect on the method they used and determine if a more efficient method could have been used.
MA.K12.MTR.4.1:	Engage in discussions that reflect on the mathematical thinking of self and others. Mathematicians who engage in discussions that reflect on the mathematical thinking of self and others: • Communicate mathematical ideas, vocabulary and methods effectively. • Analyze the mathematical thinking of others. • Compare the efficiency of a method to those expressed by others. • Recognize errors and suggest how to correctly solve the task. • Justify results by explaining methods and processes. • Construct possible arguments based on evidence. **Clarifications:** Teachers who encourage students to engage in discussions that reflect on the mathematical thinking of self and others: • Establish a culture in which students ask questions of the teacher and their peers, and error is an opportunity for learning. • Create opportunities for students to discuss their thinking with peers. • Select, sequence and present student work to advance and deepen understanding of correct and increasingly efficient methods. • Develop students' ability to justify methods and compare their responses to the responses of their peers.
MA.K12.MTR.5.1:	Use patterns and structure to help understand and connect mathematical concepts. Mathematicians who use patterns and structure to help understand and connect mathematical concepts: • Focus on relevant details within a problem. • Create plans and procedures to logically order events, steps or ideas to solve problems. • Decompose a complex problem into manageable parts. • Relate previously learned concepts to new concepts. • Look for similarities among problems. • Connect solutions of problems to more complicated large-scale situations. **Clarifications:** Teachers who encourage students to use patterns and structure to help understand and connect mathematical concepts:

	• Help students recognize the patterns in the world around them and connect these patterns to mathematical concepts. • Support students to develop generalizations based on the similarities found among problems. • Provide opportunities for students to create plans and procedures to solve problems. • Develop students' ability to construct relationships between their current understanding and more sophisticated ways of thinking.
MA.K12.MTR.6.1:	Assess the reasonableness of solutions. Mathematicians who assess the reasonableness of solutions: • Estimate to discover possible solutions. • Use benchmark quantities to determine if a solution makes sense. • Check calculations when solving problems. • Verify possible solutions by explaining the methods used. • Evaluate results based on the given context. **Clarifications:** Teachers who encourage students to assess the reasonableness of solutions: • Have students estimate or predict solutions prior to solving. • Prompt students to continually ask, "Does this solution make sense? How do you know?" • Reinforce that students check their work as they progress within and after a task. • Strengthen students' ability to verify solutions through justifications.
MA.K12.MTR.7.1:	Apply mathematics to real-world contexts. Mathematicians who apply mathematics to real-world contexts: • Connect mathematical concepts to everyday experiences. • Use models and methods to understand, represent and solve problems. • Perform investigations to gather data or determine if a method is appropriate. • Redesign models and methods to improve accuracy or efficiency. **Clarifications:** Teachers who encourage students to apply mathematics to real-world contexts: • Provide opportunities for students to create models, both concrete and abstract, and perform investigations. • Challenge students to question the accuracy of their models and methods. • Support students as they validate conclusions by comparing them to the given situation. • Indicate how various concepts can be applied to other disciplines.
ELA.K12.EE.1.1:	Cite evidence to explain and justify reasoning. **Clarifications:** K-1 Students include textual evidence in their oral communication with guidance and support from adults. The evidence can consist of details from the text without naming the text. During 1st grade, students learn how to incorporate the evidence in their writing. 2-3 Students include relevant textual evidence in their written and oral communication. Students should name the text when they refer to it. In 3rd grade, students should use a combination of direct and indirect citations. 4-5 Students continue with previous skills and reference comments made by speakers and peers. Students cite texts that they've directly quoted, paraphrased, or used for information. When writing, students will use the form of citation dictated by the instructor or the style guide referenced by the instructor. 6-8 Students continue with previous skills and use a style guide to create a proper citation. 9-12 Students continue with previous skills and should be aware of existing style guides and the ways in which they differ.
ELA.K12.EE.2.1:	Read and comprehend grade-level complex texts proficiently. **Clarifications:** See Text Complexity for grade-level complexity bands and a text complexity rubric.
ELA.K12.EE.3.1:	Make inferences to support comprehension. **Clarifications:** Students will make inferences before the words infer or inference are introduced. Kindergarten students will answer questions like "Why is the girl smiling?" or make predictions about what will happen based on the title page. Students will use the terms and apply them in 2nd grade and beyond.
ELA.K12.EE.4.1:	Use appropriate collaborative techniques and active listening skills when engaging in discussions in a variety of situations. **Clarifications:** In kindergarten, students learn to listen to one another respectfully. In grades 1-2, students build upon these skills by justifying what they are thinking. For example: "I think _____ because _____." The collaborative conversations are becoming academic conversations. In grades 3-12, students engage in academic conversations discussing claims and justifying their reasoning, refining and applying skills. Students build on ideas, propel the conversation, and support claims and counterclaims with evidence.
ELA.K12.EE.5.1:	Use the accepted rules governing a specific format to create quality work. **Clarifications:** Students will incorporate skills learned into work products to produce quality work. For students to incorporate these skills appropriately, they must receive instruction. A 3rd grade student creating a poster board display must have instruction in how to effectively present information to do quality work.
ELA.K12.EE.6.1:	Use appropriate voice and tone when speaking or writing. **Clarifications:** In kindergarten and 1st grade, students learn the difference between formal and informal language. For example, the way we talk to our friends differs from the way we speak to adults. In 2nd grade and beyond, students practice appropriate social and academic language to discuss texts.
ELD.K12.ELL.SC.1:	English language learners communicate information, ideas and concepts necessary for academic success in the content area of Science.

General Course Information and Notes

GENERAL NOTES

Laboratory investigations that include the use of scientific inquiry, research, measurement, problem solving, laboratory apparatus and technologies, experimental procedures, and safety procedures are an integral part of this course. The National Science Teachers Association (NSTA) recommends that at the high school level, all students should be in the science lab or field, collecting data every week. School laboratory investigations (labs) are defined by the National Research Council (NRC) as an experience in the laboratory, classroom, or the field that provides students with opportunities to interact directly with natural phenomena or with data collected by others using tools, materials, data collection techniques, and models (NRC, 2006, p. 3). Laboratory investigations in the high school classroom should help all students develop a growing understanding of the complexity and ambiguity of empirical work, as well as the skills to calibrate and troubleshoot equipment used to make observations. Learners should understand measurement error; and have the skills to aggregate, interpret, and present the resulting data (National Research Council, 2006, p.77; NSTA, 2007).

Special Notes:
Instructional Practices
Teaching from a range of complex text is optimized when teachers in all subject areas implement the following strategies on a routine basis:

1. Ensuring wide reading from complex text that varies in length.
2. Making close reading and rereading of texts central to lessons.
3. Emphasizing text-specific complex questions, and cognitively complex tasks, reinforce focus on the text and cultivate independence.
4. Emphasizing students supporting answers based upon evidence from the text.
5. Providing extensive research and writing opportunities (claims and evidence).

Science and Engineering Practices (NRC *Framework for K-12 Science Education, 2010*)

- Asking questions (for science) and defining problems (for engineering).
- Developing and using models.
- Planning and carrying out investigations.
- Analyzing and interpreting data.
- Using mathematics, information and computer technology, and computational thinking.
- Constructing explanations (for science) and designing solutions (for engineering).
- Engaging in argument from evidence.
- Obtaining, evaluating, and communicating information.

Florida's Benchmarks for Excellent Student Thinking (B.E.S.T.) Standards
This course includes Florida's B.E.S.T. ELA Expectations (EE) and Mathematical Thinking and Reasoning Standards (MTRs) for students. Florida educators should intentionally embed these standards within the content and their instruction as applicable. For guidance on the implementation of the EEs and MTRs, please visit cpalms.org/Standards/BEST_Standards.aspx and select the appropriate B.E.S.T. Standards package.

English Language Development ELD Standards Special Notes Section:
Teachers are required to provide listening, speaking, reading and writing instruction that allows English language learners (ELL) to communicate information, ideas and concepts for academic success in the content area of Science. For the given level of English language proficiency and with visual, graphic, or interactive support, students will interact with grade level words, expressions, sentences and discourse to process or produce language necessary for academic success The ELD standard should specify a relevant content area concept or topic of study chosen by curriculum developers and teachers which maximizes an ELL's need for communication and social skills. To access an ELL supporting document which delineates performance definitions and descriptors, please click on the following link: cpalms.org/uploads/docs/standards/eld/SC.pdf

GENERAL INFORMATION

Course Number: 2000380

Course Path: Section: Grades PreK to 12 Education Courses > **Grade Group:** Grades 9 to 12 and Adult Education Courses > **Subject:** Science > **SubSubject:** Biological Sciences > **Abbreviated Title:** ECOLOGY

Number of Credits: One (1) credit

Course Length: Year (Y)

Course Type: Elective Course

Course Level: 2

Course Status: Draft - Course Pending Approval

Grade Level(s): 9,10,11,12

Educator Certifications

Science (Secondary Grades 7-12)
Biology (Grades 6-12)

Zoology (#2000410) 2022 - And Beyond

Course Standards

Name	Description
SC.912.L.14.5:	Explain the evidence supporting the scientific theory of the origin of eukaryotic cells (endosymbiosis).
SC.912.L.14.12:	Describe the anatomy and histology of bone tissue.
SC.912.L.14.26:	Identify the major parts of the brain on diagrams or models.
SC.912.L.14.36:	Describe the factors affecting blood flow through the cardiovascular system.
SC.912.L.14.44:	Describe the physiology of the respiratory system including the mechanisms of ventilation, gas exchange, gas transport and the mechanisms that control the rate of ventilation.
SC.912.L.14.50:	Describe the structure of vertebrate sensory organs. Relate structure to function in vertebrate sensory systems.
SC.912.L.14.51:	Describe the function of the vertebrate integumentary system.
SC.912.L.15.1:	Explain how the scientific theory of evolution is supported by the fossil record, comparative anatomy, comparative embryology, biogeography, molecular biology, and observed evolutionary change.
SC.912.L.15.3:	Describe how biological diversity is increased by the origin of new species and how it is decreased by the natural process of extinction.
SC.912.L.15.4:	Describe how and why organisms are hierarchically classified and based on evolutionary relationships.
SC.912.L.15.5:	Explain the reasons for changes in how organisms are classified.
SC.912.L.15.6:	Discuss distinguishing characteristics of the domains and kingdoms of living organisms.
SC.912.L.15.7:	Discuss distinguishing characteristics of vertebrate and representative invertebrate phyla, and chordate classes using typical examples.
SC.912.L.15.11:	Discuss specific fossil hominids and what they show about human evolution.
SC.912.L.15.13:	Describe the conditions required for natural selection, including: overproduction of offspring, inherited variation, and the struggle to survive, which result in differential reproductive success.
SC.912.L.15.14:	Discuss mechanisms of evolutionary change other than natural selection such as genetic drift and gene flow.
SC.912.L.15.15:	Describe how mutation and genetic recombination increase genetic variation.
SC.912.L.17.7:	Characterize the biotic and abiotic components that define freshwater systems, marine systems and terrestrial systems.
SC.912.L.17.8:	Recognize the consequences of the losses of biodiversity due to catastrophic events, climate changes, human activity, and the introduction of invasive, non-native species.
SC.912.L.17.9:	Use a food web to identify and distinguish producers, consumers, and decomposers. Explain the pathway of energy transfer through trophic levels and the reduction of available energy at successive trophic levels.
SC.912.L.18.1:	Describe the basic molecular structures and primary functions of the four major categories of biological macromolecules.
SC.912.L.18.9:	Explain the interrelated nature of photosynthesis and cellular respiration.
SC.912.N.1.1:	Define a problem based on a specific body of knowledge, for example: biology, chemistry, physics, and earth/space science, and do the following: 1. **Pose questions about the natural world,** (Articulate the purpose of the investigation and identify the relevant scientific concepts). 2. **Conduct systematic observations,** (Write procedures that are clear and replicable. Identify observables and examine relationships between test (independent) variable and outcome (dependent) variable. Employ appropriate methods for accurate and consistent observations; conduct and record measurements at appropriate levels of precision. Follow safety guidelines). 3. **Examine books and other sources of information to see what is already known,** 4. **Review what is known in light of empirical evidence,** (Examine whether available empirical evidence can be interpreted in terms of existing knowledge and models, and if not, modify or develop new models). 5. **Plan investigations,** (Design and evaluate a scientific investigation). 6. **Use tools to gather, analyze, and interpret data (this includes the use of measurement in metric and other systems, and also the generation and interpretation of graphical representations of data, including data tables and graphs),** (Collect data or evidence in an organized way. Properly use instruments, equipment, and materials (e.g., scales, probeware, meter sticks, microscopes, computers) including set-up, calibration, technique, maintenance, and storage). 7. **Pose answers, explanations, or descriptions of events,** 8. **Generate explanations that explicate or describe natural phenomena (inferences),** 9. **Use appropriate evidence and reasoning to justify these explanations to others,** 10. **Communicate results of scientific investigations, and** 11. **Evaluate the merits of the explanations produced by others.**
SC.912.N.1.2:	Describe and explain what characterizes science and its methods.
SC.912.N.2.4:	Explain that scientific knowledge is both durable and robust and open to change. Scientific knowledge can change because it is often examined and re-examined by new investigations and scientific argumentation. Because of these frequent examinations, scientific knowledge becomes stronger, leading to its durability.
MA.K12.MTR.1.1:	Mathematicians who participate in effortful learning both individually and with others: • Analyze the problem in a way that makes sense given the task. • Ask questions that will help with solving the task. • Build perseverance by modifying methods as needed while solving a challenging task. • Stay engaged and maintain a positive mindset when working to solve tasks. • Help and support each other when attempting a new method or approach. **Clarifications:** Teachers who encourage students to participate actively in effortful learning both individually and with others: • Cultivate a community of growth mindset learners. • Foster perseverance in students by choosing tasks that are challenging. • Develop students' ability to analyze and problem solve.

- Recognize students' effort when solving challenging problems.

Demonstrate understanding by representing problems in multiple ways.
Mathematicians who demonstrate understanding by representing problems in multiple ways:

- Build understanding through modeling and using manipulatives.
- Represent solutions to problems in multiple ways using objects, drawings, tables, graphs and equations.
- Progress from modeling problems with objects and drawings to using algorithms and equations.
- Express connections between concepts and representations.

MA.K12.MTR.2.1:

- Choose a representation based on the given context or purpose.

Clarifications:
Teachers who encourage students to demonstrate understanding by representing problems in multiple ways:

- Help students make connections between concepts and representations.
- Provide opportunities for students to use manipulatives when investigating concepts.
- Guide students from concrete to pictorial to abstract representations as understanding progresses.
- Show students that various representations can have different purposes and can be useful in different situations.

Complete tasks with mathematical fluency.
Mathematicians who complete tasks with mathematical fluency:

- Select efficient and appropriate methods for solving problems within the given context.
- Maintain flexibility and accuracy while performing procedures and mental calculations.
- Complete tasks accurately and with confidence.
- Adapt procedures to apply them to a new context.

MA.K12.MTR.3.1:

- Use feedback to improve efficiency when performing calculations.

Clarifications:
Teachers who encourage students to complete tasks with mathematical fluency:

- Provide students with the flexibility to solve problems by selecting a procedure that allows them to solve efficiently and accurately.
- Offer multiple opportunities for students to practice efficient and generalizable methods.
- Provide opportunities for students to reflect on the method they used and determine if a more efficient method could have been used.

Engage in discussions that reflect on the mathematical thinking of self and others.
Mathematicians who engage in discussions that reflect on the mathematical thinking of self and others:

- Communicate mathematical ideas, vocabulary and methods effectively.
- Analyze the mathematical thinking of others.
- Compare the efficiency of a method to those expressed by others.
- Recognize errors and suggest how to correctly solve the task.
- Justify results by explaining methods and processes.

MA.K12.MTR.4.1:

- Construct possible arguments based on evidence.

Clarifications:
Teachers who encourage students to engage in discussions that reflect on the mathematical thinking of self and others:

- Establish a culture in which students ask questions of the teacher and their peers, and error is an opportunity for learning.
- Create opportunities for students to discuss their thinking with peers.
- Select, sequence and present student work to advance and deepen understanding of correct and increasingly efficient methods.
- Develop students' ability to justify methods and compare their responses to the responses of their peers.

Use patterns and structure to help understand and connect mathematical concepts.
Mathematicians who use patterns and structure to help understand and connect mathematical concepts:

- Focus on relevant details within a problem.
- Create plans and procedures to logically order events, steps or ideas to solve problems.
- Decompose a complex problem into manageable parts.
- Relate previously learned concepts to new concepts.
- Look for similarities among problems.

MA.K12.MTR.5.1:

- Connect solutions of problems to more complicated large-scale situations.

Clarifications:
Teachers who encourage students to use patterns and structure to help understand and connect mathematical concepts:

- Help students recognize the patterns in the world around them and connect these patterns to mathematical concepts.
- Support students to develop generalizations based on the similarities found among problems.
- Provide opportunities for students to create plans and procedures to solve problems.
- Develop students' ability to construct relationships between their current understanding and more sophisticated ways of thinking.

Assess the reasonableness of solutions.
Mathematicians who assess the reasonableness of solutions:

- Estimate to discover possible solutions.
- Use benchmark quantities to determine if a solution makes sense.
- Check calculations when solving problems.
- Verify possible solutions by explaining the methods used.

MA.K12.MTR.6.1:

- Evaluate results based on the given context.

Clarifications:
Teachers who encourage students to assess the reasonableness of solutions:

- Have students estimate or predict solutions prior to solving.
- Prompt students to continually ask, "Does this solution make sense? How do you know?"

	• Reinforce that students check their work as they progress within and after a task. • Strengthen students' ability to verify solutions through justifications.
MA.K12.MTR.7.1:	Apply mathematics to real-world contexts. Mathematicians who apply mathematics to real-world contexts: • Connect mathematical concepts to everyday experiences. • Use models and methods to understand, represent and solve problems. • Perform investigations to gather data or determine if a method is appropriate. • Redesign models and methods to improve accuracy or efficiency. **Clarifications:** Teachers who encourage students to apply mathematics to real-world contexts: • Provide opportunities for students to create models, both concrete and abstract, and perform investigations. • Challenge students to question the accuracy of their models and methods. • Support students as they validate conclusions by comparing them to the given situation. • Indicate how various concepts can be applied to other disciplines.
ELA.K12.EE.1.1:	Cite evidence to explain and justify reasoning. **Clarifications:** K-1 Students include textual evidence in their oral communication with guidance and support from adults. The evidence can consist of details from the text without naming the text. During 1st grade, students learn how to incorporate the evidence in their writing. 2-3 Students include relevant textual evidence in their written and oral communication. Students should name the text when they refer to it. In 3rd grade, students should use a combination of direct and indirect citations. 4-5 Students continue with previous skills and reference comments made by speakers and peers. Students cite texts that they've directly quoted, paraphrased, or used for information. When writing, students will use the form of citation dictated by the instructor or the style guide referenced by the instructor. 6-8 Students continue with previous skills and use a style guide to create a proper citation. 9-12 Students continue with previous skills and should be aware of existing style guides and the ways in which they differ.
ELA.K12.EE.2.1:	Read and comprehend grade-level complex texts proficiently. **Clarifications:** See Text Complexity for grade-level complexity bands and a text complexity rubric.
ELA.K12.EE.3.1:	Make inferences to support comprehension. **Clarifications:** Students will make inferences before the words infer or inference are introduced. Kindergarten students will answer questions like "Why is the girl smiling?" or make predictions about what will happen based on the title page. Students will use the terms and apply them in 2nd grade and beyond.
ELA.K12.EE.4.1:	Use appropriate collaborative techniques and active listening skills when engaging in discussions in a variety of situations. **Clarifications:** In kindergarten, students learn to listen to one another respectfully. In grades 1-2, students build upon these skills by justifying what they are thinking. For example: "I think _____ because _____." The collaborative conversations are becoming academic conversations. In grades 3-12, students engage in academic conversations discussing claims and justifying their reasoning, refining and applying skills. Students build on ideas, propel the conversation, and support claims and counterclaims with evidence.
ELA.K12.EE.5.1:	Use the accepted rules governing a specific format to create quality work. **Clarifications:** Students will incorporate skills learned into work products to produce quality work. For students to incorporate these skills appropriately, they must receive instruction. A 3rd grade student creating a poster board display must have instruction in how to effectively present information to do quality work.
ELA.K12.EE.6.1:	Use appropriate voice and tone when speaking or writing. **Clarifications:** In kindergarten and 1st grade, students learn the difference between formal and informal language. For example, the way we talk to our friends differs from the way we speak to adults. In 2nd grade and beyond, students practice appropriate social and academic language to discuss texts.
ELD.K12.ELL.SC.1:	English language learners communicate information, ideas and concepts necessary for academic success in the content area of Science.
ELD.K12.ELL.SI.1:	English language learners communicate for social and instructional purposes within the school setting.

General Course Information and Notes

GENERAL NOTES

Laboratory investigations that include the use of scientific inquiry, research, measurement, problem solving, laboratory apparatus and technologies, experimental procedures, and safety procedures are an integral part of this course. The National Science Teachers Association (NSTA) recommends that at the high school level, all students should be in the science lab or field, collecting data every week. School laboratory investigations (labs) are defined by the National Research Council (NRC) as an experience in the laboratory, classroom, or the field that provides students with opportunities to interact directly with natural phenomena or with data collected by others using tools, materials, data collection techniques, and models (NRC, 2006, p. 3). Laboratory investigations in the high school classroom should help all students develop a growing understanding of the complexity and ambiguity of empirical work, as well as the skills to calibrate and troubleshoot equipment used to make observations. Learners should understand measurement error; and have the skills to aggregate, interpret, and present the resulting data (National Research Council, 2006, p.77; NSTA, 2007).

Special Notes:

Instructional Practices

Teaching from a range of complex text is optimized when teachers in all subject areas implement the following strategies on a routine basis:

1. Ensuring wide reading from complex text that varies in length.
2. Making close reading and rereading of texts central to lessons.
3. Emphasizing text-specific complex questions, and cognitively complex tasks, reinforce focus on the text and cultivate independence.
4. Emphasizing students supporting answers based upon evidence from the text.
5. Providing extensive research and writing opportunities (claims and evidence).

Science and Engineering Practices (NRC *Framework for K-12 Science Education, 2010*)

- Asking questions (for science) and defining problems (for engineering).
- Developing and using models.
- Planning and carrying out investigations.
- Analyzing and interpreting data.
- Using mathematics, information and computer technology, and computational thinking.
- Constructing explanations (for science) and designing solutions (for engineering).
- Engaging in argument from evidence.
- Obtaining, evaluating, and communicating information.

Florida's Benchmarks for Excellent Student Thinking (B.E.S.T.) Standards

This course includes Florida's B.E.S.T. ELA Expectations (EE) and Mathematical Thinking and Reasoning Standards (MTRs) for students. Florida educators should intentionally embed these standards within the content and their instruction as applicable. For guidance on the implementation of the EEs and MTRs, please visit cpalms.org/Standards/BEST_Standards.aspx and select the appropriate B.E.S.T. Standards package.

English Language Development ELD Standards Special Notes Section:

Teachers are required to provide listening, speaking, reading and writing instruction that allows English language learners (ELL) to communicate information, ideas and concepts for academic success in the content area of Science. For the given level of English language proficiency and with visual, graphic, or interactive support, students will interact with grade level words, expressions, sentences and discourse to process or produce language necessary for academic success The ELD standard should specify a relevant content area concept or topic of study chosen by curriculum developers and teachers which maximizes an ELL's need for communication and social skills. To access an ELL supporting document which delineates performance definitions and descriptors, please click on the following link: cpalms.org/uploads/docs/standards/eld/SC.pdf

GENERAL INFORMATION

Course Number: 2000410

Course Path: Section: Grades PreK to 12 Education Courses > **Grade Group:** Grades 9 to 12 and Adult Education Courses > **Subject:** Science > **SubSubject:** Biological Sciences > **Abbreviated Title:** ZOOLOGY

Number of Credits: One (1) credit

Course Length: Year (Y)

Course Type: Elective Course

Course Level: 2

Course Status: Draft - Course Pending Approval

Grade Level(s): 9,10,11,12

Educator Certifications

Science (Secondary Grades 7-12)
Biology (Grades 6-12)
Middle Grades General Science (Middle Grades 5-9)

Biology Technology (#2000430) 2022 - And Beyond

Course Standards

Name	Description
SC.912.L.14.2:	Relate structure to function for the components of plant and animal cells. Explain the role of cell membranes as a highly selective barrier (passive and active transport).
SC.912.L.14.3:	Compare and contrast the general structures of plant and animal cells. Compare and contrast the general structures of prokaryotic and eukaryotic cells.
SC.912.L.14.4:	Compare and contrast structure and function of various types of microscopes.
SC.912.L.14.6:	Explain the significance of genetic factors, environmental factors, and pathogenic agents to health from the perspectives of both individual and public health.
SC.912.L.14.7:	Relate the structure of each of the major plant organs and tissues to physiological processes.
SC.912.L.14.26:	Identify the major parts of the brain on diagrams or models.
SC.912.L.14.36:	Describe the factors affecting blood flow through the cardiovascular system.
SC.912.L.14.52:	Explain the basic functions of the human immune system, including specific and nonspecific immune response, vaccines, and antibiotics.
SC.912.L.15.1:	Explain how the scientific theory of evolution is supported by the fossil record, comparative anatomy, comparative embryology, biogeography, molecular biology, and observed evolutionary change.
SC.912.L.15.4:	Describe how and why organisms are hierarchically classified and based on evolutionary relationships.
SC.912.L.15.5:	Explain the reasons for changes in how organisms are classified.
SC.912.L.15.6:	Discuss distinguishing characteristics of the domains and kingdoms of living organisms.
SC.912.L.15.8:	Describe the scientific explanations of the origin of life on Earth.
SC.912.L.15.10:	Identify basic trends in hominid evolution from early ancestors six million years ago to modern humans, including brain size, jaw size, language, and manufacture of tools.
SC.912.L.15.13:	Describe the conditions required for natural selection, including: overproduction of offspring, inherited variation, and the struggle to survive, which result in differential reproductive success.
SC.912.L.15.14:	Discuss mechanisms of evolutionary change other than natural selection such as genetic drift and gene flow.
SC.912.L.15.15:	Describe how mutation and genetic recombination increase genetic variation.
SC.912.L.16.1:	Use Mendel's laws of segregation and independent assortment to analyze patterns of inheritance.
SC.912.L.16.2:	Discuss observed inheritance patterns caused by various modes of inheritance, including dominant, recessive, codominant, sex-linked, polygenic, and multiple alleles.
SC.912.L.16.3:	Describe the basic process of DNA replication and how it relates to the transmission and conservation of the genetic information.
SC.912.L.16.4:	Explain how mutations in the DNA sequence may or may not result in phenotypic change. Explain how mutations in gametes may result in phenotypic changes in offspring.
SC.912.L.16.5:	Explain the basic processes of transcription and translation, and how they result in the expression of genes.
SC.912.L.16.6:	Discuss the mechanisms for regulation of gene expression in prokaryotes and eukaryotes at transcription and translation level.
SC.912.L.16.7:	Describe how viruses and bacteria transfer genetic material between cells and the role of this process in biotechnology.
SC.912.L.16.8:	Explain the relationship between mutation, cell cycle, and uncontrolled cell growth potentially resulting in cancer.
SC.912.L.16.9:	Explain how and why the genetic code is universal and is common to almost all organisms.
SC.912.L.16.10:	Evaluate the impact of biotechnology on the individual, society and the environment, including medical and ethical issues.
SC.912.L.16.11:	Discuss the technologies associated with forensic medicine and DNA identification, including restriction fragment length polymorphism (RFLP) analysis.
SC.912.L.16.12:	Describe how basic DNA technology (restriction digestion by endonucleases, gel electrophoresis, polymerase chain reaction, ligation, and transformation) is used to construct recombinant DNA molecules (DNA cloning).
SC.912.L.16.13:	Describe the basic anatomy and physiology of the human reproductive system. Describe the process of human development from fertilization to birth and major changes that occur in each trimester of pregnancy.
SC.912.L.16.14:	Describe the cell cycle, including the process of mitosis. Explain the role of mitosis in the formation of new cells and its importance in maintaining chromosome number during asexual reproduction.
SC.912.L.16.16:	Describe the process of meiosis, including independent assortment and crossing over. Explain how reduction division results in the formation of haploid gametes or spores.
SC.912.L.16.17:	Compare and contrast mitosis and meiosis and relate to the processes of sexual and asexual reproduction and their consequences for genetic variation.
SC.912.L.17.2:	Explain the general distribution of life in aquatic systems as a function of chemistry, geography, light, depth, salinity, and temperature.
SC.912.L.17.4:	Describe changes in ecosystems resulting from seasonal variations, climate change and succession.
SC.912.L.17.5:	Analyze how population size is determined by births, deaths, immigration, emigration, and limiting factors (biotic and abiotic) that determine carrying capacity.
SC.912.L.17.8:	Recognize the consequences of the losses of biodiversity due to catastrophic events, climate changes, human activity, and the introduction of invasive, non-native species.
SC.912.L.17.9:	Use a food web to identify and distinguish producers, consumers, and decomposers. Explain the pathway of energy transfer through trophic levels and the reduction of available energy at successive trophic levels.
SC.912.L.17.11:	Evaluate the costs and benefits of renewable and nonrenewable resources, such as water, energy, fossil fuels, wildlife, and forests.
SC.912.L.17.13:	Discuss the need for adequate monitoring of environmental parameters when making policy decisions.
SC.912.L.17.20:	Predict the impact of individuals on environmental systems and examine how human lifestyles affect sustainability.
SC.912.L.18.1:	Describe the basic molecular structures and primary functions of the four major categories of biological macromolecules.
SC.912.L.18.6:	Discuss the role of anaerobic respiration in living things and in human society.
SC.912.L.18.7:	Identify the reactants, products, and basic functions of photosynthesis.
SC.912.L.18.8:	Identify the reactants, products, and basic functions of aerobic and anaerobic cellular respiration.
SC.912.L.18.9:	Explain the interrelated nature of photosynthesis and cellular respiration.
SC.912.L.18.10:	Connect the role of adenosine triphosphate (ATP) to energy transfers within a cell.

SC.912.L.18.11:	Explain the role of enzymes as catalysts that lower the activation energy of biochemical reactions. Identify factors, such as pH and temperature, and their effect on enzyme activity.
SC.912.L.18.12:	Discuss the special properties of water that contribute to Earth's suitability as an environment for life: cohesive behavior, ability to moderate temperature, expansion upon freezing, and versatility as a solvent.
SC.912.N.1.1:	Define a problem based on a specific body of knowledge, for example: biology, chemistry, physics, and earth/space science, and do the following: 1. **Pose questions about the natural world,** (Articulate the purpose of the investigation and identify the relevant scientific concepts). 2. **Conduct systematic observations,** (Write procedures that are clear and replicable. Identify observables and examine relationships between test (independent) variable and outcome (dependent) variable. Employ appropriate methods for accurate and consistent observations; conduct and record measurements at appropriate levels of precision. Follow safety guidelines). 3. **Examine books and other sources of information to see what is already known,** 4. **Review what is known in light of empirical evidence,** (Examine whether available empirical evidence can be interpreted in terms of existing knowledge and models, and if not, modify or develop new models). 5. **Plan investigations,** (Design and evaluate a scientific investigation). 6. **Use tools to gather, analyze, and interpret data (this includes the use of measurement in metric and other systems, and also the generation and interpretation of graphical representations of data, including data tables and graphs),** (Collect data or evidence in an organized way. Properly use instruments, equipment, and materials (e.g., scales, probeware, meter sticks, microscopes, computers) including set-up, calibration, technique, maintenance, and storage). 7. **Pose answers, explanations, or descriptions of events,** 8. **Generate explanations that explicate or describe natural phenomena (inferences),** 9. **Use appropriate evidence and reasoning to justify these explanations to others,** 10. **Communicate results of scientific investigations, and** 11. **Evaluate the merits of the explanations produced by others.**
SC.912.N.1.3:	Recognize that the strength or usefulness of a scientific claim is evaluated through scientific argumentation, which depends on critical and logical thinking, and the active consideration of alternative scientific explanations to explain the data presented.
SC.912.N.1.4:	Identify sources of information and assess their reliability according to the strict standards of scientific investigation.
SC.912.N.1.6:	Describe how scientific inferences are drawn from scientific observations and provide examples from the content being studied.
SC.912.N.2.1:	Identify what is science, what clearly is not science, and what superficially resembles science (but fails to meet the criteria for science).
SC.912.N.2.2:	Identify which questions can be answered through science and which questions are outside the boundaries of scientific investigation, such as questions addressed by other ways of knowing, such as art, philosophy, and religion.
SC.912.N.3.1:	Explain that a scientific theory is the culmination of many scientific investigations drawing together all the current evidence concerning a substantial range of phenomena; thus, a scientific theory represents the most powerful explanation scientists have to offer.
SC.912.N.3.4:	Recognize that theories do not become laws, nor do laws become theories; theories are well supported explanations and laws are well supported descriptions.
SC.912.N.4.1:	Explain how scientific knowledge and reasoning provide an empirically-based perspective to inform society's decision making.
SC.912.N.4.2:	Weigh the merits of alternative strategies for solving a specific societal problem by comparing a number of different costs and benefits, such as human, economic, and environmental.
SC.912.P.12.12:	Explain how various factors, such as concentration, temperature, and presence of a catalyst affect the rate of a chemical reaction.
MA.K12.MTR.1.1:	Mathematicians who participate in effortful learning both individually and with others: • Analyze the problem in a way that makes sense given the task. • Ask questions that will help with solving the task. • Build perseverance by modifying methods as needed while solving a challenging task. • Stay engaged and maintain a positive mindset when working to solve tasks. • Help and support each other when attempting a new method or approach. **Clarifications:** Teachers who encourage students to participate actively in effortful learning both individually and with others: • Cultivate a community of growth mindset learners. • Foster perseverance in students by choosing tasks that are challenging. • Develop students' ability to analyze and problem solve. • Recognize students' effort when solving challenging problems.
MA.K12.MTR.2.1:	Demonstrate understanding by representing problems in multiple ways. Mathematicians who demonstrate understanding by representing problems in multiple ways: • Build understanding through modeling and using manipulatives. • Represent solutions to problems in multiple ways using objects, drawings, tables, graphs and equations. • Progress from modeling problems with objects and drawings to using algorithms and equations. • Express connections between concepts and representations. • Choose a representation based on the given context or purpose. **Clarifications:** Teachers who encourage students to demonstrate understanding by representing problems in multiple ways: • Help students make connections between concepts and representations. • Provide opportunities for students to use manipulatives when investigating concepts. • Guide students from concrete to pictorial to abstract representations as understanding progresses. • Show students that various representations can have different purposes and can be useful in different situations.
	Complete tasks with mathematical fluency. Mathematicians who complete tasks with mathematical fluency: • Select efficient and appropriate methods for solving problems within the given context. • Maintain flexibility and accuracy while performing procedures and mental calculations. • Complete tasks accurately and with confidence.

MA.K12.MTR.3.1:	• Adapt procedures to apply them to a new context. • Use feedback to improve efficiency when performing calculations. **Clarifications:** Teachers who encourage students to complete tasks with mathematical fluency: • Provide students with the flexibility to solve problems by selecting a procedure that allows them to solve efficiently and accurately. • Offer multiple opportunities for students to practice efficient and generalizable methods. • Provide opportunities for students to reflect on the method they used and determine if a more efficient method could have been used.
MA.K12.MTR.4.1:	Engage in discussions that reflect on the mathematical thinking of self and others. Mathematicians who engage in discussions that reflect on the mathematical thinking of self and others: • Communicate mathematical ideas, vocabulary and methods effectively. • Analyze the mathematical thinking of others. • Compare the efficiency of a method to those expressed by others. • Recognize errors and suggest how to correctly solve the task. • Justify results by explaining methods and processes. • Construct possible arguments based on evidence. **Clarifications:** Teachers who encourage students to engage in discussions that reflect on the mathematical thinking of self and others: • Establish a culture in which students ask questions of the teacher and their peers, and error is an opportunity for learning. • Create opportunities for students to discuss their thinking with peers. • Select, sequence and present student work to advance and deepen understanding of correct and increasingly efficient methods. • Develop students' ability to justify methods and compare their responses to the responses of their peers.
MA.K12.MTR.5.1:	Use patterns and structure to help understand and connect mathematical concepts. Mathematicians who use patterns and structure to help understand and connect mathematical concepts: • Focus on relevant details within a problem. • Create plans and procedures to logically order events, steps or ideas to solve problems. • Decompose a complex problem into manageable parts. • Relate previously learned concepts to new concepts. • Look for similarities among problems. • Connect solutions of problems to more complicated large-scale situations. **Clarifications:** Teachers who encourage students to use patterns and structure to help understand and connect mathematical concepts: • Help students recognize the patterns in the world around them and connect these patterns to mathematical concepts. • Support students to develop generalizations based on the similarities found among problems. • Provide opportunities for students to create plans and procedures to solve problems. • Develop students' ability to construct relationships between their current understanding and more sophisticated ways of thinking.
MA.K12.MTR.6.1:	Assess the reasonableness of solutions. Mathematicians who assess the reasonableness of solutions: • Estimate to discover possible solutions. • Use benchmark quantities to determine if a solution makes sense. • Check calculations when solving problems. • Verify possible solutions by explaining the methods used. • Evaluate results based on the given context. **Clarifications:** Teachers who encourage students to assess the reasonableness of solutions: • Have students estimate or predict solutions prior to solving. • Prompt students to continually ask, "Does this solution make sense? How do you know?" • Reinforce that students check their work as they progress within and after a task. • Strengthen students' ability to verify solutions through justifications.
MA.K12.MTR.7.1:	Apply mathematics to real-world contexts. Mathematicians who apply mathematics to real-world contexts: • Connect mathematical concepts to everyday experiences. • Use models and methods to understand, represent and solve problems. • Perform investigations to gather data or determine if a method is appropriate. • Redesign models and methods to improve accuracy or efficiency. **Clarifications:** Teachers who encourage students to apply mathematics to real-world contexts: • Provide opportunities for students to create models, both concrete and abstract, and perform investigations. • Challenge students to question the accuracy of their models and methods. • Support students as they validate conclusions by comparing them to the given situation. • Indicate how various concepts can be applied to other disciplines.
ELA.K12.EE.1.1:	Cite evidence to explain and justify reasoning. **Clarifications:** K-1 Students include textual evidence in their oral communication with guidance and support from adults. The evidence can consist of details from the text without naming the text. During 1st grade, students learn how to incorporate the evidence in their writing. 2-3 Students include relevant textual evidence in their written and oral communication. Students should name the text when they refer to it. In 3rd grade, students should use a combination of direct and indirect citations. 4-5 Students continue with previous skills and reference comments made by speakers and peers. Students cite texts that they've directly

	quoted, paraphrased, or used for information. When writing, students will use the form of citation dictated by the instructor or the style guide referenced by the instructor. 6-8 Students continue with previous skills and use a style guide to create a proper citation. 9-12 Students continue with previous skills and should be aware of existing style guides and the ways in which they differ.
ELA.K12.EE.2.1:	Read and comprehend grade-level complex texts proficiently. **Clarifications:** See Text Complexity for grade-level complexity bands and a text complexity rubric.
ELA.K12.EE.3.1:	Make inferences to support comprehension. **Clarifications:** Students will make inferences before the words infer or inference are introduced. Kindergarten students will answer questions like "Why is the girl smiling?" or make predictions about what will happen based on the title page. Students will use the terms and apply them in 2nd grade and beyond.
ELA.K12.EE.4.1:	Use appropriate collaborative techniques and active listening skills when engaging in discussions in a variety of situations. **Clarifications:** In kindergarten, students learn to listen to one another respectfully. In grades 1-2, students build upon these skills by justifying what they are thinking. For example: "I think _____ because _____." The collaborative conversations are becoming academic conversations. In grades 3-12, students engage in academic conversations discussing claims and justifying their reasoning, refining and applying skills. Students build on ideas, propel the conversation, and support claims and counterclaims with evidence.
ELA.K12.EE.5.1:	Use the accepted rules governing a specific format to create quality work. **Clarifications:** Students will incorporate skills learned into work products to produce quality work. For students to incorporate these skills appropriately, they must receive instruction. A 3rd grade student creating a poster board display must have instruction in how to effectively present information to do quality work.
ELA.K12.EE.6.1:	Use appropriate voice and tone when speaking or writing. **Clarifications:** In kindergarten and 1st grade, students learn the difference between formal and informal language. For example, the way we talk to our friends differs from the way we speak to adults. In 2nd grade and beyond, students practice appropriate social and academic language to discuss texts.
HE.912.C.1.3:	Evaluate how environment and personal health are interrelated. **Clarifications:** Food options within a community; prenatal-care services; availability of recreational facilities; air quality; weather-safety awareness; and weather, air, and water conditions.
HE.912.C.1.6:	Evaluate the relationship between access to health care and health status. **Clarifications:** Early detection and treatment of cancer, HIV, diabetes, bipolar disorder, schizophrenia, childhood disease or illness, and first-responder care.
HE.912.C.1.8:	Assess the degree of susceptibility to injury, illness, or death if engaging in unhealthy/risky behaviors. **Clarifications:** Risks associated with alcohol abuse, including poison, date rape, and death; cancer and chronic lung disease related to tobacco use; overdose from drug use; child abuse or neglect; and dating violence.
ELD.K12.ELL.SC.1:	English language learners communicate information, ideas and concepts necessary for academic success in the content area of Science.
ELD.K12.ELL.SI.1:	English language learners communicate for social and instructional purposes within the school setting.

General Course Information and Notes

GENERAL NOTES

Special Notes:
Instructional Practices
Teaching from a range of complex text is optimized when teachers in all subject areas implement the following strategies on a routine basis:

1. Ensuring wide reading from complex text that varies in length.
2. Making close reading and rereading of texts central to lessons.
3. Emphasizing text-specific complex questions, and cognitively complex tasks, reinforce focus on the text and cultivate independence.
4. Emphasizing students supporting answers based upon evidence from the text.
5. Providing extensive research and writing opportunities (claims and evidence).

Science and Engineering Practices (NRC *Framework for K-12 Science Education, 2010*)

- Asking questions (for science) and defining problems (for engineering).
- Developing and using models.
- Planning and carrying out investigations.
- Analyzing and interpreting data.
- Using mathematics, information and computer technology, and computational thinking.

- Constructing explanations (for science) and designing solutions (for engineering).
- Engaging in argument from evidence.
- Obtaining, evaluating, and communicating information.

Florida's Benchmarks for Excellent Student Thinking (B.E.S.T.) Standards
This course includes Florida's B.E.S.T. ELA Expectations (EE) and Mathematical Thinking and Reasoning Standards (MTRs) for students. Florida educators should intentionally embed these standards within the content and their instruction as applicable. For guidance on the implementation of the EEs and MTRs, please visit cpalms.org/Standards/BEST_Standards.aspx and select the appropriate B.E.S.T. Standards package.

English Language Development ELD Standards Special Notes Section:
Teachers are required to provide listening, speaking, reading and writing instruction that allows English language learners (ELL) to communicate information, ideas and concepts for academic success in the content area of Science. For the given level of English language proficiency and with visual, graphic, or interactive support, students will interact with grade level words, expressions, sentences and discourse to process or produce language necessary for academic success The ELD standard should specify a relevant content area concept or topic of study chosen by curriculum developers and teachers which maximizes an ELL's need for communication and social skills. To access an ELL supporting document which delineates performance definitions and descriptors, please click on the following link: cpalms.org/uploads/docs/standards/eld/SC.pdf

GENERAL INFORMATION

Course Number: 2000430

Course Path: Section: Grades PreK to 12 Education Courses > **Grade Group:** Grades 9 to 12 and Adult Education Courses > **Subject:** Science > **SubSubject:** Biological Sciences > **Abbreviated Title:** BIO TECH

Number of Credits: One (1) credit

Course Length: Year (Y)

Course Attributes:
- Class Size Core Required

Course Type: Core Academic Course

Course Level: 2

Course Status: Draft - Course Pending Approval

Grade Level(s): 9,10,11,12

Graduation Requirement: Biology

Educator Certifications

Science (Secondary Grades 7-12)
Biology (Grades 6-12)

Equivalent Courses

2000310-Biology 1

Genetics Honors (#2000440) 2022 - And Beyond

Course Standards

Name	Description
SC.912.L.15.8:	Describe the scientific explanations of the origin of life on Earth.
SC.912.L.15.9:	Explain the role of reproductive isolation in the process of speciation.
SC.912.L.15.12:	List the conditions for Hardy-Weinberg equilibrium in a population and why these conditions are not likely to appear in nature. Use the Hardy-Weinberg equation to predict genotypes in a population from observed phenotypes.
SC.912.L.15.13:	Describe the conditions required for natural selection, including: overproduction of offspring, inherited variation, and the struggle to survive, which result in differential reproductive success.
SC.912.L.15.14:	Discuss mechanisms of evolutionary change other than natural selection such as genetic drift and gene flow.
SC.912.L.15.15:	Describe how mutation and genetic recombination increase genetic variation.
SC.912.L.16.1:	Use Mendel's laws of segregation and independent assortment to analyze patterns of inheritance.
SC.912.L.16.2:	Discuss observed inheritance patterns caused by various modes of inheritance, including dominant, recessive, codominant, sex-linked, polygenic, and multiple alleles.
SC.912.L.16.3:	Describe the basic process of DNA replication and how it relates to the transmission and conservation of the genetic information.
SC.912.L.16.4:	Explain how mutations in the DNA sequence may or may not result in phenotypic change. Explain how mutations in gametes may result in phenotypic changes in offspring.
SC.912.L.16.5:	Explain the basic processes of transcription and translation, and how they result in the expression of genes.
SC.912.L.16.6:	Discuss the mechanisms for regulation of gene expression in prokaryotes and eukaryotes at transcription and translation level.
SC.912.L.16.7:	Describe how viruses and bacteria transfer genetic material between cells and the role of this process in biotechnology.
SC.912.L.16.8:	Explain the relationship between mutation, cell cycle, and uncontrolled cell growth potentially resulting in cancer.
SC.912.L.16.9:	Explain how and why the genetic code is universal and is common to almost all organisms.
SC.912.L.16.10:	Evaluate the impact of biotechnology on the individual, society and the environment, including medical and ethical issues.
SC.912.L.16.11:	Discuss the technologies associated with forensic medicine and DNA identification, including restriction fragment length polymorphism (RFLP) analysis.
SC.912.L.16.12:	Describe how basic DNA technology (restriction digestion by endonucleases, gel electrophoresis, polymerase chain reaction, ligation, and transformation) is used to construct recombinant DNA molecules (DNA cloning).
SC.912.L.16.14:	Describe the cell cycle, including the process of mitosis. Explain the role of mitosis in the formation of new cells and its importance in maintaining chromosome number during asexual reproduction.
SC.912.L.16.16:	Describe the process of meiosis, including independent assortment and crossing over. Explain how reduction division results in the formation of haploid gametes or spores.
SC.912.L.16.17:	Compare and contrast mitosis and meiosis and relate to the processes of sexual and asexual reproduction and their consequences for genetic variation.
SC.912.L.17.1:	Discuss the characteristics of populations, such as number of individuals, age structure, density, and pattern of distribution.
SC.912.L.17.8:	Recognize the consequences of the losses of biodiversity due to catastrophic events, climate changes, human activity, and the introduction of invasive, non-native species.
SC.912.L.18.1:	Describe the basic molecular structures and primary functions of the four major categories of biological macromolecules.
SC.912.L.18.11:	Explain the role of enzymes as catalysts that lower the activation energy of biochemical reactions. Identify factors, such as pH and temperature, and their effect on enzyme activity.
SC.912.N.1.1:	Define a problem based on a specific body of knowledge, for example: biology, chemistry, physics, and earth/space science, and do the following: 1. **Pose questions about the natural world,** (Articulate the purpose of the investigation and identify the relevant scientific concepts). 2. **Conduct systematic observations,** (Write procedures that are clear and replicable. Identify observables and examine relationships between test (independent) variable and outcome (dependent) variable. Employ appropriate methods for accurate and consistent observations; conduct and record measurements at appropriate levels of precision. Follow safety guidelines). 3. **Examine books and other sources of information to see what is already known,** 4. **Review what is known in light of empirical evidence,** (Examine whether available empirical evidence can be interpreted in terms of existing knowledge and models, and if not, modify or develop new models). 5. **Plan investigations,** (Design and evaluate a scientific investigation). 6. **Use tools to gather, analyze, and interpret data (this includes the use of measurement in metric and other systems, and also the generation and interpretation of graphical representations of data, including data tables and graphs),** (Collect data or evidence in an organized way. Properly use instruments, equipment, and materials (e.g., scales, probeware, meter sticks, microscopes, computers) including set-up, calibration, technique, maintenance, and storage). 7. **Pose answers, explanations, or descriptions of events,** 8. **Generate explanations that explicate or describe natural phenomena (inferences),** 9. **Use appropriate evidence and reasoning to justify these explanations to others,** 10. **Communicate results of scientific investigations, and** 11. **Evaluate the merits of the explanations produced by others.**
SC.912.N.1.2:	Describe and explain what characterizes science and its methods.
SC.912.N.2.1:	Identify what is science, what clearly is not science, and what superficially resembles science (but fails to meet the criteria for science).
SC.912.N.2.2:	Identify which questions can be answered through science and which questions are outside the boundaries of scientific investigation, such as questions addressed by other ways of knowing, such as art, philosophy, and religion.
SC.912.N.3.5:	Describe the function of models in science, and identify the wide range of models used in science.
SC.912.P.12.12:	Explain how various factors, such as concentration, temperature, and presence of a catalyst affect the rate of a chemical reaction.
	Mathematicians who participate in effortful learning both individually and with others: • Analyze the problem in a way that makes sense given the task.

- Ask questions that will help with solving the task.
- Build perseverance by modifying methods as needed while solving a challenging task.
- Stay engaged and maintain a positive mindset when working to solve tasks.
- Help and support each other when attempting a new method or approach.

MA.K12.MTR.1.1:

Clarifications:
Teachers who encourage students to participate actively in effortful learning both individually and with others:
- Cultivate a community of growth mindset learners.
- Foster perseverance in students by choosing tasks that are challenging.
- Develop students' ability to analyze and problem solve.
- Recognize students' effort when solving challenging problems.

Demonstrate understanding by representing problems in multiple ways.
Mathematicians who demonstrate understanding by representing problems in multiple ways:

- Build understanding through modeling and using manipulatives.
- Represent solutions to problems in multiple ways using objects, drawings, tables, graphs and equations.
- Progress from modeling problems with objects and drawings to using algorithms and equations.
- Express connections between concepts and representations.
- Choose a representation based on the given context or purpose.

MA.K12.MTR.2.1:

Clarifications:
Teachers who encourage students to demonstrate understanding by representing problems in multiple ways:
- Help students make connections between concepts and representations.
- Provide opportunities for students to use manipulatives when investigating concepts.
- Guide students from concrete to pictorial to abstract representations as understanding progresses.
- Show students that various representations can have different purposes and can be useful in different situations.

Complete tasks with mathematical fluency.
Mathematicians who complete tasks with mathematical fluency:

- Select efficient and appropriate methods for solving problems within the given context.
- Maintain flexibility and accuracy while performing procedures and mental calculations.
- Complete tasks accurately and with confidence.
- Adapt procedures to apply them to a new context.
- Use feedback to improve efficiency when performing calculations.

MA.K12.MTR.3.1:

Clarifications:
Teachers who encourage students to complete tasks with mathematical fluency:
- Provide students with the flexibility to solve problems by selecting a procedure that allows them to solve efficiently and accurately.
- Offer multiple opportunities for students to practice efficient and generalizable methods.
- Provide opportunities for students to reflect on the method they used and determine if a more efficient method could have been used.

Engage in discussions that reflect on the mathematical thinking of self and others.
Mathematicians who engage in discussions that reflect on the mathematical thinking of self and others:

- Communicate mathematical ideas, vocabulary and methods effectively.
- Analyze the mathematical thinking of others.
- Compare the efficiency of a method to those expressed by others.
- Recognize errors and suggest how to correctly solve the task.
- Justify results by explaining methods and processes.
- Construct possible arguments based on evidence.

MA.K12.MTR.4.1:

Clarifications:
Teachers who encourage students to engage in discussions that reflect on the mathematical thinking of self and others:
- Establish a culture in which students ask questions of the teacher and their peers, and error is an opportunity for learning.
- Create opportunities for students to discuss their thinking with peers.
- Select, sequence and present student work to advance and deepen understanding of correct and increasingly efficient methods.
- Develop students' ability to justify methods and compare their responses to the responses of their peers.

Use patterns and structure to help understand and connect mathematical concepts.
Mathematicians who use patterns and structure to help understand and connect mathematical concepts:

- Focus on relevant details within a problem.
- Create plans and procedures to logically order events, steps or ideas to solve problems.
- Decompose a complex problem into manageable parts.
- Relate previously learned concepts to new concepts.
- Look for similarities among problems.
- Connect solutions of problems to more complicated large-scale situations.

MA.K12.MTR.5.1:

Clarifications:
Teachers who encourage students to use patterns and structure to help understand and connect mathematical concepts:
- Help students recognize the patterns in the world around them and connect these patterns to mathematical concepts.
- Support students to develop generalizations based on the similarities found among problems.
- Provide opportunities for students to create plans and procedures to solve problems.
- Develop students' ability to construct relationships between their current understanding and more sophisticated ways of thinking.

Assess the reasonableness of solutions.
Mathematicians who assess the reasonableness of solutions:

MA.K12.MTR.6.1:	• Estimate to discover possible solutions. • Use benchmark quantities to determine if a solution makes sense. • Check calculations when solving problems. • Verify possible solutions by explaining the methods used. • Evaluate results based on the given context. **Clarifications:** Teachers who encourage students to assess the reasonableness of solutions: • Have students estimate or predict solutions prior to solving. • Prompt students to continually ask, "Does this solution make sense? How do you know?" • Reinforce that students check their work as they progress within and after a task. • Strengthen students' ability to verify solutions through justifications.
MA.K12.MTR.7.1:	Apply mathematics to real-world contexts. Mathematicians who apply mathematics to real-world contexts: • Connect mathematical concepts to everyday experiences. • Use models and methods to understand, represent and solve problems. • Perform investigations to gather data or determine if a method is appropriate. • Redesign models and methods to improve accuracy or efficiency. **Clarifications:** Teachers who encourage students to apply mathematics to real-world contexts: • Provide opportunities for students to create models, both concrete and abstract, and perform investigations. • Challenge students to question the accuracy of their models and methods. • Support students as they validate conclusions by comparing them to the given situation. • Indicate how various concepts can be applied to other disciplines.
ELA.K12.EE.1.1:	Cite evidence to explain and justify reasoning. **Clarifications:** K-1 Students include textual evidence in their oral communication with guidance and support from adults. The evidence can consist of details from the text without naming the text. During 1st grade, students learn how to incorporate the evidence in their writing. 2-3 Students include relevant textual evidence in their written and oral communication. Students should name the text when they refer to it. In 3rd grade, students should use a combination of direct and indirect citations. 4-5 Students continue with previous skills and reference comments made by speakers and peers. Students cite texts that they've directly quoted, paraphrased, or used for information. When writing, students will use the form of citation dictated by the instructor or the style guide referenced by the instructor. 6-8 Students continue with previous skills and use a style guide to create a proper citation. 9-12 Students continue with previous skills and should be aware of existing style guides and the ways in which they differ.
ELA.K12.EE.2.1:	Read and comprehend grade-level complex texts proficiently. **Clarifications:** See Text Complexity for grade-level complexity bands and a text complexity rubric.
ELA.K12.EE.3.1:	Make inferences to support comprehension. **Clarifications:** Students will make inferences before the words infer or inference are introduced. Kindergarten students will answer questions like "Why is the girl smiling?" or make predictions about what will happen based on the title page. Students will use the terms and apply them in 2nd grade and beyond.
ELA.K12.EE.4.1:	Use appropriate collaborative techniques and active listening skills when engaging in discussions in a variety of situations. **Clarifications:** In kindergarten, students learn to listen to one another respectfully. In grades 1-2, students build upon these skills by justifying what they are thinking. For example: "I think _____ because _____." The collaborative conversations are becoming academic conversations. In grades 3-12, students engage in academic conversations discussing claims and justifying their reasoning, refining and applying skills. Students build on ideas, propel the conversation, and support claims and counterclaims with evidence.
ELA.K12.EE.5.1:	Use the accepted rules governing a specific format to create quality work. **Clarifications:** Students will incorporate skills learned into work products to produce quality work. For students to incorporate these skills appropriately, they must receive instruction. A 3rd grade student creating a poster board display must have instruction in how to effectively present information to do quality work.
ELA.K12.EE.6.1:	Use appropriate voice and tone when speaking or writing. **Clarifications:** In kindergarten and 1st grade, students learn the difference between formal and informal language. For example, the way we talk to our friends differs from the way we speak to adults. In 2nd grade and beyond, students practice appropriate social and academic language to discuss texts.
ELD.K12.ELL.SC.1:	English language learners communicate information, ideas and concepts necessary for academic success in the content area of Science.
ELD.K12.ELL.SI.1:	English language learners communicate for social and instructional purposes within the school setting.
HE.912.C.1.3:	Evaluate how environment and personal health are interrelated. **Clarifications:** Food options within a community; prenatal-care services; availability of recreational facilities; air quality; weather-safety awareness; and weather, air, and water conditions.
	Analyze how heredity and family history can impact personal health.

HE.912.C.1.7:	**Clarifications:** Drug use, family obesity, heart disease, mental health, and non-communicable illness or disease.

General Course Information and Notes

GENERAL NOTES

Honors and Advanced Level Course Note: Advanced courses require a greater demand on students through increased academic rigor. Academic rigor is obtained through the application, analysis, evaluation, and creation of complex ideas that are often abstract and multi-faceted. Students are challenged to think and collaborate critically on the content they are learning. Honors level rigor will be achieved by increasing text complexity through text selection, focus on high-level qualitative measures, and complexity of task. Instruction will be structured to give students a deeper understanding of conceptual themes and organization within and across disciplines. Academic rigor is more than simply assigning to students a greater quantity of work.

Florida's Benchmarks for Excellent Student Thinking (B.E.S.T.) Standards
This course includes Florida's B.E.S.T. ELA Expectations (EE) and Mathematical Thinking and Reasoning Standards (MTRs) for students. Florida educators should intentionally embed these standards within the content and their instruction as applicable. For guidance on the implementation of the EEs and MTRs, please visit cpalms.org/Standards/BEST_Standards.aspx and select the appropriate B.E.S.T. Standards package.

English Language Development ELD Standards Special Notes Section:
Teachers are required to provide listening, speaking, reading and writing instruction that allows English language learners (ELL) to communicate information, ideas and concepts for academic success in the content area of Science. For the given level of English language proficiency and with visual, graphic, or interactive support, students will interact with grade level words, expressions, sentences and discourse to process or produce language necessary for academic success The ELD standard should specify a relevant content area concept or topic of study chosen by curriculum developers and teachers which maximizes an ELL's need for communication and social skills. To access an ELL supporting document which delineates performance definitions and descriptors, please click on the following link: cpalms.org/uploads/docs/standards/eld/SC.pdf

GENERAL INFORMATION

Course Number: 2000440

Course Path: Section: Grades PreK to 12 Education Courses > **Grade Group:** Grades 9 to 12 and Adult Education Courses > **Subject:** Science > **SubSubject:** Biological Sciences > **Abbreviated Title:** GENETICS HON

Number of Credits: One (1) credit

Course Length: Year (Y)

Course Attributes:
- Honors

Course Type: Core Academic Course

Course Level: 3

Course Status: Draft - Course Pending Approval

Grade Level(s): 9,10,11,12

Graduation Requirement: Equally Rigorous Science

Educator Certifications

Science (Secondary Grades 7-12)
Biology (Grades 6-12)

Bioscience 1 Honors (#2000500) 2022 - And Beyond

Course Standards

Name	Description
SC.912.L.14.1:	Describe the scientific theory of cells (cell theory) and relate the history of its discovery to the process of science.
SC.912.L.14.2:	Relate structure to function for the components of plant and animal cells. Explain the role of cell membranes as a highly selective barrier (passive and active transport).
SC.912.L.14.3:	Compare and contrast the general structures of plant and animal cells. Compare and contrast the general structures of prokaryotic and eukaryotic cells.
SC.912.L.14.6:	Explain the significance of genetic factors, environmental factors, and pathogenic agents to health from the perspectives of both individual and public health.
SC.912.L.15.15:	Describe how mutation and genetic recombination increase genetic variation.
SC.912.L.16.2:	Discuss observed inheritance patterns caused by various modes of inheritance, including dominant, recessive, codominant, sex-linked, polygenic, and multiple alleles.
SC.912.L.16.3:	Describe the basic process of DNA replication and how it relates to the transmission and conservation of the genetic information.
SC.912.L.16.4:	Explain how mutations in the DNA sequence may or may not result in phenotypic change. Explain how mutations in gametes may result in phenotypic changes in offspring.
SC.912.L.16.5:	Explain the basic processes of transcription and translation, and how they result in the expression of genes.
SC.912.L.16.6:	Discuss the mechanisms for regulation of gene expression in prokaryotes and eukaryotes at transcription and translation level.
SC.912.L.16.7:	Describe how viruses and bacteria transfer genetic material between cells and the role of this process in biotechnology.
SC.912.L.16.8:	Explain the relationship between mutation, cell cycle, and uncontrolled cell growth potentially resulting in cancer.
SC.912.L.16.9:	Explain how and why the genetic code is universal and is common to almost all organisms.
SC.912.L.16.10:	Evaluate the impact of biotechnology on the individual, society and the environment, including medical and ethical issues.
SC.912.L.16.12:	Describe how basic DNA technology (restriction digestion by endonucleases, gel electrophoresis, polymerase chain reaction, ligation, and transformation) is used to construct recombinant DNA molecules (DNA cloning).
SC.912.L.18.1:	Describe the basic molecular structures and primary functions of the four major categories of biological macromolecules.
SC.912.L.18.2:	Describe the important structural characteristics of monosaccharides, disaccharides, and polysaccharides and explain the functions of carbohydrates in living things.
SC.912.L.18.3:	Describe the structures of fatty acids, triglycerides, phospholipids, and steroids. Explain the functions of lipids in living organisms. Identify some reactions that fatty acids undergo. Relate the structure and function of cell membranes.
SC.912.N.1.1:	Define a problem based on a specific body of knowledge, for example: biology, chemistry, physics, and earth/space science, and do the following: 1. **Pose questions about the natural world,** (Articulate the purpose of the investigation and identify the relevant scientific concepts). 2. **Conduct systematic observations,** (Write procedures that are clear and replicable. Identify observables and examine relationships between test (independent) variable and outcome (dependent) variable. Employ appropriate methods for accurate and consistent observations; conduct and record measurements at appropriate levels of precision. Follow safety guidelines). 3. **Examine books and other sources of information to see what is already known,** 4. **Review what is known in light of empirical evidence,** (Examine whether available empirical evidence can be interpreted in terms of existing knowledge and models, and if not, modify or develop new models). 5. **Plan investigations,** (Design and evaluate a scientific investigation). 6. **Use tools to gather, analyze, and interpret data (this includes the use of measurement in metric and other systems, and also the generation and interpretation of graphical representations of data, including data tables and graphs),** (Collect data or evidence in an organized way. Properly use instruments, equipment, and materials (e.g., scales, probeware, meter sticks, microscopes, computers) including set-up, calibration, technique, maintenance, and storage). 7. **Pose answers, explanations, or descriptions of events,** 8. **Generate explanations that explicate or describe natural phenomena (inferences),** 9. **Use appropriate evidence and reasoning to justify these explanations to others,** 10. **Communicate results of scientific investigations, and** 11. **Evaluate the merits of the explanations produced by others.**
SC.912.N.1.2:	Describe and explain what characterizes science and its methods.
SC.912.N.1.3:	Recognize that the strength or usefulness of a scientific claim is evaluated through scientific argumentation, which depends on critical and logical thinking, and the active consideration of alternative scientific explanations to explain the data presented.
SC.912.N.1.4:	Identify sources of information and assess their reliability according to the strict standards of scientific investigation.
SC.912.N.1.5:	Describe and provide examples of how similar investigations conducted in many parts of the world result in the same outcome.
SC.912.N.1.6:	Describe how scientific inferences are drawn from scientific observations and provide examples from the content being studied.
SC.912.N.1.7:	Recognize the role of creativity in constructing scientific questions, methods and explanations.
SC.912.N.2.1:	Identify what is science, what clearly is not science, and what superficially resembles science (but fails to meet the criteria for science).
SC.912.N.2.2:	Identify which questions can be answered through science and which questions are outside the boundaries of scientific investigation, such as questions addressed by other ways of knowing, such as art, philosophy, and religion.
SC.912.N.2.3:	Identify examples of pseudoscience (such as astrology, phrenology) in society.
SC.912.N.2.4:	Explain that scientific knowledge is both durable and robust and open to change. Scientific knowledge can change because it is often examined and re-examined by new investigations and scientific argumentation. Because of these frequent examinations, scientific knowledge becomes stronger, leading to its durability.
SC.912.N.2.5:	Describe instances in which scientists' varied backgrounds, talents, interests, and goals influence the inferences and thus the explanations that they make about observations of natural phenomena and describe that competing interpretations (explanations) of scientists are a strength of science as they are a source of new, testable ideas that have the potential to add new evidence to support one or another of the explanations.

SC.912.N.3.1:	Explain that a scientific theory is the culmination of many scientific investigations drawing together all the current evidence concerning a substantial range of phenomena; thus, a scientific theory represents the most powerful explanation scientists have to offer.
SC.912.N.3.2:	Describe the role consensus plays in the historical development of a theory in any one of the disciplines of science.
SC.912.N.3.3:	Explain that scientific laws are descriptions of specific relationships under given conditions in nature, but do not offer explanations for those relationships.
SC.912.N.3.4:	Recognize that theories do not become laws, nor do laws become theories; theories are well supported explanations and laws are well supported descriptions.
SC.912.N.3.5:	Describe the function of models in science, and identify the wide range of models used in science.
SC.912.N.4.1:	Explain how scientific knowledge and reasoning provide an empirically-based perspective to inform society's decision making.
SC.912.N.4.2:	Weigh the merits of alternative strategies for solving a specific societal problem by comparing a number of different costs and benefits, such as human, economic, and environmental.
SC.912.P.8.11:	Relate acidity and basicity to hydronium and hydroxyl ion concentration and pH.
SC.912.P.8.12:	Describe the properties of the carbon atom that make the diversity of carbon compounds possible.
SC.912.P.8.13:	Identify selected functional groups and relate how they contribute to properties of carbon compounds.
MA.K12.MTR.1.1:	Mathematicians who participate in effortful learning both individually and with others: • Analyze the problem in a way that makes sense given the task. • Ask questions that will help with solving the task. • Build perseverance by modifying methods as needed while solving a challenging task. • Stay engaged and maintain a positive mindset when working to solve tasks. • Help and support each other when attempting a new method or approach. **Clarifications:** Teachers who encourage students to participate actively in effortful learning both individually and with others: • Cultivate a community of growth mindset learners. • Foster perseverance in students by choosing tasks that are challenging. • Develop students' ability to analyze and problem solve. • Recognize students' effort when solving challenging problems.
MA.K12.MTR.2.1:	Demonstrate understanding by representing problems in multiple ways. Mathematicians who demonstrate understanding by representing problems in multiple ways: • Build understanding through modeling and using manipulatives. • Represent solutions to problems in multiple ways using objects, drawings, tables, graphs and equations. • Progress from modeling problems with objects and drawings to using algorithms and equations. • Express connections between concepts and representations. • Choose a representation based on the given context or purpose. **Clarifications:** Teachers who encourage students to demonstrate understanding by representing problems in multiple ways: • Help students make connections between concepts and representations. • Provide opportunities for students to use manipulatives when investigating concepts. • Guide students from concrete to pictorial to abstract representations as understanding progresses. • Show students that various representations can have different purposes and can be useful in different situations.
MA.K12.MTR.3.1:	Complete tasks with mathematical fluency. Mathematicians who complete tasks with mathematical fluency: • Select efficient and appropriate methods for solving problems within the given context. • Maintain flexibility and accuracy while performing procedures and mental calculations. • Complete tasks accurately and with confidence. • Adapt procedures to apply them to a new context. • Use feedback to improve efficiency when performing calculations. **Clarifications:** Teachers who encourage students to complete tasks with mathematical fluency: • Provide students with the flexibility to solve problems by selecting a procedure that allows them to solve efficiently and accurately. • Offer multiple opportunities for students to practice efficient and generalizable methods. • Provide opportunities for students to reflect on the method they used and determine if a more efficient method could have been used.
MA.K12.MTR.4.1:	Engage in discussions that reflect on the mathematical thinking of self and others. Mathematicians who engage in discussions that reflect on the mathematical thinking of self and others: • Communicate mathematical ideas, vocabulary and methods effectively. • Analyze the mathematical thinking of others. • Compare the efficiency of a method to those expressed by others. • Recognize errors and suggest how to correctly solve the task. • Justify results by explaining methods and processes. • Construct possible arguments based on evidence. **Clarifications:** Teachers who encourage students to engage in discussions that reflect on the mathematical thinking of self and others: • Establish a culture in which students ask questions of the teacher and their peers, and error is an opportunity for learning. • Create opportunities for students to discuss their thinking with peers. • Select, sequence and present student work to advance and deepen understanding of correct and increasingly efficient methods. • Develop students' ability to justify methods and compare their responses to the responses of their peers.
	Use patterns and structure to help understand and connect mathematical concepts. Mathematicians who use patterns and structure to help understand and connect mathematical concepts:

MA.K12.MTR.5.1:	• Focus on relevant details within a problem. • Create plans and procedures to logically order events, steps or ideas to solve problems. • Decompose a complex problem into manageable parts. • Relate previously learned concepts to new concepts. • Look for similarities among problems. • Connect solutions of problems to more complicated large-scale situations. **Clarifications:** Teachers who encourage students to use patterns and structure to help understand and connect mathematical concepts: • Help students recognize the patterns in the world around them and connect these patterns to mathematical concepts. • Support students to develop generalizations based on the similarities found among problems. • Provide opportunities for students to create plans and procedures to solve problems. • Develop students' ability to construct relationships between their current understanding and more sophisticated ways of thinking.
MA.K12.MTR.6.1:	Assess the reasonableness of solutions. Mathematicians who assess the reasonableness of solutions: • Estimate to discover possible solutions. • Use benchmark quantities to determine if a solution makes sense. • Check calculations when solving problems. • Verify possible solutions by explaining the methods used. • Evaluate results based on the given context. **Clarifications:** Teachers who encourage students to assess the reasonableness of solutions: • Have students estimate or predict solutions prior to solving. • Prompt students to continually ask, "Does this solution make sense? How do you know?" • Reinforce that students check their work as they progress within and after a task. • Strengthen students' ability to verify solutions through justifications.
MA.K12.MTR.7.1:	Apply mathematics to real-world contexts. Mathematicians who apply mathematics to real-world contexts: • Connect mathematical concepts to everyday experiences. • Use models and methods to understand, represent and solve problems. • Perform investigations to gather data or determine if a method is appropriate. • Redesign models and methods to improve accuracy or efficiency. **Clarifications:** Teachers who encourage students to apply mathematics to real-world contexts: • Provide opportunities for students to create models, both concrete and abstract, and perform investigations. • Challenge students to question the accuracy of their models and methods. • Support students as they validate conclusions by comparing them to the given situation. • Indicate how various concepts can be applied to other disciplines.
ELA.K12.EE.1.1:	Cite evidence to explain and justify reasoning. **Clarifications:** K-1 Students include textual evidence in their oral communication with guidance and support from adults. The evidence can consist of details from the text without naming the text. During 1st grade, students learn how to incorporate the evidence in their writing. 2-3 Students include relevant textual evidence in their written and oral communication. Students should name the text when they refer to it. In 3rd grade, students should use a combination of direct and indirect citations. 4-5 Students continue with previous skills and reference comments made by speakers and peers. Students cite texts that they've directly quoted, paraphrased, or used for information. When writing, students will use the form of citation dictated by the instructor or the style guide referenced by the instructor. 6-8 Students continue with previous skills and use a style guide to create a proper citation. 9-12 Students continue with previous skills and should be aware of existing style guides and the ways in which they differ.
ELA.K12.EE.2.1:	Read and comprehend grade-level complex texts proficiently. **Clarifications:** See Text Complexity for grade-level complexity bands and a text complexity rubric.
ELA.K12.EE.3.1:	Make inferences to support comprehension. **Clarifications:** Students will make inferences before the words infer or inference are introduced. Kindergarten students will answer questions like "Why is the girl smiling?" or make predictions about what will happen based on the title page. Students will use the terms and apply them in 2nd grade and beyond.
ELA.K12.EE.4.1:	Use appropriate collaborative techniques and active listening skills when engaging in discussions in a variety of situations. **Clarifications:** In kindergarten, students learn to listen to one another respectfully. In grades 1-2, students build upon these skills by justifying what they are thinking. For example: "I think _____ because _____." The collaborative conversations are becoming academic conversations. In grades 3-12, students engage in academic conversations discussing claims and justifying their reasoning, refining and applying skills. Students build on ideas, propel the conversation, and support claims and counterclaims with evidence.
	Use the accepted rules governing a specific format to create quality work. **Clarifications:**

ELA.K12.EE.5.1:	Students will incorporate skills learned into work products to produce quality work. For students to incorporate these skills appropriately, they must receive instruction. A 3rd grade student creating a poster board display must have instruction in how to effectively present information to do quality work.
ELA.K12.EE.6.1:	Use appropriate voice and tone when speaking or writing. **Clarifications:** In kindergarten and 1st grade, students learn the difference between formal and informal language. For example, the way we talk to our friends differs from the way we speak to adults. In 2nd grade and beyond, students practice appropriate social and academic language to discuss texts.
HE.912.C.1.4:	Propose strategies to reduce or prevent injuries and health problems. **Clarifications:** Mandatory passenger-restraint/helmet laws, refusal skills, mandatory immunizations, healthy relationship skills, and improved inspection of food sources.
HE.912.C.1.5:	Analyze strategies for prevention, detection, and treatment of communicable and chronic diseases. **Clarifications:** Health prevention, detection, and treatment of: breast and testicular cancer, suicide, obesity, and industrial-related chronic disease.
HE.912.C.1.8:	Assess the degree of susceptibility to injury, illness, or death if engaging in unhealthy/risky behaviors. **Clarifications:** Risks associated with alcohol abuse, including poison, date rape, and death; cancer and chronic lung disease related to tobacco use; overdose from drug use; child abuse or neglect; and dating violence.
SS.912.C.2.4:	Evaluate, take, and defend positions on issues that cause the government to balance the interests of individuals with the public good.
SS.912.C.2.8:	Analyze the impact of citizen participation as a means of achieving political and social change. **Clarifications:** Examples are e-mail campaigns, boycotts, blogs, podcasts, protests, demonstrations, letters to editors.
SS.912.C.2.13:	Analyze various forms of political communication and evaluate for bias, factual accuracy, omission, and emotional appeal. **Clarifications:** Examples are political cartoons, propaganda, campaign advertisements, political speeches, electronic bumper stickers, blogs, media.
ELD.K12.ELL.SC.1:	English language learners communicate information, ideas and concepts necessary for academic success in the content area of Science.
ELD.K12.ELL.SI.1:	English language learners communicate for social and instructional purposes within the school setting.

General Course Information and Notes

GENERAL NOTES

Laboratory investigations that include the use of scientific inquiry, research, measurement, problem solving, laboratory apparatus and technologies, experimental procedures, and safety procedures are an integral part of this course. The National Science Teachers Association (NSTA) recommends that at the high school level, all students should be in the science lab or field, collecting data every week. School laboratory investigations (labs) are defined by the National Research Council (NRC) as an experience in the laboratory, classroom, or the field that provides students with opportunities to interact directly with natural phenomena or with data collected by others using tools, materials, data collection techniques, and models (NRC, 2006, p. 3). Laboratory investigations in the high school classroom should help all students develop a growing understanding of the complexity and ambiguity of empirical work, as well as the skills to calibrate and troubleshoot equipment used to make observations. Learners should understand measurement error; and have the skills to aggregate, interpret, and present the resulting data (National Research Council, 2006, p.77; NSTA, 2007). Bioscience I is a laboratory based course that focuses on introducing students to the basic lab techniques, equipment, critical thinking, work ethics, and communication skills currently used in the medical, agricultural, marine and industrial bioscience fields. Students will gain an understanding of basic DNA and molecular biology, epigenetics, genetically modified foods, bacterial plasmids, and forensics. Students will learn the principles, methodologies, and applications of equipment such as thermocyclers, horizontal gel electrophoresis apparatus, micropipettes, spectrophotometers, centrifuges, etc. Students will gain proficiency in calculating, preparing, and pH control of common lab reagents, solutions, buffers, and agarose gels. Students will learn the principles of qualitative and quantitative analysis using biomolecular indicators, spectrophotometry, and standard curves. Topics covered will include the genetics of cancer, epigenetics, emerging and re-emerging infectious diseases that affect plants and animals, ethics of bioscience, and careers in bioscience.

Laboratory activities should include but not be limited to:

- Sterilization, handling and safety requirements according to standard operating procedures;
- The preparation of buffer solutions and agarose gels for horizontal electrophoresis;
- The preparation of solutions for spectroscopy;
- Use a spectrophotometer to measure solution concentrations and graph standard curves;
- Bacterial transformation and ligation using the Green fluorescent protein gene;
- Extraction of DNA;
- Quantitative analysis of DNA molecular weights;
- Polymerase chain reactions using given primers;
- Simulate DNA fingerprinting techniques used in crime scene analysis using given gene sequences.

Honors and Advanced Level Course Note: Advanced courses require a greater demand on students through increased academic rigor. Academic rigor is obtained through the application, analysis, evaluation, and creation of complex ideas that are often abstract and multi-faceted. Students are challenged to think and collaborate critically on the content they are learning. Honors level rigor will be achieved by increasing text complexity through text selection, focus on high-level qualitative measures, and complexity of task. Instruction will be structured to give students a deeper understanding of conceptual themes and organization within and across disciplines. Academic rigor is more than simply assigning to students a greater quantity of work.

Special Notes:

Instructional Practices

Teaching from a range of complex text is optimized when teachers in all subject areas implement the following strategies on a routine basis:

1. Ensuring wide reading from complex text that varies in length.
2. Making close reading and rereading of texts central to lessons.
3. Emphasizing text-specific complex questions, and cognitively complex tasks, reinforce focus on the text and cultivate independence.
4. Emphasizing students supporting answers based upon evidence from the text
5. Providing extensive research and writing opportunities (claims and evidence).

Prerequisite: Honors Biology
Corequisite: Honors Chemistry

Science and Engineering Practices (NRC *Framework for K-12 Science Education, 2010*)

- Asking questions (for science) and defining problems (for engineering).
- Developing and using models.
- Planning and carrying out investigations.
- Analyzing and interpreting data.
- Using mathematics, information and computer technology, and computational thinking.
- Constructing explanations (for science) and designing solutions (for engineering).
- Engaging in argument from evidence.
- Obtaining, evaluating, and communicating information.

Florida's Benchmarks for Excellent Student Thinking (B.E.S.T.) Standards
This course includes Florida's B.E.S.T. ELA Expectations (EE) and Mathematical Thinking and Reasoning Standards (MTRs) for students. Florida educators should intentionally embed these standards within the content and their instruction as applicable. For guidance on the implementation of the EEs and MTRs, please visit cpalms.org/Standards/BEST_Standards.aspx and select the appropriate B.E.S.T. Standards package.

English Language Development ELD Standards Special Notes Section:
Teachers are required to provide listening, speaking, reading and writing instruction that allows English language learners (ELL) to communicate information, ideas and concepts for academic success in the content area of Science. For the given level of English language proficiency and with visual, graphic, or interactive support, students will interact with grade level words, expressions, sentences and discourse to process or produce language necessary for academic success The ELD standard should specify a relevant content area concept or topic of study chosen by curriculum developers and teachers which maximizes an ELL's need for communication and social skills. To access an ELL supporting document which delineates performance definitions and descriptors, please click on the following link: cpalms.org/uploads/docs/standards/eld/SC.pdf

GENERAL INFORMATION

Course Number: 2000500

Course Path: Section: Grades PreK to 12 Education Courses > **Grade Group:** Grades 9 to 12 and Adult Education Courses > **Subject:** Science > **SubSubject:** Biological Sciences >
Abbreviated Title: BIOSCIENCE 1 HON

Number of Credits: One (1) credit

Course Length: Year (Y)

Course Attributes:
- Honors
- Class Size Core Required

Course Type: Core Academic Course

Course Level: 3

Course Status: Draft - Course Pending Approval

Grade Level(s): 9,10,11,12

Graduation Requirement: Equally Rigorous Science

Educator Certifications

Biology (Grades 6-12)
Chemistry (Grades 6-12)

Bioscience 2 Honors (#2000510) 2022 - And Beyond

Course Standards

Name	Description
SC.912.L.14.6:	Explain the significance of genetic factors, environmental factors, and pathogenic agents to health from the perspectives of both individual and public health.
SC.912.L.14.52:	Explain the basic functions of the human immune system, including specific and nonspecific immune response, vaccines, and antibiotics.
SC.912.L.15.15:	Describe how mutation and genetic recombination increase genetic variation.
SC.912.L.16.4:	Explain how mutations in the DNA sequence may or may not result in phenotypic change. Explain how mutations in gametes may result in phenotypic changes in offspring.
SC.912.L.16.5:	Explain the basic processes of transcription and translation, and how they result in the expression of genes.
SC.912.L.16.6:	Discuss the mechanisms for regulation of gene expression in prokaryotes and eukaryotes at transcription and translation level.
SC.912.L.16.7:	Describe how viruses and bacteria transfer genetic material between cells and the role of this process in biotechnology.
SC.912.L.16.9:	Explain how and why the genetic code is universal and is common to almost all organisms.
SC.912.L.16.10:	Evaluate the impact of biotechnology on the individual, society and the environment, including medical and ethical issues.
SC.912.L.16.12:	Describe how basic DNA technology (restriction digestion by endonucleases, gel electrophoresis, polymerase chain reaction, ligation, and transformation) is used to construct recombinant DNA molecules (DNA cloning).
SC.912.L.18.4:	Describe the structures of proteins and amino acids. Explain the functions of proteins in living organisms. Identify some reactions that amino acids undergo. Relate the structure and function of enzymes.
SC.912.N.1.1:	Define a problem based on a specific body of knowledge, for example: biology, chemistry, physics, and earth/space science, and do the following: 1. **Pose questions about the natural world,** (Articulate the purpose of the investigation and identify the relevant scientific concepts). 2. **Conduct systematic observations,** (Write procedures that are clear and replicable. Identify observables and examine relationships between test (independent) variable and outcome (dependent) variable. Employ appropriate methods for accurate and consistent observations; conduct and record measurements at appropriate levels of precision. Follow safety guidelines). 3. **Examine books and other sources of information to see what is already known,** 4. **Review what is known in light of empirical evidence,** (Examine whether available empirical evidence can be interpreted in terms of existing knowledge and models, and if not, modify or develop new models). 5. **Plan investigations,** (Design and evaluate a scientific investigation). 6. **Use tools to gather, analyze, and interpret data (this includes the use of measurement in metric and other systems, and also the generation and interpretation of graphical representations of data, including data tables and graphs),** (Collect data or evidence in an organized way. Properly use instruments, equipment, and materials (e.g., scales, probeware, meter sticks, microscopes, computers) including set-up, calibration, technique, maintenance, and storage). 7. **Pose answers, explanations, or descriptions of events,** 8. **Generate explanations that explicate or describe natural phenomena (inferences),** 9. **Use appropriate evidence and reasoning to justify these explanations to others,** 10. **Communicate results of scientific investigations, and** 11. **Evaluate the merits of the explanations produced by others.**
SC.912.N.1.2:	Describe and explain what characterizes science and its methods.
SC.912.N.1.3:	Recognize that the strength or usefulness of a scientific claim is evaluated through scientific argumentation, which depends on critical and logical thinking, and the active consideration of alternative scientific explanations to explain the data presented.
SC.912.N.1.4:	Identify sources of information and assess their reliability according to the strict standards of scientific investigation.
SC.912.N.1.5:	Describe and provide examples of how similar investigations conducted in many parts of the world result in the same outcome.
SC.912.N.1.6:	Describe how scientific inferences are drawn from scientific observations and provide examples from the content being studied.
SC.912.N.1.7:	Recognize the role of creativity in constructing scientific questions, methods and explanations.
SC.912.N.2.1:	Identify what is science, what clearly is not science, and what superficially resembles science (but fails to meet the criteria for science).
SC.912.N.2.2:	Identify which questions can be answered through science and which questions are outside the boundaries of scientific investigation, such as questions addressed by other ways of knowing, such as art, philosophy, and religion.
SC.912.N.2.3:	Identify examples of pseudoscience (such as astrology, phrenology) in society.
SC.912.N.2.4:	Explain that scientific knowledge is both durable and robust and open to change. Scientific knowledge can change because it is often examined and re-examined by new investigations and scientific argumentation. Because of these frequent examinations, scientific knowledge becomes stronger, leading to its durability.
SC.912.N.2.5:	Describe instances in which scientists' varied backgrounds, talents, interests, and goals influence the inferences and thus the explanations that they make about observations of natural phenomena and describe that competing interpretations (explanations) of scientists are a strength of science as they are a source of new, testable ideas that have the potential to add new evidence to support one or another of the explanations.
SC.912.N.3.1:	Explain that a scientific theory is the culmination of many scientific investigations drawing together all the current evidence concerning a substantial range of phenomena; thus, a scientific theory represents the most powerful explanation scientists have to offer.
SC.912.N.3.2:	Describe the role consensus plays in the historical development of a theory in any one of the disciplines of science.
SC.912.N.3.3:	Explain that scientific laws are descriptions of specific relationships under given conditions in nature, but do not offer explanations for those relationships.
SC.912.N.3.4:	Recognize that theories do not become laws, nor do laws become theories; theories are well supported explanations and laws are well supported descriptions.
SC.912.N.3.5:	Describe the function of models in science, and identify the wide range of models used in science.
SC.912.N.4.1:	Explain how scientific knowledge and reasoning provide an empirically-based perspective to inform society's decision making.
SC.912.N.4.2:	Weigh the merits of alternative strategies for solving a specific societal problem by comparing a number of different costs and benefits, such as human, economic, and environmental.

SC.912.P.8.11:	Relate acidity and basicity to hydronium and hydroxyl ion concentration and pH.
MA.K12.MTR.1.1:	Mathematicians who participate in effortful learning both individually and with others: • Analyze the problem in a way that makes sense given the task. • Ask questions that will help with solving the task. • Build perseverance by modifying methods as needed while solving a challenging task. • Stay engaged and maintain a positive mindset when working to solve tasks. • Help and support each other when attempting a new method or approach. **Clarifications:** Teachers who encourage students to participate actively in effortful learning both individually and with others: • Cultivate a community of growth mindset learners. • Foster perseverance in students by choosing tasks that are challenging. • Develop students' ability to analyze and problem solve. • Recognize students' effort when solving challenging problems.
MA.K12.MTR.2.1:	Demonstrate understanding by representing problems in multiple ways. Mathematicians who demonstrate understanding by representing problems in multiple ways: • Build understanding through modeling and using manipulatives. • Represent solutions to problems in multiple ways using objects, drawings, tables, graphs and equations. • Progress from modeling problems with objects and drawings to using algorithms and equations. • Express connections between concepts and representations. • Choose a representation based on the given context or purpose. **Clarifications:** Teachers who encourage students to demonstrate understanding by representing problems in multiple ways: • Help students make connections between concepts and representations. • Provide opportunities for students to use manipulatives when investigating concepts. • Guide students from concrete to pictorial to abstract representations as understanding progresses. • Show students that various representations can have different purposes and can be useful in different situations.
MA.K12.MTR.3.1:	Complete tasks with mathematical fluency. Mathematicians who complete tasks with mathematical fluency: • Select efficient and appropriate methods for solving problems within the given context. • Maintain flexibility and accuracy while performing procedures and mental calculations. • Complete tasks accurately and with confidence. • Adapt procedures to apply them to a new context. • Use feedback to improve efficiency when performing calculations. **Clarifications:** Teachers who encourage students to complete tasks with mathematical fluency: • Provide students with the flexibility to solve problems by selecting a procedure that allows them to solve efficiently and accurately. • Offer multiple opportunities for students to practice efficient and generalizable methods. • Provide opportunities for students to reflect on the method they used and determine if a more efficient method could have been used.
MA.K12.MTR.4.1:	Engage in discussions that reflect on the mathematical thinking of self and others. Mathematicians who engage in discussions that reflect on the mathematical thinking of self and others: • Communicate mathematical ideas, vocabulary and methods effectively. • Analyze the mathematical thinking of others. • Compare the efficiency of a method to those expressed by others. • Recognize errors and suggest how to correctly solve the task. • Justify results by explaining methods and processes. • Construct possible arguments based on evidence. **Clarifications:** Teachers who encourage students to engage in discussions that reflect on the mathematical thinking of self and others: • Establish a culture in which students ask questions of the teacher and their peers, and error is an opportunity for learning. • Create opportunities for students to discuss their thinking with peers. • Select, sequence and present student work to advance and deepen understanding of correct and increasingly efficient methods. • Develop students' ability to justify methods and compare their responses to the responses of their peers.
MA.K12.MTR.5.1:	Use patterns and structure to help understand and connect mathematical concepts. Mathematicians who use patterns and structure to help understand and connect mathematical concepts: • Focus on relevant details within a problem. • Create plans and procedures to logically order events, steps or ideas to solve problems. • Decompose a complex problem into manageable parts. • Relate previously learned concepts to new concepts. • Look for similarities among problems. • Connect solutions of problems to more complicated large-scale situations. **Clarifications:** Teachers who encourage students to use patterns and structure to help understand and connect mathematical concepts: • Help students recognize the patterns in the world around them and connect these patterns to mathematical concepts. • Support students to develop generalizations based on the similarities found among problems. • Provide opportunities for students to create plans and procedures to solve problems. • Develop students' ability to construct relationships between their current understanding and more sophisticated ways of thinking.

MA.K12.MTR.6.1:	Assess the reasonableness of solutions. Mathematicians who assess the reasonableness of solutions: • Estimate to discover possible solutions. • Use benchmark quantities to determine if a solution makes sense. • Check calculations when solving problems. • Verify possible solutions by explaining the methods used. • Evaluate results based on the given context. **Clarifications:** Teachers who encourage students to assess the reasonableness of solutions: • Have students estimate or predict solutions prior to solving. • Prompt students to continually ask, "Does this solution make sense? How do you know?" • Reinforce that students check their work as they progress within and after a task. • Strengthen students' ability to verify solutions through justifications.
MA.K12.MTR.7.1:	Apply mathematics to real-world contexts. Mathematicians who apply mathematics to real-world contexts: • Connect mathematical concepts to everyday experiences. • Use models and methods to understand, represent and solve problems. • Perform investigations to gather data or determine if a method is appropriate. • Redesign models and methods to improve accuracy or efficiency. **Clarifications:** Teachers who encourage students to apply mathematics to real-world contexts: • Provide opportunities for students to create models, both concrete and abstract, and perform investigations. • Challenge students to question the accuracy of their models and methods. • Support students as they validate conclusions by comparing them to the given situation. • Indicate how various concepts can be applied to other disciplines.
ELA.K12.EE.1.1:	Cite evidence to explain and justify reasoning. **Clarifications:** K-1 Students include textual evidence in their oral communication with guidance and support from adults. The evidence can consist of details from the text without naming the text. During 1st grade, students learn how to incorporate the evidence in their writing. 2-3 Students include relevant textual evidence in their written and oral communication. Students should name the text when they refer to it. In 3rd grade, students should use a combination of direct and indirect citations. 4-5 Students continue with previous skills and reference comments made by speakers and peers. Students cite texts that they've directly quoted, paraphrased, or used for information. When writing, students will use the form of citation dictated by the instructor or the style guide referenced by the instructor. 6-8 Students continue with previous skills and use a style guide to create a proper citation. 9-12 Students continue with previous skills and should be aware of existing style guides and the ways in which they differ.
ELA.K12.EE.2.1:	Read and comprehend grade-level complex texts proficiently. **Clarifications:** See Text Complexity for grade-level complexity bands and a text complexity rubric.
ELA.K12.EE.3.1:	Make inferences to support comprehension. **Clarifications:** Students will make inferences before the words infer or inference are introduced. Kindergarten students will answer questions like "Why is the girl smiling?" or make predictions about what will happen based on the title page. Students will use the terms and apply them in 2nd grade and beyond.
ELA.K12.EE.4.1:	Use appropriate collaborative techniques and active listening skills when engaging in discussions in a variety of situations. **Clarifications:** In kindergarten, students learn to listen to one another respectfully. In grades 1-2, students build upon these skills by justifying what they are thinking. For example: "I think _____ because _____." The collaborative conversations are becoming academic conversations. In grades 3-12, students engage in academic conversations discussing claims and justifying their reasoning, refining and applying skills. Students build on ideas, propel the conversation, and support claims and counterclaims with evidence.
ELA.K12.EE.5.1:	Use the accepted rules governing a specific format to create quality work. **Clarifications:** Students will incorporate skills learned into work products to produce quality work. For students to incorporate these skills appropriately, they must receive instruction. A 3rd grade student creating a poster board display must have instruction in how to effectively present information to do quality work.
ELA.K12.EE.6.1:	Use appropriate voice and tone when speaking or writing. **Clarifications:** In kindergarten and 1st grade, students learn the difference between formal and informal language. For example, the way we talk to our friends differs from the way we speak to adults. In 2nd grade and beyond, students practice appropriate social and academic language to discuss texts.
HE.912.C.1.4:	Propose strategies to reduce or prevent injuries and health problems. **Clarifications:** Mandatory passenger-restraint/helmet laws, refusal skills, mandatory immunizations, healthy relationship skills, and improved inspection of food sources.
	Analyze strategies for prevention, detection, and treatment of communicable and chronic diseases.

HE.912.C.1.5:	**Clarifications:** Health prevention, detection, and treatment of: breast and testicular cancer, suicide, obesity, and industrial-related chronic disease.
HE.912.C.1.8:	Assess the degree of susceptibility to injury, illness, or death if engaging in unhealthy/risky behaviors. **Clarifications:** Risks associated with alcohol abuse, including poison, date rape, and death; cancer and chronic lung disease related to tobacco use; overdose from drug use; child abuse or neglect; and dating violence.
SS.912.C.2.4:	Evaluate, take, and defend positions on issues that cause the government to balance the interests of individuals with the public good.
SS.912.C.2.8:	Analyze the impact of citizen participation as a means of achieving political and social change. **Clarifications:** Examples are e-mail campaigns, boycotts, blogs, podcasts, protests, demonstrations, letters to editors.
SS.912.C.2.13:	Analyze various forms of political communication and evaluate for bias, factual accuracy, omission, and emotional appeal. **Clarifications:** Examples are political cartoons, propaganda, campaign advertisements, political speeches, electronic bumper stickers, blogs, media.
ELD.K12.ELL.SC.1:	English language learners communicate information, ideas and concepts necessary for academic success in the content area of Science.
ELD.K12.ELL.SI.1:	English language learners communicate for social and instructional purposes within the school setting.

General Course Information and Notes

GENERAL NOTES

Laboratory investigations that include the use of scientific inquiry, research, measurement, problem solving, laboratory apparatus and technologies, experimental procedures, and safety procedures are an integral part of this course. The National Science Teachers Association (NSTA) recommends that at the high school level, all students should be in the science lab or field, collecting data every week. School laboratory investigations (labs) are defined by the National Research Council (NRC) as an experience in the laboratory, classroom, or the field that provides students with opportunities to interact directly with natural phenomena or with data collected by others using tools, materials, data collection techniques, and models (NRC, 2006, p. 3). Laboratory investigations in the high school classroom should help all students develop a growing understanding of the complexity and ambiguity of empirical work, as well as the skills to calibrate and troubleshoot equipment used to make observations. Learners should understand measurement error; and have the skills to aggregate, interpret, and present the resulting data (National Research Council, 2006, p.77; NSTA, 2007). Bioscience II is a rigorous laboratory based course that provides an advanced foundation in the concepts, theories, and pioneering methods involved in micro and molecular based research including medical research, functional genomics, gene discovery, agriculture and forensics. Students will learn how to design plasmids and primers for polymerase chain reactions (PCR). Course focus will be on proteomics (the study of protein expression), protein separation and analysis, protein chromatography purification, protein quantification through spectroscopy, cladistical analysis, immunology, stem cell research, gene sequencing, and bioinformatics using BLAST (Basic Local Alignment Search Tool.) Emphasis will be placed on training students in the means by which to design experiments in preparation for independent research. Students will learn the principles, methodologies, and applications of equipment such as thermocyclers, horizontal and vertical gel electrophoresis, micropipettes, spectrophotometers, centrifuges, and other advanced laboratory apparatus used in the bioscience industry.

Laboratory activities may include but not be limited to:

- The preparation of buffer solutions and polyacrylamide gels for vertical electrophoresis;
- Quantitative analysis of protein molecular weights by developing a standard curve;
- Western blotting and ELISA testing;
- The preparation of serial dilutions for spectroscopy to determine unknown concentrations;
- Bacterial transformation and ligation using bacterial blue/white screening;
- Extraction of DNA for chromatography purification to be used for electrophoresis;
- Polymerase chain reactions using self designed primers;
- Gene Sequencing and Bioinformatics.

Honors and Advanced Level Course Note: Advanced courses require a greater demand on students through increased academic rigor. Academic rigor is obtained through the application, analysis, evaluation, and creation of complex ideas that are often abstract and multi-faceted. Students are challenged to think and collaborate critically on the content they are learning. Honors level rigor will be achieved by increasing text complexity through text selection, focus on high-level qualitative measures, and complexity of task. Instruction will be structured to give students a deeper understanding of conceptual themes and organization within and across disciplines. Academic rigor is more than simply assigning to students a greater quantity of work.

Special Notes

Instructional Practices: Teaching from a range of complex text is optimized when teachers in all subject areas implement the following strategies on a routine basis:

1. Ensuring wide reading from complex text that varies in length.
2. Making close reading and rereading of texts central to lessons.
3. Emphasizing text-specific complex questions, and cognitively complex tasks, reinforce focus on the text and cultivate independence.
4. Emphasizing students supporting answers based upon evidence from the text.
5. Providing extensive research and writing opportunities (claims and evidence).

Prerequisite: Honors Chemistry and Bioscience I/or AP Biology
Corequisite: Honors Physics

Science and Engineering Practices (NRC *Framework for K-12 Science Education, 2010*)

- Asking questions (for science) and defining problems (for engineering).
- Developing and using models.
- Planning and carrying out investigations.
- Analyzing and interpreting data.
- Using mathematics, information and computer technology, and computational thinking.

- Constructing explanations (for science) and designing solutions (for engineering).
- Engaging in argument from evidence.
- Obtaining, evaluating, and communicating information.

Florida's Benchmarks for Excellent Student Thinking (B.E.S.T.) Standards
This course includes Florida's B.E.S.T. ELA Expectations (EE) and Mathematical Thinking and Reasoning Standards (MTRs) for students. Florida educators should intentionally embed these standards within the content and their instruction as applicable. For guidance on the implementation of the EEs and MTRs, please visit cpalms.org/Standards/BEST_Standards.aspx and select the appropriate B.E.S.T. Standards package.

English Language Development ELD Standards Special Notes Section:
Teachers are required to provide listening, speaking, reading and writing instruction that allows English language learners (ELL) to communicate information, ideas and concepts for academic success in the content area of Science. For the given level of English language proficiency and with visual, graphic, or interactive support, students will interact with grade level words, expressions, sentences and discourse to process or produce language necessary for academic success The ELD standard should specify a relevant content area concept or topic of study chosen by curriculum developers and teachers which maximizes an ELL's need for communication and social skills. To access an ELL supporting document which delineates performance definitions and descriptors, please click on the following link: cpalms.org/uploads/docs/standards/eld/SC.pdf

GENERAL INFORMATION

Course Number: 2000510

Course Path: Section: Grades PreK to 12 Education Courses > **Grade Group:** Grades 9 to 12 and Adult Education Courses > **Subject:** Science > **SubSubject:** Biological Sciences >

Abbreviated Title: BIOSCIENCE 2 HON

Number of Credits: One (1) credit

Course Length: Year (Y)

Course Attributes:
- Honors

Course Type: Core Academic Course

Course Level: 3

Course Status: Draft - Course Pending Approval

Grade Level(s): 9,10,11,12

Graduation Requirement: Equally Rigorous Science

Educator Certifications

Biology (Grades 6-12)
Chemistry (Grades 6-12)

Bioscience 3 Honors (#2000520) 2022 - And Beyond

Course Standards

Name	Description
SC.912.L.16.11:	Discuss the technologies associated with forensic medicine and DNA identification, including restriction fragment length polymorphism (RFLP) analysis.
SC.912.L.18.11:	Explain the role of enzymes as catalysts that lower the activation energy of biochemical reactions. Identify factors, such as pH and temperature, and their effect on enzyme activity.
SC.912.N.1.1:	Define a problem based on a specific body of knowledge, for example: biology, chemistry, physics, and earth/space science, and do the following: 1. **Pose questions about the natural world,** (Articulate the purpose of the investigation and identify the relevant scientific concepts). 2. **Conduct systematic observations,** (Write procedures that are clear and replicable. Identify observables and examine relationships between test (independent) variable and outcome (dependent) variable. Employ appropriate methods for accurate and consistent observations; conduct and record measurements at appropriate levels of precision. Follow safety guidelines). 3. **Examine books and other sources of information to see what is already known,** 4. **Review what is known in light of empirical evidence,** (Examine whether available empirical evidence can be interpreted in terms of existing knowledge and models, and if not, modify or develop new models). 5. **Plan investigations,** (Design and evaluate a scientific investigation). 6. **Use tools to gather, analyze, and interpret data (this includes the use of measurement in metric and other systems, and also the generation and interpretation of graphical representations of data, including data tables and graphs),** (Collect data or evidence in an organized way. Properly use instruments, equipment, and materials (e.g., scales, probeware, meter sticks, microscopes, computers) including set-up, calibration, technique, maintenance, and storage). 7. **Pose answers, explanations, or descriptions of events,** 8. **Generate explanations that explicate or describe natural phenomena (inferences),** 9. **Use appropriate evidence and reasoning to justify these explanations to others,** 10. **Communicate results of scientific investigations, and** 11. **Evaluate the merits of the explanations produced by others.**
SC.912.N.1.2:	Describe and explain what characterizes science and its methods.
SC.912.N.1.3:	Recognize that the strength or usefulness of a scientific claim is evaluated through scientific argumentation, which depends on critical and logical thinking, and the active consideration of alternative scientific explanations to explain the data presented.
SC.912.N.1.4:	Identify sources of information and assess their reliability according to the strict standards of scientific investigation.
SC.912.N.1.5:	Describe and provide examples of how similar investigations conducted in many parts of the world result in the same outcome.
SC.912.N.1.6:	Describe how scientific inferences are drawn from scientific observations and provide examples from the content being studied.
SC.912.N.1.7:	Recognize the role of creativity in constructing scientific questions, methods and explanations.
SC.912.N.2.1:	Identify what is science, what clearly is not science, and what superficially resembles science (but fails to meet the criteria for science).
SC.912.N.2.2:	Identify which questions can be answered through science and which questions are outside the boundaries of scientific investigation, such as questions addressed by other ways of knowing, such as art, philosophy, and religion.
SC.912.N.2.3:	Identify examples of pseudoscience (such as astrology, phrenology) in society.
SC.912.N.2.4:	Explain that scientific knowledge is both durable and robust and open to change. Scientific knowledge can change because it is often examined and re-examined by new investigations and scientific argumentation. Because of these frequent examinations, scientific knowledge becomes stronger, leading to its durability.
SC.912.N.2.5:	Describe instances in which scientists' varied backgrounds, talents, interests, and goals influence the inferences and thus the explanations that they make about observations of natural phenomena and describe that competing interpretations (explanations) of scientists are a strength of science as they are a source of new, testable ideas that have the potential to add new evidence to support one or another of the explanations.
SC.912.N.3.1:	Explain that a scientific theory is the culmination of many scientific investigations drawing together all the current evidence concerning a substantial range of phenomena; thus, a scientific theory represents the most powerful explanation scientists have to offer.
SC.912.N.3.2:	Describe the role consensus plays in the historical development of a theory in any one of the disciplines of science.
SC.912.N.3.3:	Explain that scientific laws are descriptions of specific relationships under given conditions in nature, but do not offer explanations for those relationships.
SC.912.N.3.4:	Recognize that theories do not become laws, nor do laws become theories; theories are well supported explanations and laws are well supported descriptions.
SC.912.N.3.5:	Describe the function of models in science, and identify the wide range of models used in science.
SC.912.N.4.1:	Explain how scientific knowledge and reasoning provide an empirically-based perspective to inform society's decision making.
SC.912.N.4.2:	Weigh the merits of alternative strategies for solving a specific societal problem by comparing a number of different costs and benefits, such as human, economic, and environmental.
SC.912.P.8.11:	Relate acidity and basicity to hydronium and hydroxyl ion concentration and pH.
SC.912.P.12.12:	Explain how various factors, such as concentration, temperature, and presence of a catalyst affect the rate of a chemical reaction.
MA.K12.MTR.1.1:	Mathematicians who participate in effortful learning both individually and with others: • Analyze the problem in a way that makes sense given the task. • Ask questions that will help with solving the task. • Build perseverance by modifying methods as needed while solving a challenging task. • Stay engaged and maintain a positive mindset when working to solve tasks. • Help and support each other when attempting a new method or approach. **Clarifications:** Teachers who encourage students to participate actively in effortful learning both individually and with others: • Cultivate a community of growth mindset learners.

- Foster perseverance in students by choosing tasks that are challenging.
- Develop students' ability to analyze and problem solve.
- Recognize students' effort when solving challenging problems.

MA.K12.MTR.2.1:

Demonstrate understanding by representing problems in multiple ways.
Mathematicians who demonstrate understanding by representing problems in multiple ways:

- Build understanding through modeling and using manipulatives.
- Represent solutions to problems in multiple ways using objects, drawings, tables, graphs and equations.
- Progress from modeling problems with objects and drawings to using algorithms and equations.
- Express connections between concepts and representations.
- Choose a representation based on the given context or purpose.

Clarifications:
Teachers who encourage students to demonstrate understanding by representing problems in multiple ways:

- Help students make connections between concepts and representations.
- Provide opportunities for students to use manipulatives when investigating concepts.
- Guide students from concrete to pictorial to abstract representations as understanding progresses.
- Show students that various representations can have different purposes and can be useful in different situations.

MA.K12.MTR.3.1:

Complete tasks with mathematical fluency.
Mathematicians who complete tasks with mathematical fluency:

- Select efficient and appropriate methods for solving problems within the given context.
- Maintain flexibility and accuracy while performing procedures and mental calculations.
- Complete tasks accurately and with confidence.
- Adapt procedures to apply them to a new context.
- Use feedback to improve efficiency when performing calculations.

Clarifications:
Teachers who encourage students to complete tasks with mathematical fluency:

- Provide students with the flexibility to solve problems by selecting a procedure that allows them to solve efficiently and accurately.
- Offer multiple opportunities for students to practice efficient and generalizable methods.
- Provide opportunities for students to reflect on the method they used and determine if a more efficient method could have been used.

MA.K12.MTR.4.1:

Engage in discussions that reflect on the mathematical thinking of self and others.
Mathematicians who engage in discussions that reflect on the mathematical thinking of self and others:

- Communicate mathematical ideas, vocabulary and methods effectively.
- Analyze the mathematical thinking of others.
- Compare the efficiency of a method to those expressed by others.
- Recognize errors and suggest how to correctly solve the task.
- Justify results by explaining methods and processes.
- Construct possible arguments based on evidence.

Clarifications:
Teachers who encourage students to engage in discussions that reflect on the mathematical thinking of self and others:

- Establish a culture in which students ask questions of the teacher and their peers, and error is an opportunity for learning.
- Create opportunities for students to discuss their thinking with peers.
- Select, sequence and present student work to advance and deepen understanding of correct and increasingly efficient methods.
- Develop students' ability to justify methods and compare their responses to the responses of their peers.

MA.K12.MTR.5.1:

Use patterns and structure to help understand and connect mathematical concepts.
Mathematicians who use patterns and structure to help understand and connect mathematical concepts:

- Focus on relevant details within a problem.
- Create plans and procedures to logically order events, steps or ideas to solve problems.
- Decompose a complex problem into manageable parts.
- Relate previously learned concepts to new concepts.
- Look for similarities among problems.
- Connect solutions of problems to more complicated large-scale situations.

Clarifications:
Teachers who encourage students to use patterns and structure to help understand and connect mathematical concepts:

- Help students recognize the patterns in the world around them and connect these patterns to mathematical concepts.
- Support students to develop generalizations based on the similarities found among problems.
- Provide opportunities for students to create plans and procedures to solve problems.
- Develop students' ability to construct relationships between their current understanding and more sophisticated ways of thinking.

MA.K12.MTR.6.1:

Assess the reasonableness of solutions.
Mathematicians who assess the reasonableness of solutions:

- Estimate to discover possible solutions.
- Use benchmark quantities to determine if a solution makes sense.
- Check calculations when solving problems.
- Verify possible solutions by explaining the methods used.
- Evaluate results based on the given context.

Clarifications:
Teachers who encourage students to assess the reasonableness of solutions:

	• Have students estimate or predict solutions prior to solving. • Prompt students to continually ask, "Does this solution make sense? How do you know?" • Reinforce that students check their work as they progress within and after a task. • Strengthen students' ability to verify solutions through justifications.
MA.K12.MTR.7.1:	Apply mathematics to real-world contexts. Mathematicians who apply mathematics to real-world contexts: • Connect mathematical concepts to everyday experiences. • Use models and methods to understand, represent and solve problems. • Perform investigations to gather data or determine if a method is appropriate. • Redesign models and methods to improve accuracy or efficiency. **Clarifications:** Teachers who encourage students to apply mathematics to real-world contexts: • Provide opportunities for students to create models, both concrete and abstract, and perform investigations. • Challenge students to question the accuracy of their models and methods. • Support students as they validate conclusions by comparing them to the given situation. • Indicate how various concepts can be applied to other disciplines.
ELA.K12.EE.1.1:	Cite evidence to explain and justify reasoning. **Clarifications:** K-1 Students include textual evidence in their oral communication with guidance and support from adults. The evidence can consist of details from the text without naming the text. During 1st grade, students learn how to incorporate the evidence in their writing. 2-3 Students include relevant textual evidence in their written and oral communication. Students should name the text when they refer to it. In 3rd grade, students should use a combination of direct and indirect citations. 4-5 Students continue with previous skills and reference comments made by speakers and peers. Students cite texts that they've directly quoted, paraphrased, or used for information. When writing, students will use the form of citation dictated by the instructor or the style guide referenced by the instructor. 6-8 Students continue with previous skills and use a style guide to create a proper citation. 9-12 Students continue with previous skills and should be aware of existing style guides and the ways in which they differ.
ELA.K12.EE.2.1:	Read and comprehend grade-level complex texts proficiently. **Clarifications:** See Text Complexity for grade-level complexity bands and a text complexity rubric.
ELA.K12.EE.3.1:	Make inferences to support comprehension. **Clarifications:** Students will make inferences before the words infer or inference are introduced. Kindergarten students will answer questions like "Why is the girl smiling?" or make predictions about what will happen based on the title page. Students will use the terms and apply them in 2nd grade and beyond.
ELA.K12.EE.4.1:	Use appropriate collaborative techniques and active listening skills when engaging in discussions in a variety of situations. **Clarifications:** In kindergarten, students learn to listen to one another respectfully. In grades 1-2, students build upon these skills by justifying what they are thinking. For example: "I think _____ because _____." The collaborative conversations are becoming academic conversations. In grades 3-12, students engage in academic conversations discussing claims and justifying their reasoning, refining and applying skills. Students build on ideas, propel the conversation, and support claims and counterclaims with evidence.
ELA.K12.EE.5.1:	Use the accepted rules governing a specific format to create quality work. **Clarifications:** Students will incorporate skills learned into work products to produce quality work. For students to incorporate these skills appropriately, they must receive instruction. A 3rd grade student creating a poster board display must have instruction in how to effectively present information to do quality work.
ELA.K12.EE.6.1:	Use appropriate voice and tone when speaking or writing. **Clarifications:** In kindergarten and 1st grade, students learn the difference between formal and informal language. For example, the way we talk to our friends differs from the way we speak to adults. In 2nd grade and beyond, students practice appropriate social and academic language to discuss texts.
SS.912.C.2.4:	Evaluate, take, and defend positions on issues that cause the government to balance the interests of individuals with the public good.
SS.912.C.2.5:	Conduct a service project to further the public good. **Clarifications:** Examples are school, community, state, national, international.
SS.912.C.2.8:	Analyze the impact of citizen participation as a means of achieving political and social change. **Clarifications:** Examples are e-mail campaigns, boycotts, blogs, podcasts, protests, demonstrations, letters to editors.
SS.912.C.2.10:	Monitor current public issues in Florida. **Clarifications:** Examples are On-line Sunshine, media, e-mails to government officials, political text messaging.
SS.912.C.2.13:	Analyze various forms of political communication and evaluate for bias, factual accuracy, omission, and emotional appeal. **Clarifications:** Examples are political cartoons, propaganda, campaign advertisements, political speeches, electronic bumper stickers, blogs, media.

HE.912.C.1.3:	Evaluate how environment and personal health are interrelated. **Clarifications:** Food options within a community; prenatal-care services; availability of recreational facilities; air quality; weather-safety awareness; and weather, air, and water conditions.
HE.912.C.1.4:	Propose strategies to reduce or prevent injuries and health problems. **Clarifications:** Mandatory passenger-restraint/helmet laws, refusal skills, mandatory immunizations, healthy relationship skills, and improved inspection of food sources.
HE.912.C.1.8:	Assess the degree of susceptibility to injury, illness, or death if engaging in unhealthy/risky behaviors. **Clarifications:** Risks associated with alcohol abuse, including poison, date rape, and death; cancer and chronic lung disease related to tobacco use; overdose from drug use; child abuse or neglect; and dating violence.
ELD.K12.ELL.SC.1:	English language learners communicate information, ideas and concepts necessary for academic success in the content area of Science.
ELD.K12.ELL.SI.1:	English language learners communicate for social and instructional purposes within the school setting.

General Course Information and Notes

GENERAL NOTES

Laboratory investigations that include the use of scientific inquiry, research, measurement, problem solving, laboratory apparatus and technologies, experimental procedures, and safety procedures are an integral part of this course. The National Science Teachers Association (NSTA) recommends that at the high school level, all students should be in the science lab or field, collecting data every week. School laboratory investigations (labs) are defined by the National Research Council (NRC) as an experience in the laboratory, classroom, or the field that provides students with opportunities to interact directly with natural phenomena or with data collected by others using tools, materials, data collection techniques, and models (NRC, 2006, p. 3). Laboratory investigations in the high school classroom should help all students develop a growing understanding of the complexity and ambiguity of empirical work, as well as the skills to calibrate and troubleshoot equipment used to make observations. Learners should understand measurement error; and have the skills to aggregate, interpret, and present the resulting data (National Research Council, 2006, p.77; NSTA, 2007). Bioscience III is an advanced laboratory based research course that will apply the conceptual knowledge and practical skills learned in Bioscience I and II. The goal of this course is to develop skills in the evaluation of research, to provide practice in scientific writing, to develop oral communication skills, and to expose students to current literature and research in the field of Bioscience. The first part of the course will focus on the analysis, evaluation, and discussion of recent Bioscience-related research publications. Students will be required to provide both oral and written evaluations of the publications that are discussed. Students will form teams and work with faculty to design and implement an independent research project, prepare a technical paper, and present their results. Students will be given the option to participate in local and/or national science competitions. Students will have opportunities to contact mentors from surrounding Bioscience educational and research facilities for advice during the development and implementation of their research projects.

Independent laboratory activities should emphasize experimental design of an original research project and may include but should not be limited to:

- Determine and implement specific electrophoresis techniques;
- Primer Design specified by the parameters of the research project;
- Plasmid Design;
- Extraction and purification of DNA and/or protein.

Honors and Advanced Level Course Note: Advanced courses require a greater demand on students through increased academic rigor. Academic rigor is obtained through the application, analysis, evaluation, and creation of complex ideas that are often abstract and multi-faceted. Students are challenged to think and collaborate critically on the content they are learning. Honors level rigor will be achieved by increasing text complexity through text selection, focus on high-level qualitative measures, and complexity of task. Instruction will be structured to give students a deeper understanding of conceptual themes and organization within and across disciplines. Academic rigor is more than simply assigning to students a greater quantity of work.

Special Notes

Instructional Practices
Teaching from a range of complex text is optimized when teachers in all subject areas implement the following strategies on a routine basis:
Ensuring wide reading from complex text that varies in length.

1. Making close reading and rereading of texts central to lessons.
2. Emphasizing text-specific complex questions, and cognitively complex tasks, reinforce focus on the text and cultivate independence.
3. Emphasizing students supporting answers based upon evidence from the text.
4. Providing extensive research and writing opportunities (claims and evidence).
5. Integration of Florida Standards for Mathematical Practice.

Pre-requisites: Bioscience II
Corequisite: Equally rigorous science course

Science and Engineering Practices (NRC *Framework for K-12 Science Education, 2010*)

- Asking questions (for science) and defining problems (for engineering).
- Developing and using models.
- Planning and carrying out investigations.
- Analyzing and interpreting data.
- Using mathematics, information and computer technology, and computational thinking.
- Constructing explanations (for science) and designing solutions (for engineering).
- Engaging in argument from evidence.
- Obtaining, evaluating, and communicating information.

Florida's Benchmarks for Excellent Student Thinking (B.E.S.T.) Standards
This course includes Florida's B.E.S.T. ELA Expectations (EE) and Mathematical Thinking and Reasoning Standards (MTRs) for students. Florida educators should intentionally embed these standards within the content and their instruction as applicable. For guidance on the implementation of the EEs and MTRs, please visit cpalms.org/Standards/BEST_Standards.aspx and select the appropriate B.E.S.T. Standards package.

English Language Development ELD Standards Special Notes Section:
Teachers are required to provide listening, speaking, reading and writing instruction that allows English language learners (ELL) to communicate information, ideas and concepts for academic success in the content area of Science. For the given level of English language proficiency and with visual, graphic, or interactive support, students will interact with grade level words, expressions, sentences and discourse to process or produce language necessary for academic success The ELD standard should specify a relevant content area concept or topic of study chosen by curriculum developers and teachers which maximizes an ELL's need for communication and social skills. To access an ELL supporting document which delineates performance definitions and descriptors, please click on the following link: cpalms.org/uploads/docs/standards/eld/SC.pdf

GENERAL INFORMATION

Course Number: 2000520

Course Path: Section: Grades PreK to 12 Education Courses > **Grade Group:** Grades 9 to 12 and Adult Education Courses > **Subject:** Science > **SubSubject:** Biological Sciences > **Abbreviated Title:** BIOSCIENCE 3 HON

Number of Credits: One (1) credit

Course Length: Year (Y)

Course Attributes:
- Honors

Course Type: Core Academic Course

Course Level: 3

Course Status: Draft - Course Pending Approval

Grade Level(s): 9,10,11,12

Graduation Requirement: Equally Rigorous Science

Educator Certifications

Biology (Grades 6-12)
Chemistry (Grades 6-12)

Florida's Preinternational Baccalaureate Biology 1 (#2000800) 2022 - And Beyond

Course Standards

Name	Description
SC.912.E.7.1:	Analyze the movement of matter and energy through the different biogeochemical cycles, including water and carbon.
SC.912.L.14.1:	Describe the scientific theory of cells (cell theory) and relate the history of its discovery to the process of science.
SC.912.L.14.2:	Relate structure to function for the components of plant and animal cells. Explain the role of cell membranes as a highly selective barrier (passive and active transport).
SC.912.L.14.3:	Compare and contrast the general structures of plant and animal cells. Compare and contrast the general structures of prokaryotic and eukaryotic cells.
SC.912.L.14.4:	Compare and contrast structure and function of various types of microscopes.
SC.912.L.14.6:	Explain the significance of genetic factors, environmental factors, and pathogenic agents to health from the perspectives of both individual and public health.
SC.912.L.14.7:	Relate the structure of each of the major plant organs and tissues to physiological processes.
SC.912.L.14.26:	Identify the major parts of the brain on diagrams or models.
SC.912.L.14.36:	Describe the factors affecting blood flow through the cardiovascular system.
SC.912.L.14.52:	Explain the basic functions of the human immune system, including specific and nonspecific immune response, vaccines, and antibiotics.
SC.912.L.15.1:	Explain how the scientific theory of evolution is supported by the fossil record, comparative anatomy, comparative embryology, biogeography, molecular biology, and observed evolutionary change.
SC.912.L.15.4:	Describe how and why organisms are hierarchically classified and based on evolutionary relationships.
SC.912.L.15.5:	Explain the reasons for changes in how organisms are classified.
SC.912.L.15.6:	Discuss distinguishing characteristics of the domains and kingdoms of living organisms.
SC.912.L.15.8:	Describe the scientific explanations of the origin of life on Earth.
SC.912.L.15.10:	Identify basic trends in hominid evolution from early ancestors six million years ago to modern humans, including brain size, jaw size, language, and manufacture of tools.
SC.912.L.15.13:	Describe the conditions required for natural selection, including: overproduction of offspring, inherited variation, and the struggle to survive, which result in differential reproductive success.
SC.912.L.15.14:	Discuss mechanisms of evolutionary change other than natural selection such as genetic drift and gene flow.
SC.912.L.15.15:	Describe how mutation and genetic recombination increase genetic variation.
SC.912.L.16.1:	Use Mendel's laws of segregation and independent assortment to analyze patterns of inheritance.
SC.912.L.16.2:	Discuss observed inheritance patterns caused by various modes of inheritance, including dominant, recessive, codominant, sex-linked, polygenic, and multiple alleles.
SC.912.L.16.3:	Describe the basic process of DNA replication and how it relates to the transmission and conservation of the genetic information.
SC.912.L.16.4:	Explain how mutations in the DNA sequence may or may not result in phenotypic change. Explain how mutations in gametes may result in phenotypic changes in offspring.
SC.912.L.16.5:	Explain the basic processes of transcription and translation, and how they result in the expression of genes.
SC.912.L.16.8:	Explain the relationship between mutation, cell cycle, and uncontrolled cell growth potentially resulting in cancer.
SC.912.L.16.9:	Explain how and why the genetic code is universal and is common to almost all organisms.
SC.912.L.16.10:	Evaluate the impact of biotechnology on the individual, society and the environment, including medical and ethical issues.
SC.912.L.16.13:	Describe the basic anatomy and physiology of the human reproductive system. Describe the process of human development from fertilization to birth and major changes that occur in each trimester of pregnancy.
SC.912.L.16.14:	Describe the cell cycle, including the process of mitosis. Explain the role of mitosis in the formation of new cells and its importance in maintaining chromosome number during asexual reproduction.
SC.912.L.16.16:	Describe the process of meiosis, including independent assortment and crossing over. Explain how reduction division results in the formation of haploid gametes or spores.
SC.912.L.16.17:	Compare and contrast mitosis and meiosis and relate to the processes of sexual and asexual reproduction and their consequences for genetic variation.
SC.912.L.17.2:	Explain the general distribution of life in aquatic systems as a function of chemistry, geography, light, depth, salinity, and temperature.
SC.912.L.17.4:	Describe changes in ecosystems resulting from seasonal variations, climate change and succession.
SC.912.L.17.5:	Analyze how population size is determined by births, deaths, immigration, emigration, and limiting factors (biotic and abiotic) that determine carrying capacity.
SC.912.L.17.8:	Recognize the consequences of the losses of biodiversity due to catastrophic events, climate changes, human activity, and the introduction of invasive, non-native species.
SC.912.L.17.9:	Use a food web to identify and distinguish producers, consumers, and decomposers. Explain the pathway of energy transfer through trophic levels and the reduction of available energy at successive trophic levels.
SC.912.L.17.11:	Evaluate the costs and benefits of renewable and nonrenewable resources, such as water, energy, fossil fuels, wildlife, and forests.
SC.912.L.17.13:	Discuss the need for adequate monitoring of environmental parameters when making policy decisions.
SC.912.L.17.20:	Predict the impact of individuals on environmental systems and examine how human lifestyles affect sustainability.
SC.912.L.18.1:	Describe the basic molecular structures and primary functions of the four major categories of biological macromolecules.
SC.912.L.18.7:	Identify the reactants, products, and basic functions of photosynthesis.
SC.912.L.18.8:	Identify the reactants, products, and basic functions of aerobic and anaerobic cellular respiration.
SC.912.L.18.9:	Explain the interrelated nature of photosynthesis and cellular respiration.
SC.912.L.18.10:	Connect the role of adenosine triphosphate (ATP) to energy transfers within a cell.

SC.912.L.18.11:	Explain the role of enzymes as catalysts that lower the activation energy of biochemical reactions. Identify factors, such as pH and temperature, and their effect on enzyme activity.
SC.912.L.18.12:	Discuss the special properties of water that contribute to Earth's suitability as an environment for life: cohesive behavior, ability to moderate temperature, expansion upon freezing, and versatility as a solvent.
SC.912.N.1.1:	Define a problem based on a specific body of knowledge, for example: biology, chemistry, physics, and earth/space science, and do the following: 1. **Pose questions about the natural world,** (Articulate the purpose of the investigation and identify the relevant scientific concepts). 2. **Conduct systematic observations,** (Write procedures that are clear and replicable. Identify observables and examine relationships between test (independent) variable and outcome (dependent) variable. Employ appropriate methods for accurate and consistent observations; conduct and record measurements at appropriate levels of precision. Follow safety guidelines). 3. **Examine books and other sources of information to see what is already known,** 4. **Review what is known in light of empirical evidence,** (Examine whether available empirical evidence can be interpreted in terms of existing knowledge and models, and if not, modify or develop new models). 5. **Plan investigations,** (Design and evaluate a scientific investigation). 6. **Use tools to gather, analyze, and interpret data (this includes the use of measurement in metric and other systems, and also the generation and interpretation of graphical representations of data, including data tables and graphs),** (Collect data or evidence in an organized way. Properly use instruments, equipment, and materials (e.g., scales, probeware, meter sticks, microscopes, computers) including set-up, calibration, technique, maintenance, and storage). 7. **Pose answers, explanations, or descriptions of events,** 8. **Generate explanations that explicate or describe natural phenomena (inferences),** 9. **Use appropriate evidence and reasoning to justify these explanations to others,** 10. **Communicate results of scientific investigations, and** 11. **Evaluate the merits of the explanations produced by others.**
SC.912.N.1.3:	Recognize that the strength or usefulness of a scientific claim is evaluated through scientific argumentation, which depends on critical and logical thinking, and the active consideration of alternative scientific explanations to explain the data presented.
SC.912.N.1.4:	Identify sources of information and assess their reliability according to the strict standards of scientific investigation.
SC.912.N.1.6:	Describe how scientific inferences are drawn from scientific observations and provide examples from the content being studied.
SC.912.N.2.1:	Identify what is science, what clearly is not science, and what superficially resembles science (but fails to meet the criteria for science).
SC.912.N.2.2:	Identify which questions can be answered through science and which questions are outside the boundaries of scientific investigation, such as questions addressed by other ways of knowing, such as art, philosophy, and religion.
SC.912.N.3.1:	Explain that a scientific theory is the culmination of many scientific investigations drawing together all the current evidence concerning a substantial range of phenomena; thus, a scientific theory represents the most powerful explanation scientists have to offer.
SC.912.N.3.4:	Recognize that theories do not become laws, nor do laws become theories; theories are well supported explanations and laws are well supported descriptions.
MA.K12.MTR.1.1:	Mathematicians who participate in effortful learning both individually and with others: • Analyze the problem in a way that makes sense given the task. • Ask questions that will help with solving the task. • Build perseverance by modifying methods as needed while solving a challenging task. • Stay engaged and maintain a positive mindset when working to solve tasks. • Help and support each other when attempting a new method or approach. **Clarifications:** Teachers who encourage students to participate actively in effortful learning both individually and with others: • Cultivate a community of growth mindset learners. • Foster perseverance in students by choosing tasks that are challenging. • Develop students' ability to analyze and problem solve. • Recognize students' effort when solving challenging problems.
MA.K12.MTR.2.1:	Demonstrate understanding by representing problems in multiple ways. Mathematicians who demonstrate understanding by representing problems in multiple ways: • Build understanding through modeling and using manipulatives. • Represent solutions to problems in multiple ways using objects, drawings, tables, graphs and equations. • Progress from modeling problems with objects and drawings to using algorithms and equations. • Express connections between concepts and representations. • Choose a representation based on the given context or purpose. **Clarifications:** Teachers who encourage students to demonstrate understanding by representing problems in multiple ways: • Help students make connections between concepts and representations. • Provide opportunities for students to use manipulatives when investigating concepts. • Guide students from concrete to pictorial to abstract representations as understanding progresses. • Show students that various representations can have different purposes and can be useful in different situations.
MA.K12.MTR.3.1:	Complete tasks with mathematical fluency. Mathematicians who complete tasks with mathematical fluency: • Select efficient and appropriate methods for solving problems within the given context. • Maintain flexibility and accuracy while performing procedures and mental calculations. • Complete tasks accurately and with confidence. • Adapt procedures to apply them to a new context. • Use feedback to improve efficiency when performing calculations. **Clarifications:** Teachers who encourage students to complete tasks with mathematical fluency: • Provide students with the flexibility to solve problems by selecting a procedure that allows them to solve efficiently and accurately.

- Offer multiple opportunities for students to practice efficient and generalizable methods.
- Provide opportunities for students to reflect on the method they used and determine if a more efficient method could have been used.

MA.K12.MTR.4.1:

Engage in discussions that reflect on the mathematical thinking of self and others.
Mathematicians who engage in discussions that reflect on the mathematical thinking of self and others:

- Communicate mathematical ideas, vocabulary and methods effectively.
- Analyze the mathematical thinking of others.
- Compare the efficiency of a method to those expressed by others.
- Recognize errors and suggest how to correctly solve the task.
- Justify results by explaining methods and processes.
- Construct possible arguments based on evidence.

Clarifications:
Teachers who encourage students to engage in discussions that reflect on the mathematical thinking of self and others:

- Establish a culture in which students ask questions of the teacher and their peers, and error is an opportunity for learning.
- Create opportunities for students to discuss their thinking with peers.
- Select, sequence and present student work to advance and deepen understanding of correct and increasingly efficient methods.
- Develop students' ability to justify methods and compare their responses to the responses of their peers.

MA.K12.MTR.5.1:

Use patterns and structure to help understand and connect mathematical concepts.
Mathematicians who use patterns and structure to help understand and connect mathematical concepts:

- Focus on relevant details within a problem.
- Create plans and procedures to logically order events, steps or ideas to solve problems.
- Decompose a complex problem into manageable parts.
- Relate previously learned concepts to new concepts.
- Look for similarities among problems.
- Connect solutions of problems to more complicated large-scale situations.

Clarifications:
Teachers who encourage students to use patterns and structure to help understand and connect mathematical concepts:

- Help students recognize the patterns in the world around them and connect these patterns to mathematical concepts.
- Support students to develop generalizations based on the similarities found among problems.
- Provide opportunities for students to create plans and procedures to solve problems.
- Develop students' ability to construct relationships between their current understanding and more sophisticated ways of thinking.

MA.K12.MTR.6.1:

Assess the reasonableness of solutions.
Mathematicians who assess the reasonableness of solutions:

- Estimate to discover possible solutions.
- Use benchmark quantities to determine if a solution makes sense.
- Check calculations when solving problems.
- Verify possible solutions by explaining the methods used.
- Evaluate results based on the given context.

Clarifications:
Teachers who encourage students to assess the reasonableness of solutions:

- Have students estimate or predict solutions prior to solving.
- Prompt students to continually ask, "Does this solution make sense? How do you know?"
- Reinforce that students check their work as they progress within and after a task.
- Strengthen students' ability to verify solutions through justifications.

MA.K12.MTR.7.1:

Apply mathematics to real-world contexts.
Mathematicians who apply mathematics to real-world contexts:

- Connect mathematical concepts to everyday experiences.
- Use models and methods to understand, represent and solve problems.
- Perform investigations to gather data or determine if a method is appropriate. • Redesign models and methods to improve accuracy or efficiency.

Clarifications:
Teachers who encourage students to apply mathematics to real-world contexts:

- Provide opportunities for students to create models, both concrete and abstract, and perform investigations.
- Challenge students to question the accuracy of their models and methods.
- Support students as they validate conclusions by comparing them to the given situation.
- Indicate how various concepts can be applied to other disciplines.

ELA.K12.EE.1.1:

Cite evidence to explain and justify reasoning.

Clarifications:
K-1 Students include textual evidence in their oral communication with guidance and support from adults. The evidence can consist of details from the text without naming the text. During 1st grade, students learn how to incorporate the evidence in their writing.
2-3 Students include relevant textual evidence in their written and oral communication. Students should name the text when they refer to it. In 3rd grade, students should use a combination of direct and indirect citations.

4-5 Students continue with previous skills and reference comments made by speakers and peers. Students cite texts that they've directly quoted, paraphrased, or used for information. When writing, students will use the form of citation dictated by the instructor or the style guide referenced by the instructor.

6-8 Students continue with previous skills and use a style guide to create a proper citation.

9-12 Students continue with previous skills and should be aware of existing style guides and the ways in which they differ.

ELA.K12.EE.2.1:	Read and comprehend grade-level complex texts proficiently. **Clarifications:** See Text Complexity for grade-level complexity bands and a text complexity rubric.
ELA.K12.EE.3.1:	Make inferences to support comprehension. **Clarifications:** Students will make inferences before the words infer or inference are introduced. Kindergarten students will answer questions like "Why is the girl smiling?" or make predictions about what will happen based on the title page. Students will use the terms and apply them in 2nd grade and beyond.
ELA.K12.EE.4.1:	Use appropriate collaborative techniques and active listening skills when engaging in discussions in a variety of situations. **Clarifications:** In kindergarten, students learn to listen to one another respectfully. In grades 1-2, students build upon these skills by justifying what they are thinking. For example: "I think _____ because _____." The collaborative conversations are becoming academic conversations. In grades 3-12, students engage in academic conversations discussing claims and justifying their reasoning, refining and applying skills. Students build on ideas, propel the conversation, and support claims and counterclaims with evidence.
ELA.K12.EE.5.1:	Use the accepted rules governing a specific format to create quality work. **Clarifications:** Students will incorporate skills learned into work products to produce quality work. For students to incorporate these skills appropriately, they must receive instruction. A 3rd grade student creating a poster board display must have instruction in how to effectively present information to do quality work.
ELA.K12.EE.6.1:	Use appropriate voice and tone when speaking or writing. **Clarifications:** In kindergarten and 1st grade, students learn the difference between formal and informal language. For example, the way we talk to our friends differs from the way we speak to adults. In 2nd grade and beyond, students practice appropriate social and academic language to discuss texts.
HE.912.C.1.3:	Evaluate how environment and personal health are interrelated. **Clarifications:** Food options within a community; prenatal-care services; availability of recreational facilities; air quality; weather-safety awareness; and weather, air, and water conditions.
HE.912.C.1.4:	Propose strategies to reduce or prevent injuries and health problems. **Clarifications:** Mandatory passenger-restraint/helmet laws, refusal skills, mandatory immunizations, healthy relationship skills, and improved inspection of food sources.
HE.912.C.1.8:	Assess the degree of susceptibility to injury, illness, or death if engaging in unhealthy/risky behaviors. **Clarifications:** Risks associated with alcohol abuse, including poison, date rape, and death; cancer and chronic lung disease related to tobacco use; overdose from drug use; child abuse or neglect; and dating violence.
ELD.K12.ELL.SC.1:	English language learners communicate information, ideas and concepts necessary for academic success in the content area of Science.
ELD.K12.ELL.SI.1:	English language learners communicate for social and instructional purposes within the school setting.

General Course Information and Notes

GENERAL NOTES

Special Note. *Pre-IB courses have been created by individual schools or school districts since before the MYP started. These courses mapped backwards the Diploma Programme (DP) to prepare students as early as age 14. The IB was never involved in creating or approving these courses. The IB acknowledges that it is important for students to receive preparation for taking part in the DP, and that preparation is the MYP. The IB designed the MYP to address the whole child, which, as a result, has a very different philosophical approach that aims at educating all students aged 11-16. Pre-IB courses usually deal with content, with less emphasis upon the needs of the whole child or the affective domain than the MYP. A school can have a course that it calls "pre-IB" as long as it makes it clear that the course and any supporting material have been developed independently of the IB. For this reason, the school must name the course along the lines of, for example, the "Any School pre-IB course".*

The IB does not recognize pre-IB courses or courses labeled IB by different school districts which are not an official part of the IBDP or IBCC curriculum. Typically, students enrolled in grade 9 or 10 are not in the IBDP or IBCC programmes.
ibanswers.ibo.org/app/answers/detail/a_id/5414/kw/pre-ib. **Florida's Pre-IB courses should only be used in schools where MYP is not offered in order to prepare students to enter the IBDP. Teachers of Florida's Pre-IB courses should have undergone IB training in order to ensure seamless articulation for students within the subject area.**
Honors and Advanced Level Course Note: Advanced courses require a greater demand on students through increased academic rigor. Academic rigor is obtained through the application, analysis, evaluation, and creation of complex ideas that are often abstract and multi-faceted. Students are challenged to think and collaborate critically on the content they are learning. Honors level rigor will be achieved by increasing text complexity through text selection, focus on high-level qualitative measures, and complexity of task. Instruction will be structured to give students a deeper understanding of conceptual themes and organization within and across disciplines. Academic rigor is more than simply assigning to students a greater quantity of work.

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This course includes Florida's B.E.S.T. ELA Expectations (EE) and Mathematical Thinking and Reasoning Standards (MTRs) for students. Florida educators should intentionally embed these standards within the content and their instruction as applicable. For guidance on the implementation of the EEs and MTRs, please visit cpalms.org/Standards/BEST_Standards.aspx and select the appropriate B.E.S.T. Standards package.

English Language Development ELD Standards Special Notes Section:

Teachers are required to provide listening, speaking, reading and writing instruction that allows English language learners (ELL) to communicate for social and instructional purposes within the school setting. For the given level of English language proficiency and with visual, graphic, or interactive support, students will interact with grade level words, expressions, sentences and discourse to process or produce language necessary for academic success. The ELD standard should specify a relevant content area concept or topic of study chosen by curriculum developers and teachers which maximizes an ELL's need for communication and social skills. To access an ELL supporting document which delineates performance definitions and descriptors, please click on the following link: cpalms.org/uploads/docs/standards/eld/SI.pdf

GENERAL INFORMATION

Course Number: 2000800

Course Path: Section: Grades PreK to 12 Education Courses > **Grade Group:** Grades 9 to 12 and Adult Education Courses > **Subject:** Science > **SubSubject:** Biological Sciences > **Abbreviated Title:** FL PRE-IB BIO 1

Number of Credits: One (1) credit

Course Length: Year (Y)

Course Attributes:

- Honors

Course Type: Core Academic Course

Course Level: 3

Course Status: Draft - Course Pending Approval

Grade Level(s): 9,10

Graduation Requirement: Biology

Educator Certifications

Science (Secondary Grades 7-12)
Biology (Grades 6-12)

Equivalent Courses

2000310-Biology 1

Science Transfer (#2000990) 2022 - And Beyond

Course Standards

Name	Description
MA.K12.MTR.1.1:	Mathematicians who participate in effortful learning both individually and with others: • Analyze the problem in a way that makes sense given the task. • Ask questions that will help with solving the task. • Build perseverance by modifying methods as needed while solving a challenging task. • Stay engaged and maintain a positive mindset when working to solve tasks. • Help and support each other when attempting a new method or approach. **Clarifications:** Teachers who encourage students to participate actively in effortful learning both individually and with others: • Cultivate a community of growth mindset learners. • Foster perseverance in students by choosing tasks that are challenging. • Develop students' ability to analyze and problem solve. • Recognize students' effort when solving challenging problems.
MA.K12.MTR.2.1:	Demonstrate understanding by representing problems in multiple ways. Mathematicians who demonstrate understanding by representing problems in multiple ways: • Build understanding through modeling and using manipulatives. • Represent solutions to problems in multiple ways using objects, drawings, tables, graphs and equations. • Progress from modeling problems with objects and drawings to using algorithms and equations. • Express connections between concepts and representations. • Choose a representation based on the given context or purpose. **Clarifications:** Teachers who encourage students to demonstrate understanding by representing problems in multiple ways: • Help students make connections between concepts and representations. • Provide opportunities for students to use manipulatives when investigating concepts. • Guide students from concrete to pictorial to abstract representations as understanding progresses. • Show students that various representations can have different purposes and can be useful in different situations.
MA.K12.MTR.3.1:	Complete tasks with mathematical fluency. Mathematicians who complete tasks with mathematical fluency: • Select efficient and appropriate methods for solving problems within the given context. • Maintain flexibility and accuracy while performing procedures and mental calculations. • Complete tasks accurately and with confidence. • Adapt procedures to apply them to a new context. • Use feedback to improve efficiency when performing calculations. **Clarifications:** Teachers who encourage students to complete tasks with mathematical fluency: • Provide students with the flexibility to solve problems by selecting a procedure that allows them to solve efficiently and accurately. • Offer multiple opportunities for students to practice efficient and generalizable methods. • Provide opportunities for students to reflect on the method they used and determine if a more efficient method could have been used.
MA.K12.MTR.4.1:	Engage in discussions that reflect on the mathematical thinking of self and others. Mathematicians who engage in discussions that reflect on the mathematical thinking of self and others: • Communicate mathematical ideas, vocabulary and methods effectively. • Analyze the mathematical thinking of others. • Compare the efficiency of a method to those expressed by others. • Recognize errors and suggest how to correctly solve the task. • Justify results by explaining methods and processes. • Construct possible arguments based on evidence. **Clarifications:** Teachers who encourage students to engage in discussions that reflect on the mathematical thinking of self and others: • Establish a culture in which students ask questions of the teacher and their peers, and error is an opportunity for learning. • Create opportunities for students to discuss their thinking with peers. • Select, sequence and present student work to advance and deepen understanding of correct and increasingly efficient methods. • Develop students' ability to justify methods and compare their responses to the responses of their peers.
	Use patterns and structure to help understand and connect mathematical concepts. Mathematicians who use patterns and structure to help understand and connect mathematical concepts: • Focus on relevant details within a problem. • Create plans and procedures to logically order events, steps or ideas to solve problems. • Decompose a complex problem into manageable parts. • Relate previously learned concepts to new concepts.

MA.K12.MTR.5.1:	• Look for similarities among problems. • Connect solutions of problems to more complicated large-scale situations. **Clarifications:** Teachers who encourage students to use patterns and structure to help understand and connect mathematical concepts: • Help students recognize the patterns in the world around them and connect these patterns to mathematical concepts. • Support students to develop generalizations based on the similarities found among problems. • Provide opportunities for students to create plans and procedures to solve problems. • Develop students' ability to construct relationships between their current understanding and more sophisticated ways of thinking.
MA.K12.MTR.6.1:	Assess the reasonableness of solutions. Mathematicians who assess the reasonableness of solutions: • Estimate to discover possible solutions. • Use benchmark quantities to determine if a solution makes sense. • Check calculations when solving problems. • Verify possible solutions by explaining the methods used. • Evaluate results based on the given context. **Clarifications:** Teachers who encourage students to assess the reasonableness of solutions: • Have students estimate or predict solutions prior to solving. • Prompt students to continually ask, "Does this solution make sense? How do you know?" • Reinforce that students check their work as they progress within and after a task. • Strengthen students' ability to verify solutions through justifications.
MA.K12.MTR.7.1:	Apply mathematics to real-world contexts. Mathematicians who apply mathematics to real-world contexts: • Connect mathematical concepts to everyday experiences. • Use models and methods to understand, represent and solve problems. • Perform investigations to gather data or determine if a method is appropriate. • Redesign models and methods to improve accuracy or efficiency. **Clarifications:** Teachers who encourage students to apply mathematics to real-world contexts: • Provide opportunities for students to create models, both concrete and abstract, and perform investigations. • Challenge students to question the accuracy of their models and methods. • Support students as they validate conclusions by comparing them to the given situation. • Indicate how various concepts can be applied to other disciplines.
ELA.K12.EE.1.1:	Cite evidence to explain and justify reasoning. **Clarifications:** K-1 Students include textual evidence in their oral communication with guidance and support from adults. The evidence can consist of details from the text without naming the text. During 1st grade, students learn how to incorporate the evidence in their writing. 2-3 Students include relevant textual evidence in their written and oral communication. Students should name the text when they refer to it. In 3rd grade, students should use a combination of direct and indirect citations. 4-5 Students continue with previous skills and reference comments made by speakers and peers. Students cite texts that they've directly quoted, paraphrased, or used for information. When writing, students will use the form of citation dictated by the instructor or the style guide referenced by the instructor. 6-8 Students continue with previous skills and use a style guide to create a proper citation. 9-12 Students continue with previous skills and should be aware of existing style guides and the ways in which they differ.
ELA.K12.EE.2.1:	Read and comprehend grade-level complex texts proficiently. **Clarifications:** See Text Complexity for grade-level complexity bands and a text complexity rubric.
ELA.K12.EE.3.1:	Make inferences to support comprehension. **Clarifications:** Students will make inferences before the words infer or inference are introduced. Kindergarten students will answer questions like "Why is the girl smiling?" or make predictions about what will happen based on the title page. Students will use the terms and apply them in 2nd grade and beyond.
ELA.K12.EE.4.1:	Use appropriate collaborative techniques and active listening skills when engaging in discussions in a variety of situations. **Clarifications:** In kindergarten, students learn to listen to one another respectfully. In grades 1-2, students build upon these skills by justifying what they are thinking. For example: "I think _____ because _____." The collaborative conversations are becoming academic conversations. In grades 3-12, students engage in academic conversations discussing claims and justifying their reasoning, refining and applying skills. Students build on ideas, propel the conversation, and support claims and counterclaims with evidence.
ELA.K12.EE.5.1:	Use the accepted rules governing a specific format to create quality work. **Clarifications:** Students will incorporate skills learned into work products to produce quality work. For students to incorporate these skills appropriately, they must receive instruction. A 3rd grade student creating a poster board display must have instruction in how to effectively present information to do quality work.
	Use appropriate voice and tone when speaking or writing.

ELA.K12.EE.6.1:	**Clarifications:** In kindergarten and 1st grade, students learn the difference between formal and informal language. For example, the way we talk to our friends differs from the way we speak to adults. In 2nd grade and beyond, students practice appropriate social and academic language to discuss texts.

General Course Information and Notes

GENERAL NOTES

SUBJECT AREA TRANSFER NUMBERS

Each course transferred into a Florida public school by an out-of-state or non-public school student should be matched with a course title and number when such course provides substantially the same content. However, a few transfer courses may not be close enough in content to be matched. For those courses a subject area transfer number is provided.

Florida's Benchmarks for Excellent Student Thinking (B.E.S.T.) Standards
This course includes Florida's B.E.S.T. ELA Expectations (EE) and Mathematical Thinking and Reasoning Standards (MTRs) for students. Florida educators should intentionally embed these standards within the content and their instruction as applicable. For guidance on the implementation of the EEs and MTRs, please visit cpalms.org/Standards/BEST_Standards.aspx and select the appropriate B.E.S.T. Standards package.

GENERAL INFORMATION

Course Number: 2000990

Course Path: Section: Grades PreK to 12 Education Courses > **Grade Group:** Grades 9 to 12 and Adult Education Courses > **Subject:** Science > **SubSubject:** Chemistry > **Abbreviated Title:** SCI TRAN **Course Length:** Not Applicable

Course Type: Transfer Course

Course Status: Draft - Course Pending Approval

Grade Level(s): 9,10,11,12

CTE Industry Certification Science Substitution (#2000999) 2022 - And Beyond

Course Standards

Name	Description
MA.K12.MTR.1.1:	Mathematicians who participate in effortful learning both individually and with others: • Analyze the problem in a way that makes sense given the task. • Ask questions that will help with solving the task. • Build perseverance by modifying methods as needed while solving a challenging task. • Stay engaged and maintain a positive mindset when working to solve tasks. • Help and support each other when attempting a new method or approach. **Clarifications:** Teachers who encourage students to participate actively in effortful learning both individually and with others: • Cultivate a community of growth mindset learners. • Foster perseverance in students by choosing tasks that are challenging. • Develop students' ability to analyze and problem solve. • Recognize students' effort when solving challenging problems.
MA.K12.MTR.2.1:	Demonstrate understanding by representing problems in multiple ways. Mathematicians who demonstrate understanding by representing problems in multiple ways: • Build understanding through modeling and using manipulatives. • Represent solutions to problems in multiple ways using objects, drawings, tables, graphs and equations. • Progress from modeling problems with objects and drawings to using algorithms and equations. • Express connections between concepts and representations. • Choose a representation based on the given context or purpose. **Clarifications:** Teachers who encourage students to demonstrate understanding by representing problems in multiple ways: • Help students make connections between concepts and representations. • Provide opportunities for students to use manipulatives when investigating concepts. • Guide students from concrete to pictorial to abstract representations as understanding progresses. • Show students that various representations can have different purposes and can be useful in different situations.
MA.K12.MTR.3.1:	Complete tasks with mathematical fluency. Mathematicians who complete tasks with mathematical fluency: • Select efficient and appropriate methods for solving problems within the given context. • Maintain flexibility and accuracy while performing procedures and mental calculations. • Complete tasks accurately and with confidence. • Adapt procedures to apply them to a new context. • Use feedback to improve efficiency when performing calculations. **Clarifications:** Teachers who encourage students to complete tasks with mathematical fluency: • Provide students with the flexibility to solve problems by selecting a procedure that allows them to solve efficiently and accurately. • Offer multiple opportunities for students to practice efficient and generalizable methods. • Provide opportunities for students to reflect on the method they used and determine if a more efficient method could have been used.
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	Use patterns and structure to help understand and connect mathematical concepts. Mathematicians who use patterns and structure to help understand and connect mathematical concepts: • Focus on relevant details within a problem.

MA.K12.MTR.5.1:	• Create plans and procedures to logically order events, steps or ideas to solve problems. • Decompose a complex problem into manageable parts. • Relate previously learned concepts to new concepts. • Look for similarities among problems. • Connect solutions of problems to more complicated large-scale situations. **Clarifications:** Teachers who encourage students to use patterns and structure to help understand and connect mathematical concepts: • Help students recognize the patterns in the world around them and connect these patterns to mathematical concepts. • Support students to develop generalizations based on the similarities found among problems. • Provide opportunities for students to create plans and procedures to solve problems. • Develop students' ability to construct relationships between their current understanding and more sophisticated ways of thinking.
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General Course Information and Notes

VERSION DESCRIPTION

Section 1003.4282, F.S., authorizes the substitution of up to one (1) equally rigorous science credit (EQ) toward high school graduation for a student receiving a passing score on an industry certification examination. Only one substitution per industry certification attained is allowed.

The school district would determine which industry certification exams (passing scores) can yield course substitutions for science. It is important to note that one qualifying industry certification attainment equates to one substitution credit. The eligible industry certifications that are tied to statewide college credit may be found at fldoe.org/academics/career-adult-edu/career-technical-edu-agreements/industry-certification.stml.

Students who receive a course substitution earn course credit counted toward high school graduation. A course substitution does not factor into a student's grade point average (GPA).

GENERAL INFORMATION

Course Number: 2000999

Course Path: Section: Grades PreK to 12 Education Courses > **Grade Group:** Grades 9 to 12 and Adult Education Courses > **Subject:** Science > **SubSubject:** Chemistry >
Abbreviated Title: CTE/IC SCI SUB
Course Length: Not Applicable

Course Type: Course Substitution
Course Status: Draft - Course Pending Approval
Graduation Requirement: Equally Rigorous Science

M/J Earth/Space Science (#2001010) 2022 - And Beyond

Course Standards

Use grade appropriate Nature of Science benchmarks (i.e. if this course is offered to seventh grade students, then the SC.7.N benchmarks should be integrated into the course content, and SC.6.N and SC.8.N benchmarks should be omitted from the seventh grade course).

Name	Description
SC.6.E.6.1:	Describe and give examples of ways in which Earth's surface is built up and torn down by physical and chemical weathering, erosion, and deposition.
SC.6.E.6.2:	Recognize that there are a variety of different landforms on Earth's surface such as coastlines, dunes, rivers, mountains, glaciers, deltas, and lakes and relate these landforms as they apply to Florida.
SC.6.E.7.1:	Differentiate among radiation, conduction, and convection, the three mechanisms by which heat is transferred through Earth's system.
SC.6.E.7.2:	Investigate and apply how the cycling of water between the atmosphere and hydrosphere has an effect on weather patterns and climate.
SC.6.E.7.3:	Describe how global patterns such as the jet stream and ocean currents influence local weather in measurable terms such as temperature, air pressure, wind direction and speed, and humidity and precipitation.
SC.6.E.7.4:	Differentiate and show interactions among the geosphere, hydrosphere, cryosphere, atmosphere, and biosphere.
SC.6.E.7.5:	Explain how energy provided by the sun influences global patterns of atmospheric movement and the temperature differences between air, water, and land.
SC.6.E.7.6:	Differentiate between weather and climate.
SC.6.E.7.7:	Investigate how natural disasters have affected human life in Florida.
SC.6.E.7.8:	Describe ways human beings protect themselves from hazardous weather and sun exposure.
SC.6.E.7.9:	Describe how the composition and structure of the atmosphere protects life and insulates the planet.
SC.6.N.1.1:	Define a problem from the sixth grade curriculum, use appropriate reference materials to support scientific understanding, plan and carry out scientific investigation of various types, such as systematic observations or experiments, identify variables, collect and organize data, interpret data in charts, tables, and graphics, analyze information, make predictions, and defend conclusions.
SC.6.N.1.2:	Explain why scientific investigations should be replicable.
SC.6.N.1.3:	Explain the difference between an experiment and other types of scientific investigation, and explain the relative benefits and limitations of each.
SC.6.N.1.4:	Discuss, compare, and negotiate methods used, results obtained, and explanations among groups of students conducting the same investigation.
SC.6.N.1.5:	Recognize that science involves creativity, not just in designing experiments, but also in creating explanations that fit evidence.
SC.6.N.2.1:	Distinguish science from other activities involving thought.
SC.6.N.2.2:	Explain that scientific knowledge is durable because it is open to change as new evidence or interpretations are encountered.
SC.6.N.2.3:	Recognize that scientists who make contributions to scientific knowledge come from all kinds of backgrounds and possess varied talents, interests, and goals.
SC.6.N.3.1:	Recognize and explain that a scientific theory is a well-supported and widely accepted explanation of nature and is not simply a claim posed by an individual. Thus, the use of the term theory in science is very different than how it is used in everyday life.
SC.6.N.3.2:	Recognize and explain that a scientific law is a description of a specific relationship under given conditions in the natural world. Thus, scientific laws are different from societal laws.
SC.6.N.3.3:	Give several examples of scientific laws.
SC.6.N.3.4:	Identify the role of models in the context of the sixth grade science benchmarks.
SC.7.E.6.1:	Describe the layers of the solid Earth, including the lithosphere, the hot convecting mantle, and the dense metallic liquid and solid cores.
SC.7.E.6.2:	Identify the patterns within the rock cycle and relate them to surface events (weathering and erosion) and sub-surface events (plate tectonics and mountain building).
SC.7.E.6.3:	Identify current methods for measuring the age of Earth and its parts, including the law of superposition and radioactive dating.
SC.7.E.6.4:	Explain and give examples of how physical evidence supports scientific theories that Earth has evolved over geologic time due to natural processes.
SC.7.E.6.5:	Explore the scientific theory of plate tectonics by describing how the movement of Earth's crustal plates causes both slow and rapid changes in Earth's surface, including volcanic eruptions, earthquakes, and mountain building.
SC.7.E.6.6:	Identify the impact that humans have had on Earth, such as deforestation, urbanization, desertification, erosion, air and water quality, changing the flow of water.
SC.7.E.6.7:	Recognize that heat flow and movement of material within Earth causes earthquakes and volcanic eruptions, and creates mountains and ocean basins.
SC.7.N.1.1:	Define a problem from the seventh grade curriculum, use appropriate reference materials to support scientific understanding, plan and carry out scientific investigation of various types, such as systematic observations or experiments, identify variables, collect and organize data, interpret data in charts, tables, and graphics, analyze information, make predictions, and defend conclusions.
SC.7.N.1.2:	Differentiate replication (by others) from repetition (multiple trials).
SC.7.N.1.3:	Distinguish between an experiment (which must involve the identification and control of variables) and other forms of scientific investigation and explain that not all scientific knowledge is derived from experimentation.
SC.7.N.1.4:	Identify test variables (independent variables) and outcome variables (dependent variables) in an experiment.
SC.7.N.1.5:	Describe the methods used in the pursuit of a scientific explanation as seen in different fields of science such as biology, geology, and physics.
SC.7.N.1.6:	Explain that empirical evidence is the cumulative body of observations of a natural phenomenon on which scientific explanations are based.
SC.7.N.1.7:	Explain that scientific knowledge is the result of a great deal of debate and confirmation within the science community.
SC.7.N.2.1:	Identify an instance from the history of science in which scientific knowledge has changed when new evidence or new interpretations are encountered.
SC.7.N.3.1:	Recognize and explain the difference between theories and laws and give several examples of scientific theories and the evidence that supports them.
SC.7.N.3.2:	Identify the benefits and limitations of the use of scientific models.
SC.8.E.5.1:	Recognize that there are enormous distances between objects in space and apply our knowledge of light and space travel to understand this distance.
SC.8.E.5.2:	Recognize that the universe contains many billions of galaxies and that each galaxy contains many billions of stars.

SC.8.E.5.3:	Distinguish the hierarchical relationships between planets and other astronomical bodies relative to solar system, galaxy, and universe, including distance, size, and composition.
SC.8.E.5.4:	Explore the Law of Universal Gravitation by explaining the role that gravity plays in the formation of planets, stars, and solar systems and in determining their motions.
SC.8.E.5.5:	Describe and classify specific physical properties of stars: apparent magnitude (brightness), temperature (color), size, and luminosity (absolute brightness).
SC.8.E.5.6:	Create models of solar properties including: rotation, structure of the Sun, convection, sunspots, solar flares, and prominences.
SC.8.E.5.7:	Compare and contrast the properties of objects in the Solar System including the Sun, planets, and moons to those of Earth, such as gravitational force, distance from the Sun, speed, movement, temperature, and atmospheric conditions.
SC.8.E.5.8:	Compare various historical models of the Solar System, including geocentric and heliocentric.
SC.8.E.5.9:	Explain the impact of objects in space on each other including: 1. the Sun on the Earth including seasons and gravitational attraction 2. the Moon on the Earth, including phases, tides, and eclipses, and the relative position of each body.
SC.8.E.5.10:	Assess how technology is essential to science for such purposes as access to outer space and other remote locations, sample collection, measurement, data collection and storage, computation, and communication of information.
SC.8.E.5.11:	Identify and compare characteristics of the electromagnetic spectrum such as wavelength, frequency, use, and hazards and recognize its application to an understanding of planetary images and satellite photographs.
SC.8.E.5.12:	Summarize the effects of space exploration on the economy and culture of Florida.
SC.8.N.1.1:	Define a problem from the eighth grade curriculum using appropriate reference materials to support scientific understanding, plan and carry out scientific investigations of various types, such as systematic observations or experiments, identify variables, collect and organize data, interpret data in charts, tables, and graphics, analyze information, make predictions, and defend conclusions.
SC.8.N.1.2:	Design and conduct a study using repeated trials and replication.
SC.8.N.1.3:	Use phrases such as "results support" or "fail to support" in science, understanding that science does not offer conclusive 'proof' of a knowledge claim.
SC.8.N.1.4:	Explain how hypotheses are valuable if they lead to further investigations, even if they turn out not to be supported by the data.
SC.8.N.1.5:	Analyze the methods used to develop a scientific explanation as seen in different fields of science.
SC.8.N.1.6:	Understand that scientific investigations involve the collection of relevant empirical evidence, the use of logical reasoning, and the application of imagination in devising hypotheses, predictions, explanations and models to make sense of the collected evidence.
SC.8.N.2.1:	Distinguish between scientific and pseudoscientific ideas.
SC.8.N.2.2:	Discuss what characterizes science and its methods.
SC.8.N.3.1:	Select models useful in relating the results of their own investigations.
SC.8.N.3.2:	Explain why theories may be modified but are rarely discarded.
SC.8.N.4.1:	Explain that science is one of the processes that can be used to inform decision making at the community, state, national, and international levels.
SC.8.N.4.2:	Explain how political, social, and economic concerns can affect science, and vice versa.
MA.K12.MTR.1.1:	Mathematicians who participate in effortful learning both individually and with others: • Analyze the problem in a way that makes sense given the task. • Ask questions that will help with solving the task. • Build perseverance by modifying methods as needed while solving a challenging task. • Stay engaged and maintain a positive mindset when working to solve tasks. • Help and support each other when attempting a new method or approach. **Clarifications:** Teachers who encourage students to participate actively in effortful learning both individually and with others: • Cultivate a community of growth mindset learners. • Foster perseverance in students by choosing tasks that are challenging. • Develop students' ability to analyze and problem solve. • Recognize students' effort when solving challenging problems.
MA.K12.MTR.2.1:	Demonstrate understanding by representing problems in multiple ways. Mathematicians who demonstrate understanding by representing problems in multiple ways: • Build understanding through modeling and using manipulatives. • Represent solutions to problems in multiple ways using objects, drawings, tables, graphs and equations. • Progress from modeling problems with objects and drawings to using algorithms and equations. • Express connections between concepts and representations. • Choose a representation based on the given context or purpose. **Clarifications:** Teachers who encourage students to demonstrate understanding by representing problems in multiple ways: • Help students make connections between concepts and representations. • Provide opportunities for students to use manipulatives when investigating concepts. • Guide students from concrete to pictorial to abstract representations as understanding progresses. • Show students that various representations can have different purposes and can be useful in different situations.
MA.K12.MTR.3.1:	Complete tasks with mathematical fluency. Mathematicians who complete tasks with mathematical fluency: • Select efficient and appropriate methods for solving problems within the given context. • Maintain flexibility and accuracy while performing procedures and mental calculations. • Complete tasks accurately and with confidence. • Adapt procedures to apply them to a new context. • Use feedback to improve efficiency when performing calculations. **Clarifications:** Teachers who encourage students to complete tasks with mathematical fluency: • Provide students with the flexibility to solve problems by selecting a procedure that allows them to solve efficiently and accurately.

	• Offer multiple opportunities for students to practice efficient and generalizable methods. • Provide opportunities for students to reflect on the method they used and determine if a more efficient method could have been used.
MA.K12.MTR.4.1:	Engage in discussions that reflect on the mathematical thinking of self and others. Mathematicians who engage in discussions that reflect on the mathematical thinking of self and others: • Communicate mathematical ideas, vocabulary and methods effectively. • Analyze the mathematical thinking of others. • Compare the efficiency of a method to those expressed by others. • Recognize errors and suggest how to correctly solve the task. • Justify results by explaining methods and processes. • Construct possible arguments based on evidence. **Clarifications:** Teachers who encourage students to engage in discussions that reflect on the mathematical thinking of self and others: • Establish a culture in which students ask questions of the teacher and their peers, and error is an opportunity for learning. • Create opportunities for students to discuss their thinking with peers. • Select, sequence and present student work to advance and deepen understanding of correct and increasingly efficient methods. • Develop students' ability to justify methods and compare their responses to the responses of their peers.
MA.K12.MTR.5.1:	Use patterns and structure to help understand and connect mathematical concepts. Mathematicians who use patterns and structure to help understand and connect mathematical concepts: • Focus on relevant details within a problem. • Create plans and procedures to logically order events, steps or ideas to solve problems. • Decompose a complex problem into manageable parts. • Relate previously learned concepts to new concepts. • Look for similarities among problems. • Connect solutions of problems to more complicated large-scale situations. **Clarifications:** Teachers who encourage students to use patterns and structure to help understand and connect mathematical concepts: • Help students recognize the patterns in the world around them and connect these patterns to mathematical concepts. • Support students to develop generalizations based on the similarities found among problems. • Provide opportunities for students to create plans and procedures to solve problems. • Develop students' ability to construct relationships between their current understanding and more sophisticated ways of thinking.
MA.K12.MTR.6.1:	Assess the reasonableness of solutions. Mathematicians who assess the reasonableness of solutions: • Estimate to discover possible solutions. • Use benchmark quantities to determine if a solution makes sense. • Check calculations when solving problems. • Verify possible solutions by explaining the methods used. • Evaluate results based on the given context. **Clarifications:** Teachers who encourage students to assess the reasonableness of solutions: • Have students estimate or predict solutions prior to solving. • Prompt students to continually ask, "Does this solution make sense? How do you know?" • Reinforce that students check their work as they progress within and after a task. • Strengthen students' ability to verify solutions through justifications.
MA.K12.MTR.7.1:	Apply mathematics to real-world contexts. Mathematicians who apply mathematics to real-world contexts: • Connect mathematical concepts to everyday experiences. • Use models and methods to understand, represent and solve problems. • Perform investigations to gather data or determine if a method is appropriate. • Redesign models and methods to improve accuracy or efficiency. **Clarifications:** Teachers who encourage students to apply mathematics to real-world contexts: • Provide opportunities for students to create models, both concrete and abstract, and perform investigations. • Challenge students to question the accuracy of their models and methods. • Support students as they validate conclusions by comparing them to the given situation. • Indicate how various concepts can be applied to other disciplines.
ELA.K12.EE.1.1:	Cite evidence to explain and justify reasoning. **Clarifications:** K-1 Students include textual evidence in their oral communication with guidance and support from adults. The evidence can consist of details from the text without naming the text. During 1st grade, students learn how to incorporate the evidence in their writing. 2-3 Students include relevant textual evidence in their written and oral communication. Students should name the text when they refer to it. In 3rd grade, students should use a combination of direct and indirect citations. 4-5 Students continue with previous skills and reference comments made by speakers and peers. Students cite texts that they've directly quoted, paraphrased, or used for information. When writing, students will use the form of citation dictated by the instructor or the style guide referenced by the instructor. 6-8 Students continue with previous skills and use a style guide to create a proper citation. 9-12 Students continue with previous skills and should be aware of existing style guides and the ways in which they differ.

ELA.K12.EE.2.1:	Read and comprehend grade-level complex texts proficiently. **Clarifications:** See Text Complexity for grade-level complexity bands and a text complexity rubric.
ELA.K12.EE.3.1:	Make inferences to support comprehension. **Clarifications:** Students will make inferences before the words infer or inference are introduced. Kindergarten students will answer questions like "Why is the girl smiling?" or make predictions about what will happen based on the title page. Students will use the terms and apply them in 2nd grade and beyond.
ELA.K12.EE.4.1:	Use appropriate collaborative techniques and active listening skills when engaging in discussions in a variety of situations. **Clarifications:** In kindergarten, students learn to listen to one another respectfully. In grades 1-2, students build upon these skills by justifying what they are thinking. For example: "I think _____ because _____." The collaborative conversations are becoming academic conversations. In grades 3-12, students engage in academic conversations discussing claims and justifying their reasoning, refining and applying skills. Students build on ideas, propel the conversation, and support claims and counterclaims with evidence.
ELA.K12.EE.5.1:	Use the accepted rules governing a specific format to create quality work. **Clarifications:** Students will incorporate skills learned into work products to produce quality work. For students to incorporate these skills appropriately, they must receive instruction. A 3rd grade student creating a poster board display must have instruction in how to effectively present information to do quality work.
ELA.K12.EE.6.1:	Use appropriate voice and tone when speaking or writing. **Clarifications:** In kindergarten and 1st grade, students learn the difference between formal and informal language. For example, the way we talk to our friends differs from the way we speak to adults. In 2nd grade and beyond, students practice appropriate social and academic language to discuss texts.
ELD.K12.ELL.SC.1:	English language learners communicate information, ideas and concepts necessary for academic success in the content area of Science.
ELD.K12.ELL.SI.1:	English language learners communicate for social and instructional purposes within the school setting.
HE.6.C.1.3:	Identify environmental factors that affect personal health. **Clarifications:** Air and water quality, availability of sidewalks, contaminated food, and road hazards.

General Course Information and Notes

GENERAL NOTES

Laboratory investigations that include the use of scientific inquiry, research, measurement, problem solving, laboratory apparatus and technologies, experimental procedures, and safety procedures are an integral part of this course. The National Science Teachers Association (NSTA) recommends that at the middle school level, all students should have multiple opportunities every week to explore science laboratory investigations (labs). School laboratory investigations are defined by the National Research Council (NRC) as an experience in the laboratory, classroom, or the field that provides students with opportunities to interact directly with natural phenomena or with data collected by others using tools, materials, data collection techniques, and models (NRC, 2006, p. 3). Laboratory investigations in the middle school classroom should help all students develop a growing understanding of the complexity and ambiguity of empirical work, as well as the skills to calibrate and troubleshoot equipment used to make observations. Learners should understand measurement error; and have the skills to aggregate, interpret, and present the resulting data (NRC 2006, p. 77; NSTA, 2007).

Special Notes:

Instructional Practices
Teaching from a range of complex text is optimized when teachers in all subject areas implement the following strategies on a routine basis:

1. Ensuring wide reading from complex text that varies in length.
2. Making close reading and rereading of texts central to lessons.
3. Emphasizing text-specific complex questions, and cognitively complex tasks, reinforce focus on the text and cultivate independence.
4. Emphasizing students supporting answers based upon evidence from the text.
5. Providing extensive research and writing opportunities (claims and evidence).

Science and Engineering Practices (NRC *Framework for K-12 Science Education, 2010*)

- Asking questions (for science) and defining problems (for engineering).
- Developing and using models.
- Planning and carrying out investigations.
- Analyzing and interpreting data.
- Using mathematics, information and computer technology, and computational thinking.
- Constructing explanations (for science) and designing solutions (for engineering).
- Engaging in argument from evidence.
- Obtaining, evaluating, and communicating information.

Florida's Benchmarks for Excellent Student Thinking (B.E.S.T.) Standards
This course includes Florida's B.E.S.T. ELA Expectations (EE) and Mathematical Thinking and Reasoning Standards (MTRs) for students. Florida educators should intentionally embed these standards within the content and their instruction as applicable. For guidance on the implementation of the EEs and MTRs, please visit cpalms.org/Standards/BEST_Standards.aspx and select the appropriate B.E.S.T. Standards package.

English Language Development ELD Standards Special Notes Section:
Teachers are required to provide listening, speaking, reading and writing instruction that allows English language learners (ELL) to communicate information, ideas and concepts for academic success in the content area of Science. For the given level of English language proficiency and with visual, graphic, or interactive support, students will interact with grade level words, expressions, sentences and discourse to process or produce language necessary for academic success The ELD standard should specify a relevant content area concept or topic of study chosen by curriculum developers and teachers which maximizes an ELL's need for communication and social skills. To access an ELL supporting document which delineates performance definitions and descriptors, please click on the following link: cpalms.org/uploads/docs/standards/eld/SC.pdf

Additional Instructional Resources:
A.V.E. for Success Collection is provided by the Florida Association of School Administrators: fasa.net/4DCGI/cms/review.html?Action=CMS_Document&DocID=139. Please be aware that these resources have not been reviewed by CPALMS and there may be a charge for the use of some of them in this collection.

GENERAL INFORMATION

Course Number: 2001010

Course Path: Section: Grades PreK to 12 Education Courses > **Grade Group:** Grades 6 to 8 Education Courses > **Subject:** Science > **SubSubject:** Earth/Space Sciences >
Abbreviated Title: M/J EARTH/SPA SCI
Course Length: Year (Y)
Course Attributes:
- Class Size Core Required

Course Level: 2

Course Status: Draft - Course Pending Approval

Grade Level(s): 6,7,8

Educator Certifications

Science (Secondary Grades 7-12)
Middle Grades Integrated Curriculum (Middle Grades 5-9)
Earth/Space Science (Grades 6-12)
Middle Grades General Science (Middle Grades 5-9)
Chemistry (Grades 6-12)
Physics (Grades 6-12)

M/J Earth/Space Science, Advanced (#2001020) 2022 - And Beyond

Course Standards

Use grade appropriate Nature of Science benchmarks (i.e. if this course is offered to seventh grade students, then the SC.7.N benchmarks should be integrated into the course content, and SC.6.N and SC.8.N benchmarks should be omitted from the seventh grade course).

Name	Description
SC.6.E.6.1:	Describe and give examples of ways in which Earth's surface is built up and torn down by physical and chemical weathering, erosion, and deposition.
SC.6.E.6.2:	Recognize that there are a variety of different landforms on Earth's surface such as coastlines, dunes, rivers, mountains, glaciers, deltas, and lakes and relate these landforms as they apply to Florida.
SC.6.E.7.1:	Differentiate among radiation, conduction, and convection, the three mechanisms by which heat is transferred through Earth's system.
SC.6.E.7.2:	Investigate and apply how the cycling of water between the atmosphere and hydrosphere has an effect on weather patterns and climate.
SC.6.E.7.3:	Describe how global patterns such as the jet stream and ocean currents influence local weather in measurable terms such as temperature, air pressure, wind direction and speed, and humidity and precipitation.
SC.6.E.7.4:	Differentiate and show interactions among the geosphere, hydrosphere, cryosphere, atmosphere, and biosphere.
SC.6.E.7.5:	Explain how energy provided by the sun influences global patterns of atmospheric movement and the temperature differences between air, water, and land.
SC.6.E.7.6:	Differentiate between weather and climate.
SC.6.E.7.7:	Investigate how natural disasters have affected human life in Florida.
SC.6.E.7.8:	Describe ways human beings protect themselves from hazardous weather and sun exposure.
SC.6.E.7.9:	Describe how the composition and structure of the atmosphere protects life and insulates the planet.
SC.7.E.6.1:	Describe the layers of the solid Earth, including the lithosphere, the hot convecting mantle, and the dense metallic liquid and solid cores.
SC.7.E.6.2:	Identify the patterns within the rock cycle and relate them to surface events (weathering and erosion) and sub-surface events (plate tectonics and mountain building).
SC.7.E.6.3:	Identify current methods for measuring the age of Earth and its parts, including the law of superposition and radioactive dating.
SC.7.E.6.4:	Explain and give examples of how physical evidence supports scientific theories that Earth has evolved over geologic time due to natural processes.
SC.7.E.6.5:	Explore the scientific theory of plate tectonics by describing how the movement of Earth's crustal plates causes both slow and rapid changes in Earth's surface, including volcanic eruptions, earthquakes, and mountain building.
SC.7.E.6.6:	Identify the impact that humans have had on Earth, such as deforestation, urbanization, desertification, erosion, air and water quality, changing the flow of water.
SC.7.E.6.7:	Recognize that heat flow and movement of material within Earth causes earthquakes and volcanic eruptions, and creates mountains and ocean basins.
SC.7.N.1.1:	Define a problem from the seventh grade curriculum, use appropriate reference materials to support scientific understanding, plan and carry out scientific investigation of various types, such as systematic observations or experiments, identify variables, collect and organize data, interpret data in charts, tables, and graphics, analyze information, make predictions, and defend conclusions.
SC.7.N.1.2:	Differentiate replication (by others) from repetition (multiple trials).
SC.7.N.1.3:	Distinguish between an experiment (which must involve the identification and control of variables) and other forms of scientific investigation and explain that not all scientific knowledge is derived from experimentation.
SC.7.N.1.4:	Identify test variables (independent variables) and outcome variables (dependent variables) in an experiment.
SC.7.N.1.5:	Describe the methods used in the pursuit of a scientific explanation as seen in different fields of science such as biology, geology, and physics.
SC.7.N.1.6:	Explain that empirical evidence is the cumulative body of observations of a natural phenomenon on which scientific explanations are based.
SC.7.N.1.7:	Explain that scientific knowledge is the result of a great deal of debate and confirmation within the science community.
SC.7.N.2.1:	Identify an instance from the history of science in which scientific knowledge has changed when new evidence or new interpretations are encountered.
SC.7.N.3.1:	Recognize and explain the difference between theories and laws and give several examples of scientific theories and the evidence that supports them.
SC.7.N.3.2:	Identify the benefits and limitations of the use of scientific models.
SC.8.E.5.1:	Recognize that there are enormous distances between objects in space and apply our knowledge of light and space travel to understand this distance.
SC.8.E.5.2:	Recognize that the universe contains many billions of galaxies and that each galaxy contains many billions of stars.
SC.8.E.5.3:	Distinguish the hierarchical relationships between planets and other astronomical bodies relative to solar system, galaxy, and universe, including distance, size, and composition.
SC.8.E.5.4:	Explore the Law of Universal Gravitation by explaining the role that gravity plays in the formation of planets, stars, and solar systems and in determining their motions.
SC.8.E.5.5:	Describe and classify specific physical properties of stars: apparent magnitude (brightness), temperature (color), size, and luminosity (absolute brightness).
SC.8.E.5.6:	Create models of solar properties including: rotation, structure of the Sun, convection, sunspots, solar flares, and prominences.
SC.8.E.5.7:	Compare and contrast the properties of objects in the Solar System including the Sun, planets, and moons to those of Earth, such as gravitational force, distance from the Sun, speed, movement, temperature, and atmospheric conditions.
SC.8.E.5.8:	Compare various historical models of the Solar System, including geocentric and heliocentric.
SC.8.E.5.9:	Explain the impact of objects in space on each other including: 1. the Sun on the Earth including seasons and gravitational attraction 2. the Moon on the Earth, including phases, tides, and eclipses, and the relative position of each body.
SC.8.E.5.10:	Assess how technology is essential to science for such purposes as access to outer space and other remote locations, sample collection, measurement, data collection and storage, computation, and communication of information.

SC.8.E.5.11:	Identify and compare characteristics of the electromagnetic spectrum such as wavelength, frequency, use, and hazards and recognize its application to an understanding of planetary images and satellite photographs.
SC.8.E.5.12:	Summarize the effects of space exploration on the economy and culture of Florida.
SC.8.N.1.1:	Define a problem from the eighth grade curriculum using appropriate reference materials to support scientific understanding, plan and carry out scientific investigations of various types, such as systematic observations or experiments, identify variables, collect and organize data, interpret data in charts, tables, and graphics, analyze information, make predictions, and defend conclusions.
SC.8.N.1.2:	Design and conduct a study using repeated trials and replication.
SC.8.N.1.3:	Use phrases such as "results support" or "fail to support" in science, understanding that science does not offer conclusive 'proof' of a knowledge claim.
SC.8.N.1.4:	Explain how hypotheses are valuable if they lead to further investigations, even if they turn out not to be supported by the data.
SC.8.N.1.5:	Analyze the methods used to develop a scientific explanation as seen in different fields of science.
SC.8.N.1.6:	Understand that scientific investigations involve the collection of relevant empirical evidence, the use of logical reasoning, and the application of imagination in devising hypotheses, predictions, explanations and models to make sense of the collected evidence.
SC.8.N.2.1:	Distinguish between scientific and pseudoscientific ideas.
SC.8.N.2.2:	Discuss what characterizes science and its methods.
SC.8.N.3.1:	Select models useful in relating the results of their own investigations.
SC.8.N.3.2:	Explain why theories may be modified but are rarely discarded.
SC.8.N.4.1:	Explain that science is one of the processes that can be used to inform decision making at the community, state, national, and international levels.
SC.8.N.4.2:	Explain how political, social, and economic concerns can affect science, and vice versa.
SC.912.E.5.4:	Explain the physical properties of the Sun and its dynamic nature and connect them to conditions and events on Earth.
SC.912.E.6.1:	Describe and differentiate the layers of Earth and the interactions among them.
SC.912.E.6.2:	Connect surface features to surface processes that are responsible for their formation.
SC.912.E.6.3:	Analyze the scientific theory of plate tectonics and identify related major processes and features as a result of moving plates.
SC.912.E.7.3:	Differentiate and describe the various interactions among Earth systems, including: atmosphere, hydrosphere, cryosphere, geosphere, and biosphere.
SC.912.E.7.5:	Predict future weather conditions based on present observations and conceptual models and recognize limitations and uncertainties of such predictions.
SC.912.E.7.6:	Relate the formation of severe weather to the various physical factors.
MA.K12.MTR.1.1:	Mathematicians who participate in effortful learning both individually and with others: • Analyze the problem in a way that makes sense given the task. • Ask questions that will help with solving the task. • Build perseverance by modifying methods as needed while solving a challenging task. • Stay engaged and maintain a positive mindset when working to solve tasks. • Help and support each other when attempting a new method or approach. **Clarifications:** Teachers who encourage students to participate actively in effortful learning both individually and with others: • Cultivate a community of growth mindset learners. • Foster perseverance in students by choosing tasks that are challenging. • Develop students' ability to analyze and problem solve. • Recognize students' effort when solving challenging problems.
MA.K12.MTR.2.1:	Demonstrate understanding by representing problems in multiple ways. Mathematicians who demonstrate understanding by representing problems in multiple ways: • Build understanding through modeling and using manipulatives. • Represent solutions to problems in multiple ways using objects, drawings, tables, graphs and equations. • Progress from modeling problems with objects and drawings to using algorithms and equations. • Express connections between concepts and representations. • Choose a representation based on the given context or purpose. **Clarifications:** Teachers who encourage students to demonstrate understanding by representing problems in multiple ways: • Help students make connections between concepts and representations. • Provide opportunities for students to use manipulatives when investigating concepts. • Guide students from concrete to pictorial to abstract representations as understanding progresses. • Show students that various representations can have different purposes and can be useful in different situations.
MA.K12.MTR.3.1:	Complete tasks with mathematical fluency. Mathematicians who complete tasks with mathematical fluency: • Select efficient and appropriate methods for solving problems within the given context. • Maintain flexibility and accuracy while performing procedures and mental calculations. • Complete tasks accurately and with confidence. • Adapt procedures to apply them to a new context. • Use feedback to improve efficiency when performing calculations. **Clarifications:** Teachers who encourage students to complete tasks with mathematical fluency: • Provide students with the flexibility to solve problems by selecting a procedure that allows them to solve efficiently and accurately. • Offer multiple opportunities for students to practice efficient and generalizable methods. • Provide opportunities for students to reflect on the method they used and determine if a more efficient method could have been used.
	Engage in discussions that reflect on the mathematical thinking of self and others. Mathematicians who engage in discussions that reflect on the mathematical thinking of self and others: • Communicate mathematical ideas, vocabulary and methods effectively. • Analyze the mathematical thinking of others. • Compare the efficiency of a method to those expressed by others.

MA.K12.MTR.4.1:	• Recognize errors and suggest how to correctly solve the task. • Justify results by explaining methods and processes. • Construct possible arguments based on evidence. **Clarifications:** Teachers who encourage students to engage in discussions that reflect on the mathematical thinking of self and others: • Establish a culture in which students ask questions of the teacher and their peers, and error is an opportunity for learning. • Create opportunities for students to discuss their thinking with peers. • Select, sequence and present student work to advance and deepen understanding of correct and increasingly efficient methods. • Develop students' ability to justify methods and compare their responses to the responses of their peers.
MA.K12.MTR.5.1:	Use patterns and structure to help understand and connect mathematical concepts. Mathematicians who use patterns and structure to help understand and connect mathematical concepts: • Focus on relevant details within a problem. • Create plans and procedures to logically order events, steps or ideas to solve problems. • Decompose a complex problem into manageable parts. • Relate previously learned concepts to new concepts. • Look for similarities among problems. • Connect solutions of problems to more complicated large-scale situations. **Clarifications:** Teachers who encourage students to use patterns and structure to help understand and connect mathematical concepts: • Help students recognize the patterns in the world around them and connect these patterns to mathematical concepts. • Support students to develop generalizations based on the similarities found among problems. • Provide opportunities for students to create plans and procedures to solve problems. • Develop students' ability to construct relationships between their current understanding and more sophisticated ways of thinking.
MA.K12.MTR.6.1:	Assess the reasonableness of solutions. Mathematicians who assess the reasonableness of solutions: • Estimate to discover possible solutions. • Use benchmark quantities to determine if a solution makes sense. • Check calculations when solving problems. • Verify possible solutions by explaining the methods used. • Evaluate results based on the given context. **Clarifications:** Teachers who encourage students to assess the reasonableness of solutions: • Have students estimate or predict solutions prior to solving. • Prompt students to continually ask, "Does this solution make sense? How do you know?" • Reinforce that students check their work as they progress within and after a task. • Strengthen students' ability to verify solutions through justifications.
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ELA.K12.EE.1.1:	Cite evidence to explain and justify reasoning. **Clarifications:** K-1 Students include textual evidence in their oral communication with guidance and support from adults. The evidence can consist of details from the text without naming the text. During 1st grade, students learn how to incorporate the evidence in their writing. 2-3 Students include relevant textual evidence in their written and oral communication. Students should name the text when they refer to it. In 3rd grade, students should use a combination of direct and indirect citations. 4-5 Students continue with previous skills and reference comments made by speakers and peers. Students cite texts that they've directly quoted, paraphrased, or used for information. When writing, students will use the form of citation dictated by the instructor or the style guide referenced by the instructor. 6-8 Students continue with previous skills and use a style guide to create a proper citation. 9-12 Students continue with previous skills and should be aware of existing style guides and the ways in which they differ.
ELA.K12.EE.2.1:	Read and comprehend grade-level complex texts proficiently. **Clarifications:** See Text Complexity for grade-level complexity bands and a text complexity rubric.
ELA.K12.EE.3.1:	Make inferences to support comprehension. **Clarifications:** Students will make inferences before the words infer or inference are introduced. Kindergarten students will answer questions like "Why is the girl

	smiling?" or make predictions about what will happen based on the title page. Students will use the terms and apply them in 2nd grade and beyond.
ELA.K12.EE.4.1:	Use appropriate collaborative techniques and active listening skills when engaging in discussions in a variety of situations. **Clarifications:** In kindergarten, students learn to listen to one another respectfully. In grades 1-2, students build upon these skills by justifying what they are thinking. For example: "I think _____ because _____." The collaborative conversations are becoming academic conversations. In grades 3-12, students engage in academic conversations discussing claims and justifying their reasoning, refining and applying skills. Students build on ideas, propel the conversation, and support claims and counterclaims with evidence.
ELA.K12.EE.5.1:	Use the accepted rules governing a specific format to create quality work. **Clarifications:** Students will incorporate skills learned into work products to produce quality work. For students to incorporate these skills appropriately, they must receive instruction. A 3rd grade student creating a poster board display must have instruction in how to effectively present information to do quality work.
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ELD.K12.ELL.SC.1:	English language learners communicate information, ideas and concepts necessary for academic success in the content area of Science.
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GENERAL NOTES

Laboratory investigations that include the use of scientific inquiry, research, measurement, problem solving, laboratory apparatus and technologies, experimental procedures, and safety procedures are an integral part of this course. The National Science Teachers Association (NSTA) recommends that at the middle school level, all students should have multiple opportunities every week to explore science laboratory investigations (labs). School laboratory investigations are defined by the National Research Council (NRC) as an experience in the laboratory, classroom, or the field that provides students with opportunities to interact directly with natural phenomena or with data collected by others using tools, materials, data collection techniques, and models (NRC, 2006, p. 3). Laboratory investigations in the middle school classroom should help all students develop a growing understanding of the complexity and ambiguity of empirical work, as well as the skills to calibrate and troubleshoot equipment used to make observations. Learners should understand measurement error; and have the skills to aggregate, interpret, and present the resulting data (NRC 2006, p. 77; NSTA, 2007).

Honors and Advanced Level Course Note: Advanced courses require a greater demand on students through increased academic rigor. Academic rigor is obtained through the application, analysis, evaluation, and creation of complex ideas that are often abstract and multi-faceted. Students are challenged to think and collaborate critically on the content they are learning. Honors level rigor will be achieved by increasing text complexity through text selection, focus on high-level qualitative measures, and complexity of task. Instruction will be structured to give students a deeper understanding of conceptual themes and organization within and across disciplines. Academic rigor is more than simply assigning to students a greater quantity of work.

Special Notes:

Instructional Practices
Teaching from a range of complex text is optimized when teachers in all subject areas implement the following strategies on a routine basis:

1. Ensuring wide reading from complex text that varies in length.
2. Making close reading and rereading of texts central to lessons.
3. Emphasizing text-specific complex questions, and cognitively complex tasks, reinforce focus on the text and cultivate independence.
4. Emphasizing students supporting answers based upon evidence from the text.
5. Providing extensive research and writing opportunities (claims and evidence).

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- Asking questions (for science) and defining problems (for engineering).
- Developing and using models.
- Planning and carrying out investigations.
- Analyzing and interpreting data.
- Using mathematics, information and computer technology, and computational thinking.
- Constructing explanations (for science) and designing solutions (for engineering).
- Engaging in argument from evidence.
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This course includes Florida's B.E.S.T. ELA Expectations (EE) and Mathematical Thinking and Reasoning Standards (MTRs) for students. Florida educators should intentionally

embed these standards within the content and their instruction as applicable. For guidance on the implementation of the EEs and MTRs, please visit cpalms.org/Standards/BEST_Standards.aspx and select the appropriate B.E.S.T. Standards package.

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Teachers are required to provide listening, speaking, reading and writing instruction that allows English language learners (ELL) to communicate information, ideas and concepts for academic success in the content area of Science. For the given level of English language proficiency and with visual, graphic, or interactive support, students will interact with grade level words, expressions, sentences and discourse to process or produce language necessary for academic success The ELD standard should specify a relevant content area concept or topic of study chosen by curriculum developers and teachers which maximizes an ELL's need for communication and social skills. To access an ELL supporting document which delineates performance definitions and descriptors, please click on the following link: cpalms.org/uploads/docs/standards/eld/SC.pdf

Additional Instructional Resources:
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GENERAL INFORMATION

Course Number: 2001020

Course Path: Section: Grades PreK to 12 Education Courses > **Grade Group:** Grades 6 to 8 Education Courses > **Subject:** Science > **SubSubject:** Earth/Space Sciences >

Abbreviated Title: M/J EARTH/SPA SCI ADV

Course Length: Year (Y)

Course Attributes:

- Class Size Core Required

Course Level: 3

Course Status: Draft - Course Pending Approval

Grade Level(s): 6,7,8

Educator Certifications

Science (Secondary Grades 7-12)
Middle Grades Integrated Curriculum (Middle Grades 5-9)
Earth/Space Science (Grades 6-12)
Middle Grades General Science (Middle Grades 5-9)
Chemistry (Grades 6-12)
Physics (Grades 6-12)

M/J STEM Astronomy and Space Science (#2001025) 2022 -

And Beyond

Course Standards

Name	Description
SC.6.E.7.9:	Describe how the composition and structure of the atmosphere protects life and insulates the planet.
SC.6.N.1.2:	Explain why scientific investigations should be replicable.
SC.6.N.1.3:	Explain the difference between an experiment and other types of scientific investigation, and explain the relative benefits and limitations of each.
SC.6.N.1.4:	Discuss, compare, and negotiate methods used, results obtained, and explanations among groups of students conducting the same investigation.
SC.6.N.1.5:	Recognize that science involves creativity, not just in designing experiments, but also in creating explanations that fit evidence.
SC.6.N.2.1:	Distinguish science from other activities involving thought.
SC.6.N.2.2:	Explain that scientific knowledge is durable because it is open to change as new evidence or interpretations are encountered.
SC.6.N.2.3:	Recognize that scientists who make contributions to scientific knowledge come from all kinds of backgrounds and possess varied talents, interests, and goals.
SC.6.N.3.1:	Recognize and explain that a scientific theory is a well-supported and widely accepted explanation of nature and is not simply a claim posed by an individual. Thus, the use of the term theory in science is very different than how it is used in everyday life.
SC.6.N.3.2:	Recognize and explain that a scientific law is a description of a specific relationship under given conditions in the natural world. Thus, scientific laws are different from societal laws.
SC.6.N.3.3:	Give several examples of scientific laws.
SC.6.N.3.4:	Identify the role of models in the context of the sixth grade science benchmarks.
SC.7.N.1.2:	Differentiate replication (by others) from repetition (multiple trials).
SC.7.N.1.3:	Distinguish between an experiment (which must involve the identification and control of variables) and other forms of scientific investigation and explain that not all scientific knowledge is derived from experimentation.
SC.7.N.1.4:	Identify test variables (independent variables) and outcome variables (dependent variables) in an experiment.
SC.7.N.1.5:	Describe the methods used in the pursuit of a scientific explanation as seen in different fields of science such as biology, geology, and physics.
SC.7.N.1.6:	Explain that empirical evidence is the cumulative body of observations of a natural phenomenon on which scientific explanations are based.
SC.7.N.1.7:	Explain that scientific knowledge is the result of a great deal of debate and confirmation within the science community.
SC.7.N.2.1:	Identify an instance from the history of science in which scientific knowledge has changed when new evidence or new interpretations are encountered.
SC.7.N.3.1:	Recognize and explain the difference between theories and laws and give several examples of scientific theories and the evidence that supports them.
SC.7.N.3.2:	Identify the benefits and limitations of the use of scientific models.
SC.8.E.5.1:	Recognize that there are enormous distances between objects in space and apply our knowledge of light and space travel to understand this distance.
SC.8.E.5.2:	Recognize that the universe contains many billions of galaxies and that each galaxy contains many billions of stars.
SC.8.E.5.3:	Distinguish the hierarchical relationships between planets and other astronomical bodies relative to solar system, galaxy, and universe, including distance, size, and composition.
SC.8.E.5.4:	Explore the Law of Universal Gravitation by explaining the role that gravity plays in the formation of planets, stars, and solar systems and in determining their motions.
SC.8.E.5.5:	Describe and classify specific physical properties of stars: apparent magnitude (brightness), temperature (color), size, and luminosity (absolute brightness).
SC.8.E.5.6:	Create models of solar properties including: rotation, structure of the Sun, convection, sunspots, solar flares, and prominences.
SC.8.E.5.7:	Compare and contrast the properties of objects in the Solar System including the Sun, planets, and moons to those of Earth, such as gravitational force, distance from the Sun, speed, movement, temperature, and atmospheric conditions.
SC.8.E.5.8:	Compare various historical models of the Solar System, including geocentric and heliocentric.
SC.8.E.5.9:	Explain the impact of objects in space on each other including: 1. the Sun on the Earth including seasons and gravitational attraction 2. the Moon on the Earth, including phases, tides, and eclipses, and the relative position of each body.
SC.8.E.5.10:	Assess how technology is essential to science for such purposes as access to outer space and other remote locations, sample collection, measurement, data collection and storage, computation, and communication of information.
SC.8.E.5.11:	Identify and compare characteristics of the electromagnetic spectrum such as wavelength, frequency, use, and hazards and recognize its application to an understanding of planetary images and satellite photographs.
SC.8.E.5.12:	Summarize the effects of space exploration on the economy and culture of Florida.
SC.8.N.1.2:	Design and conduct a study using repeated trials and replication.
SC.8.N.1.3:	Use phrases such as "results support" or "fail to support" in science, understanding that science does not offer conclusive 'proof' of a knowledge claim.
SC.8.N.1.4:	Explain how hypotheses are valuable if they lead to further investigations, even if they turn out not to be supported by the data.
SC.8.N.1.5:	Analyze the methods used to develop a scientific explanation as seen in different fields of science.
SC.8.N.1.6:	Understand that scientific investigations involve the collection of relevant empirical evidence, the use of logical reasoning, and the application of imagination in devising hypotheses, predictions, explanations and models to make sense of the collected evidence.
SC.8.N.2.1:	Distinguish between scientific and pseudoscientific ideas.
SC.8.N.2.2:	Discuss what characterizes science and its methods.
SC.8.N.3.1:	Select models useful in relating the results of their own investigations.
SC.8.N.3.2:	Explain why theories may be modified but are rarely discarded.

SC.8.N.4.1:	Explain that science is one of the processes that can be used to inform decision making at the community, state, national, and international levels.
SC.8.N.4.2:	Explain how political, social, and economic concerns can affect science, and vice versa.
MA.K12.MTR.1.1:	Mathematicians who participate in effortful learning both individually and with others: • Analyze the problem in a way that makes sense given the task. • Ask questions that will help with solving the task. • Build perseverance by modifying methods as needed while solving a challenging task. • Stay engaged and maintain a positive mindset when working to solve tasks. • Help and support each other when attempting a new method or approach. **Clarifications:** Teachers who encourage students to participate actively in effortful learning both individually and with others: • Cultivate a community of growth mindset learners. • Foster perseverance in students by choosing tasks that are challenging. • Develop students' ability to analyze and problem solve. • Recognize students' effort when solving challenging problems.
MA.K12.MTR.2.1:	Demonstrate understanding by representing problems in multiple ways. Mathematicians who demonstrate understanding by representing problems in multiple ways: • Build understanding through modeling and using manipulatives. • Represent solutions to problems in multiple ways using objects, drawings, tables, graphs and equations. • Progress from modeling problems with objects and drawings to using algorithms and equations. • Express connections between concepts and representations. • Choose a representation based on the given context or purpose. **Clarifications:** Teachers who encourage students to demonstrate understanding by representing problems in multiple ways: • Help students make connections between concepts and representations. • Provide opportunities for students to use manipulatives when investigating concepts. • Guide students from concrete to pictorial to abstract representations as understanding progresses. • Show students that various representations can have different purposes and can be useful in different situations.
MA.K12.MTR.3.1:	Complete tasks with mathematical fluency. Mathematicians who complete tasks with mathematical fluency: • Select efficient and appropriate methods for solving problems within the given context. • Maintain flexibility and accuracy while performing procedures and mental calculations. • Complete tasks accurately and with confidence. • Adapt procedures to apply them to a new context. • Use feedback to improve efficiency when performing calculations. **Clarifications:** Teachers who encourage students to complete tasks with mathematical fluency: • Provide students with the flexibility to solve problems by selecting a procedure that allows them to solve efficiently and accurately. • Offer multiple opportunities for students to practice efficient and generalizable methods. • Provide opportunities for students to reflect on the method they used and determine if a more efficient method could have been used.
MA.K12.MTR.4.1:	Engage in discussions that reflect on the mathematical thinking of self and others. Mathematicians who engage in discussions that reflect on the mathematical thinking of self and others: • Communicate mathematical ideas, vocabulary and methods effectively. • Analyze the mathematical thinking of others. • Compare the efficiency of a method to those expressed by others. • Recognize errors and suggest how to correctly solve the task. • Justify results by explaining methods and processes. • Construct possible arguments based on evidence. **Clarifications:** Teachers who encourage students to engage in discussions that reflect on the mathematical thinking of self and others: • Establish a culture in which students ask questions of the teacher and their peers, and error is an opportunity for learning. • Create opportunities for students to discuss their thinking with peers. • Select, sequence and present student work to advance and deepen understanding of correct and increasingly efficient methods. • Develop students' ability to justify methods and compare their responses to the responses of their peers.
MA.K12.MTR.5.1:	Use patterns and structure to help understand and connect mathematical concepts. Mathematicians who use patterns and structure to help understand and connect mathematical concepts: • Focus on relevant details within a problem. • Create plans and procedures to logically order events, steps or ideas to solve problems. • Decompose a complex problem into manageable parts. • Relate previously learned concepts to new concepts. • Look for similarities among problems. • Connect solutions of problems to more complicated large-scale situations. **Clarifications:** Teachers who encourage students to use patterns and structure to help understand and connect mathematical concepts: • Help students recognize the patterns in the world around them and connect these patterns to mathematical concepts. • Support students to develop generalizations based on the similarities found among problems. • Provide opportunities for students to create plans and procedures to solve problems.

	• Develop students' ability to construct relationships between their current understanding and more sophisticated ways of thinking.
MA.K12.MTR.6.1:	Assess the reasonableness of solutions. Mathematicians who assess the reasonableness of solutions: • Estimate to discover possible solutions. • Use benchmark quantities to determine if a solution makes sense. • Check calculations when solving problems. • Verify possible solutions by explaining the methods used. • Evaluate results based on the given context. **Clarifications:** Teachers who encourage students to assess the reasonableness of solutions: • Have students estimate or predict solutions prior to solving. • Prompt students to continually ask, "Does this solution make sense? How do you know?" • Reinforce that students check their work as they progress within and after a task. • Strengthen students' ability to verify solutions through justifications.
MA.K12.MTR.7.1:	Apply mathematics to real-world contexts. Mathematicians who apply mathematics to real-world contexts: • Connect mathematical concepts to everyday experiences. • Use models and methods to understand, represent and solve problems. • Perform investigations to gather data or determine if a method is appropriate. • Redesign models and methods to improve accuracy or efficiency. **Clarifications:** Teachers who encourage students to apply mathematics to real-world contexts: • Provide opportunities for students to create models, both concrete and abstract, and perform investigations. • Challenge students to question the accuracy of their models and methods. • Support students as they validate conclusions by comparing them to the given situation. • Indicate how various concepts can be applied to other disciplines.
ELA.K12.EE.1.1:	Cite evidence to explain and justify reasoning. **Clarifications:** K-1 Students include textual evidence in their oral communication with guidance and support from adults. The evidence can consist of details from the text without naming the text. During 1st grade, students learn how to incorporate the evidence in their writing. 2-3 Students include relevant textual evidence in their written and oral communication. Students should name the text when they refer to it. In 3rd grade, students should use a combination of direct and indirect citations. 4-5 Students continue with previous skills and reference comments made by speakers and peers. Students cite texts that they've directly quoted, paraphrased, or used for information. When writing, students will use the form of citation dictated by the instructor or the style guide referenced by the instructor. 6-8 Students continue with previous skills and use a style guide to create a proper citation. 9-12 Students continue with previous skills and should be aware of existing style guides and the ways in which they differ.
ELA.K12.EE.2.1:	Read and comprehend grade-level complex texts proficiently. **Clarifications:** See Text Complexity for grade-level complexity bands and a text complexity rubric.
ELA.K12.EE.3.1:	Make inferences to support comprehension. **Clarifications:** Students will make inferences before the words infer or inference are introduced. Kindergarten students will answer questions like "Why is the girl smiling?" or make predictions about what will happen based on the title page. Students will use the terms and apply them in 2nd grade and beyond.
ELA.K12.EE.4.1:	Use appropriate collaborative techniques and active listening skills when engaging in discussions in a variety of situations. **Clarifications:** In kindergarten, students learn to listen to one another respectfully. In grades 1-2, students build upon these skills by justifying what they are thinking. For example: "I think _____ because _____." The collaborative conversations are becoming academic conversations. In grades 3-12, students engage in academic conversations discussing claims and justifying their reasoning, refining and applying skills. Students build on ideas, propel the conversation, and support claims and counterclaims with evidence.
ELA.K12.EE.5.1:	Use the accepted rules governing a specific format to create quality work. **Clarifications:** Students will incorporate skills learned into work products to produce quality work. For students to incorporate these skills appropriately, they must receive instruction. A 3rd grade student creating a poster board display must have instruction in how to effectively present information to do quality work.
ELA.K12.EE.6.1:	Use appropriate voice and tone when speaking or writing. **Clarifications:** In kindergarten and 1st grade, students learn the difference between formal and informal language. For example, the way we talk to our friends differs from the way we speak to adults. In 2nd grade and beyond, students practice appropriate social and academic language to discuss texts.
ELD.K12.ELL.SC.1:	English language learners communicate information, ideas and concepts necessary for academic success in the content area of Science.

GENERAL NOTES

If this course is to be used in a STEM sequence in place of either the comprehensive or subject specific course sequences, teachers should refer to the test item specifications for the 8th grade SSA for information on tested standards which can be found at: fldoe.org/core/fileparse.php/5663/urlt/swsatisG8.pdf.

This course is an integrated Science, Technology, Engineering and Mathematics (STEM) course for middle school students. M/J STEM Physical Science includes an integration of standards from science, mathematics, and english/language arts (ELA) through the application to STEM problem solving using physical science knowledge and science and engineering practices. Physical sciences through applications such as aeronautics, robotics, rocketry, mechanical, electrical, and civil engineering, are emphasized in this course. Laboratory investigations that include the use of scientific inquiry, research, measurement, problem solving, laboratory apparatus and technologies, experimental procedures, and safety procedures are an integral part of this course. The National Science Teachers Association (NSTA) recommends that at the middle school level, all students should have multiple opportunities every week to explore science laboratory investigations (labs). School laboratory investigations are defined by the National Research Council (NRC) as an experience in the laboratory, classroom, or the field that provides students with opportunities to interact directly with natural phenomena or with data collected by other using tools, materials, data collection techniques, and models (NRC, 2006, p. 3). Laboratory investigations in the middle school classroom should help all students develop a growing understanding of the complexity and ambiguity of empirical work, as well as the skills to calibrate and troubleshoot equipment used to make observations. Learners should understand measurement error; and have the skills to aggregate, interpret, and present the resulting data (NRC, 2006, p. 77; NSTA, 2007).

Special Notes:

Instructional Practices
Teaching from a range of complex text is optimized when teachers in all subject areas implement the following strategies on a routine basis:

1. Ensuring wide reading from complex text that varies in length.
2. Making close reading and rereading of texts central to lessons.
3. Emphasizing text-specific complex questions, and cognitively complex tasks, reinforce focus on the text and cultivate independence.
4. Emphasizing students supporting answers based upon evidence from the text.
5. Providing extensive research and writing opportunities (claims and evidence).

Science and Engineering Practices (NRC *Framework for K-12 Science Education, 2010*)

- Asking questions (for science) and defining problems (for engineering).
- Developing and using models.
- Planning and carrying out investigations.
- Analyzing and interpreting data.
- Using mathematics, information and computer technology, and computational thinking.
- Constructing explanations (for science) and designing solutions (for engineering).
- Engaging in argument from evidence.
- Obtaining, evaluating, and communicating information.

ISTE Standards (iste.org/docs/pdfs20-14_ISTE_Standards-S_PDF.pdf) should be incorporated in many contexts throughout the course.

Course Standards
Use grade appropriate Nature of Science benchmarks (i.e., if this course is offered to seventh grade students, then the SC.7.N benchmarks should be integrated into the course content, and SC.6.N and SC.8.N benchmarks should be omitted from the seventh grade course).

Florida's Benchmarks for Excellent Student Thinking (B.E.S.T.) Standards
This course includes Florida's B.E.S.T. ELA Expectations (EE) and Mathematical Thinking and Reasoning Standards (MTRs) for students. Florida educators should intentionally embed these standards within the content and their instruction as applicable. For guidance on the implementation of the EEs and MTRs, please visit cpalms.org/Standards/BEST_Standards.aspx and select the appropriate B.E.S.T. Standards package.

English Language Development ELD Standards Special Notes Section:
Teachers are required to provide listening, speaking, reading and writing instruction that allows English language learners (ELL) to communicate information, ideas and concepts for academic success in the content area of Science. For the given level of English language proficiency and with visual, graphic, or interactive support, students will interact with grade level words, expressions, sentences and discourse to process or produce language necessary for academic success The ELD standard should specify a relevant content area concept or topic of study chosen by curriculum developers and teachers which maximizes an ELL's need for communication and social skills. To access an ELL supporting document which delineates performance definitions and descriptors, please click on the following link: cpalms.org/uploads/docs/standards/eld/SC.pdf.

Additional Instructional Resources:
A.V.E. for Success Collection: fasa.net/4DCGI/cms/review.html?Action=CMS_Document&DocID=139

GENERAL INFORMATION

Course Number: 2001025

Course Path: Section: Grades PreK to 12 Education Courses > **Grade Group:** Grades 6 to 8 Education Courses > **Subject:** Science > **SubSubject:** Earth/Space Sciences >

Abbreviated Title: M/J STEM ASTRO/SPACE

Course Length: Year (Y)

Course Attributes:

- Class Size Core Required

Course Type: Core Academic Course

Course Status: Draft - Course Pending Approval

Grade Level(s): 6,7,8

Educator Certifications

Chemistry (Grades 6-12)
Physics (Grades 6-12)
Earth/Space Science (Grades 6-12)
Middle Grades Integrated Curriculum (Middle Grades 5-9)
Middle Grades General Science (Middle Grades 5-9)

Earth/Space Science (#2001310) 2022 - And Beyond

Course Standards

Name	Description
SC.912.E.5.1:	Cite evidence used to develop and verify the scientific theory of the Big Bang (also known as the Big Bang Theory) of the origin of the universe.
SC.912.E.5.2:	Identify patterns in the organization and distribution of matter in the universe and the forces that determine them.
SC.912.E.5.3:	Describe and predict how the initial mass of a star determines its evolution.
SC.912.E.5.4:	Explain the physical properties of the Sun and its dynamic nature and connect them to conditions and events on Earth.
SC.912.E.5.5:	Explain the formation of planetary systems based on our knowledge of our Solar System and apply this knowledge to newly discovered planetary systems.
SC.912.E.5.6:	Develop logical connections through physical principles, including Kepler's and Newton's Laws about the relationships and the effects of Earth, Moon, and Sun on each other.
SC.912.E.5.9:	Analyze the broad effects of space exploration on the economy and culture of Florida.
SC.912.E.5.11:	Distinguish the various methods of measuring astronomical distances and apply each in appropriate situations.
SC.912.E.6.1:	Describe and differentiate the layers of Earth and the interactions among them.
SC.912.E.6.2:	Connect surface features to surface processes that are responsible for their formation.
SC.912.E.6.3:	Analyze the scientific theory of plate tectonics and identify related major processes and features as a result of moving plates.
SC.912.E.6.4:	Analyze how specific geologic processes and features are expressed in Florida and elsewhere.
SC.912.E.6.5:	Describe the geologic development of the present day oceans and identify commonly found features.
SC.912.E.7.1:	Analyze the movement of matter and energy through the different biogeochemical cycles, including water and carbon.
SC.912.E.7.2:	Analyze the causes of the various kinds of surface and deep water motion within the oceans and their impacts on the transfer of energy between the poles and the equator.
SC.912.E.7.3:	Differentiate and describe the various interactions among Earth systems, including: atmosphere, hydrosphere, cryosphere, geosphere, and biosphere.
SC.912.E.7.4:	Summarize the conditions that contribute to the climate of a geographic area, including the relationships to lakes and oceans.
SC.912.E.7.5:	Predict future weather conditions based on present observations and conceptual models and recognize limitations and uncertainties of such predictions.
SC.912.E.7.6:	Relate the formation of severe weather to the various physical factors.
SC.912.E.7.7:	Identify, analyze, and relate the internal (Earth system) and external (astronomical) conditions that contribute to global climate change.
SC.912.E.7.8:	Explain how various atmospheric, oceanic, and hydrologic conditions in Florida have influenced and can influence human behavior, both individually and collectively.
SC.912.L.15.1:	Explain how the scientific theory of evolution is supported by the fossil record, comparative anatomy, comparative embryology, biogeography, molecular biology, and observed evolutionary change.
SC.912.L.15.8:	Describe the scientific explanations of the origin of life on Earth.
SC.912.N.1.1:	Define a problem based on a specific body of knowledge, for example: biology, chemistry, physics, and earth/space science, and do the following: 1. **Pose questions about the natural world,** (Articulate the purpose of the investigation and identify the relevant scientific concepts). 2. **Conduct systematic observations,** (Write procedures that are clear and replicable. Identify observables and examine relationships between test (independent) variable and outcome (dependent) variable. Employ appropriate methods for accurate and consistent observations; conduct and record measurements at appropriate levels of precision. Follow safety guidelines). 3. **Examine books and other sources of information to see what is already known,** 4. **Review what is known in light of empirical evidence,** (Examine whether available empirical evidence can be interpreted in terms of existing knowledge and models, and if not, modify or develop new models). 5. **Plan investigations,** (Design and evaluate a scientific investigation). 6. **Use tools to gather, analyze, and interpret data (this includes the use of measurement in metric and other systems, and also the generation and interpretation of graphical representations of data, including data tables and graphs),** (Collect data or evidence in an organized way. Properly use instruments, equipment, and materials (e.g., scales, probeware, meter sticks, microscopes, computers) including set-up, calibration, technique, maintenance, and storage). 7. **Pose answers, explanations, or descriptions of events,** 8. **Generate explanations that explicate or describe natural phenomena (inferences),** 9. **Use appropriate evidence and reasoning to justify these explanations to others,** 10. **Communicate results of scientific investigations, and** 11. **Evaluate the merits of the explanations produced by others.**
SC.912.N.1.4:	Identify sources of information and assess their reliability according to the strict standards of scientific investigation.
SC.912.N.1.5:	Describe and provide examples of how similar investigations conducted in many parts of the world result in the same outcome.
SC.912.N.1.6:	Describe how scientific inferences are drawn from scientific observations and provide examples from the content being studied.
SC.912.N.2.4:	Explain that scientific knowledge is both durable and robust and open to change. Scientific knowledge can change because it is often examined and re-examined by new investigations and scientific argumentation. Because of these frequent examinations, scientific knowledge becomes stronger, leading to its durability.
SC.912.N.2.5:	Describe instances in which scientists' varied backgrounds, talents, interests, and goals influence the inferences and thus the explanations that they make about observations of natural phenomena and describe that competing interpretations (explanations) of scientists are a strength of science as they are a source of new, testable ideas that have the potential to add new evidence to support one or another of the explanations.
SC.912.N.3.1:	Explain that a scientific theory is the culmination of many scientific investigations drawing together all the current evidence concerning a substantial range of phenomena; thus, a scientific theory represents the most powerful explanation scientists have to offer.
SC.912.N.3.5:	Describe the function of models in science, and identify the wide range of models used in science.
SC.912.N.4.1:	Explain how scientific knowledge and reasoning provide an empirically-based perspective to inform society's decision making.

SC.912.P.10.4:	Describe heat as the energy transferred by convection, conduction, and radiation, and explain the connection of heat to change in temperature or states of matter.
SC.912.P.10.10:	Compare the magnitude and range of the four fundamental forces (gravitational, electromagnetic, weak nuclear, strong nuclear).
SC.912.P.10.11:	Explain and compare nuclear reactions (radioactive decay, fission and fusion), the energy changes associated with them and their associated safety issues.
SC.912.P.10.16:	Explain the relationship between moving charges and magnetic fields, as well as changing magnetic fields and electric fields, and their application to modern technologies.
SC.912.P.10.18:	Explore the theory of electromagnetism by comparing and contrasting the different parts of the electromagnetic spectrum in terms of wavelength, frequency, and energy, and relate them to phenomena and applications.
SC.912.P.10.19:	Explain that all objects emit and absorb electromagnetic radiation and distinguish between objects that are blackbody radiators and those that are not.
SC.912.P.10.20:	Describe the measurable properties of waves and explain the relationships among them and how these properties change when the wave moves from one medium to another.
SC.912.P.12.2:	Analyze the motion of an object in terms of its position, velocity, and acceleration (with respect to a frame of reference) as functions of time.
SC.912.P.12.4:	Describe how the gravitational force between two objects depends on their masses and the distance between them.
MA.K12.MTR.1.1:	Mathematicians who participate in effortful learning both individually and with others: • Analyze the problem in a way that makes sense given the task. • Ask questions that will help with solving the task. • Build perseverance by modifying methods as needed while solving a challenging task. • Stay engaged and maintain a positive mindset when working to solve tasks. • Help and support each other when attempting a new method or approach. **Clarifications:** Teachers who encourage students to participate actively in effortful learning both individually and with others: • Cultivate a community of growth mindset learners. • Foster perseverance in students by choosing tasks that are challenging. • Develop students' ability to analyze and problem solve. • Recognize students' effort when solving challenging problems.
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MA.K12.MTR.6.1:	Assess the reasonableness of solutions. Mathematicians who assess the reasonableness of solutions: • Estimate to discover possible solutions. • Use benchmark quantities to determine if a solution makes sense. • Check calculations when solving problems. • Verify possible solutions by explaining the methods used. • Evaluate results based on the given context. **Clarifications:** Teachers who encourage students to assess the reasonableness of solutions: • Have students estimate or predict solutions prior to solving. • Prompt students to continually ask, "Does this solution make sense? How do you know?" • Reinforce that students check their work as they progress within and after a task. • Strengthen students' ability to verify solutions through justifications.
MA.K12.MTR.7.1:	Apply mathematics to real-world contexts. Mathematicians who apply mathematics to real-world contexts: • Connect mathematical concepts to everyday experiences. • Use models and methods to understand, represent and solve problems. • Perform investigations to gather data or determine if a method is appropriate. • Redesign models and methods to improve accuracy or efficiency. **Clarifications:** Teachers who encourage students to apply mathematics to real-world contexts: • Provide opportunities for students to create models, both concrete and abstract, and perform investigations. • Challenge students to question the accuracy of their models and methods. • Support students as they validate conclusions by comparing them to the given situation. • Indicate how various concepts can be applied to other disciplines.
ELA.K12.EE.1.1:	Cite evidence to explain and justify reasoning. **Clarifications:** K-1 Students include textual evidence in their oral communication with guidance and support from adults. The evidence can consist of details from the text without naming the text. During 1st grade, students learn how to incorporate the evidence in their writing. 2-3 Students include relevant textual evidence in their written and oral communication. Students should name the text when they refer to it. In 3rd grade, students should use a combination of direct and indirect citations. 4-5 Students continue with previous skills and reference comments made by speakers and peers. Students cite texts that they've directly quoted, paraphrased, or used for information. When writing, students will use the form of citation dictated by the instructor or the style guide referenced by the instructor. 6-8 Students continue with previous skills and use a style guide to create a proper citation. 9-12 Students continue with previous skills and should be aware of existing style guides and the ways in which they differ.
ELA.K12.EE.2.1:	Read and comprehend grade-level complex texts proficiently. **Clarifications:** See Text Complexity for grade-level complexity bands and a text complexity rubric.
ELA.K12.EE.3.1:	Make inferences to support comprehension. **Clarifications:** Students will make inferences before the words infer or inference are introduced. Kindergarten students will answer questions like "Why is the girl smiling?" or make predictions about what will happen based on the title page. Students will use the terms and apply them in 2nd grade and beyond.
ELA.K12.EE.4.1:	Use appropriate collaborative techniques and active listening skills when engaging in discussions in a variety of situations. **Clarifications:** In kindergarten, students learn to listen to one another respectfully. In grades 1-2, students build upon these skills by justifying what they are thinking. For example: "I think _____ because _____." The collaborative conversations are becoming academic conversations. In grades 3-12, students engage in academic conversations discussing claims and justifying their reasoning, refining and applying skills. Students build on ideas, propel the conversation, and support claims and counterclaims with evidence.
	Use the accepted rules governing a specific format to create quality work. **Clarifications:**

ELA.K12.EE.5.1:	Students will incorporate skills learned into work products to produce quality work. For students to incorporate these skills appropriately, they must receive instruction. A 3rd grade student creating a poster board display must have instruction in how to effectively present information to do quality work.
ELA.K12.EE.6.1:	Use appropriate voice and tone when speaking or writing. **Clarifications:** In kindergarten and 1st grade, students learn the difference between formal and informal language. For example, the way we talk to our friends differs from the way we speak to adults. In 2nd grade and beyond, students practice appropriate social and academic language to discuss texts.
ELD.K12.ELL.SC.1:	English language learners communicate information, ideas and concepts necessary for academic success in the content area of Science.
ELD.K12.ELL.SI.1:	English language learners communicate for social and instructional purposes within the school setting.

General Course Information and Notes

VERSION DESCRIPTION

Laboratory investigations that include the use of scientific inquiry, research, measurement, problem solving, laboratory apparatus and technologies, experimental procedures, and safety procedures are an integral part of this course. The National Science Teachers Association (NSTA) recommends that at the high school level, all students should be in the science lab or field, collecting data every week. School laboratory investigations (labs) are defined by the National Research Council (NRC) as an experience in the laboratory, classroom, or the field that provides students with opportunities to interact directly with natural phenomena or with data collected by others using tools, materials, data collection techniques, and models (NRC, 2006, p. 3). Laboratory investigations in the high school classroom should help all students develop a growing understanding of the complexity and ambiguity of empirical work, as well as the skills to calibrate and troubleshoot equipment used to make observations. Learners should understand measurement error; and have the skills to aggregate, interpret, and present the resulting data (National Research Council, 2006, p.77; NSTA, 2007).

Special Notes:
Instructional Practices
Teaching from a range of complex text is optimized when teachers in all subject areas implement the following strategies on a routine basis:

1. Ensuring wide reading from complex text that varies in length.
2. Making close reading and rereading of texts central to lessons.
3. Emphasizing text-specific complex questions, and cognitively complex tasks, reinforce focus on the text and cultivate independence.
4. Emphasizing students supporting answers based upon evidence from the text.
5. Providing extensive research and writing opportunities (claims and evidence).

Science and Engineering Practices (NRC *Framework for K-12 Science Education, 2010*)

- Asking questions (for science) and defining problems (for engineering).
- Developing and using models.
- Planning and carrying out investigations.
- Analyzing and interpreting data.
- Using mathematics, information and computer technology, and computational thinking.
- Constructing explanations (for science) and designing solutions (for engineering).
- Engaging in argument from evidence.
- Obtaining, evaluating, and communicating information.

GENERAL NOTES

Florida's Benchmarks for Excellent Student Thinking (B.E.S.T.) Standards
This course includes Florida's B.E.S.T. ELA Expectations (EE) and Mathematical Thinking and Reasoning Standards (MTRs) for students. Florida educators should intentionally embed these standards within the content and their instruction as applicable. For guidance on the implementation of the EEs and MTRs, please visit cpalms.org/Standards/BEST_Standards.aspx and select the appropriate B.E.S.T. Standards package.

English Language Development ELD Standards Special Notes Section:
Teachers are required to provide listening, speaking, reading and writing instruction that allows English language learners (ELL) to communicate information, ideas and concepts for academic success in the content area of Science. For the given level of English language proficiency and with visual, graphic, or interactive support, students will interact with grade level words, expressions, sentences and discourse to process or produce language necessary for academic success The ELD standard should specify a relevant content area concept or topic of study chosen by curriculum developers and teachers which maximizes an ELL's need for communication and social skills. To access an ELL supporting document which delineates performance definitions and descriptors, please click on the following link: cpalms.org/uploads/docs/standards/eld/SC.pdf

Additional Instructional Resources:
A.V.E. for Success Collection is provided by the Florida Association of School Administrators: fasa.net/4DCGI/cms/review.html?Action=CMS_Document&DocID=139. Please be aware that these resources have not been reviewed by CPALMS and there may be a charge for the use of some of them in this collection.

GENERAL INFORMATION

Course Number: 2001310

Course Path: Section: Grades PreK to 12 Education Courses > **Grade Group:** Grades 9 to 12 and Adult Education Courses > **Subject:** Science > **SubSubject:** Earth/Space Sciences >

Abbreviated Title: EARTH/SPA SCI
Number of Credits: One (1) credit
Course Length: Year (Y)
Course Type: Core Academic Course
Course Level: 2
Course Status: Draft - Course Pending Approval
Grade Level(s): 9,10,11,12
Graduation Requirement: Equally Rigorous Science

Educator Certifications

Science (Secondary Grades 7-12)
Chemistry (Grades 6-12)
Earth/Space Science (Grades 6-12)
Physics (Grades 6-12)
Middle Grades General Science (Middle Grades 5-9)

Earth/Space Science Honors (#2001320) 2022 - And Beyond

Course Standards

Name	Description
SC.912.E.5.1:	Cite evidence used to develop and verify the scientific theory of the Big Bang (also known as the Big Bang Theory) of the origin of the universe.
SC.912.E.5.2:	Identify patterns in the organization and distribution of matter in the universe and the forces that determine them.
SC.912.E.5.3:	Describe and predict how the initial mass of a star determines its evolution.
SC.912.E.5.4:	Explain the physical properties of the Sun and its dynamic nature and connect them to conditions and events on Earth.
SC.912.E.5.5:	Explain the formation of planetary systems based on our knowledge of our Solar System and apply this knowledge to newly discovered planetary systems.
SC.912.E.5.6:	Develop logical connections through physical principles, including Kepler's and Newton's Laws about the relationships and the effects of Earth, Moon, and Sun on each other.
SC.912.E.5.7:	Relate the history of and explain the justification for future space exploration and continuing technology development.
SC.912.E.5.8:	Connect the concepts of radiation and the electromagnetic spectrum to the use of historical and newly-developed observational tools.
SC.912.E.5.9:	Analyze the broad effects of space exploration on the economy and culture of Florida.
SC.912.E.5.10:	Describe and apply the coordinate system used to locate objects in the sky.
SC.912.E.5.11:	Distinguish the various methods of measuring astronomical distances and apply each in appropriate situations.
SC.912.E.6.1:	Describe and differentiate the layers of Earth and the interactions among them.
SC.912.E.6.2:	Connect surface features to surface processes that are responsible for their formation.
SC.912.E.6.3:	Analyze the scientific theory of plate tectonics and identify related major processes and features as a result of moving plates.
SC.912.E.6.4:	Analyze how specific geologic processes and features are expressed in Florida and elsewhere.
SC.912.E.6.5:	Describe the geologic development of the present day oceans and identify commonly found features.
SC.912.E.7.1:	Analyze the movement of matter and energy through the different biogeochemical cycles, including water and carbon.
SC.912.E.7.2:	Analyze the causes of the various kinds of surface and deep water motion within the oceans and their impacts on the transfer of energy between the poles and the equator.
SC.912.E.7.3:	Differentiate and describe the various interactions among Earth systems, including: atmosphere, hydrosphere, cryosphere, geosphere, and biosphere.
SC.912.E.7.4:	Summarize the conditions that contribute to the climate of a geographic area, including the relationships to lakes and oceans.
SC.912.E.7.5:	Predict future weather conditions based on present observations and conceptual models and recognize limitations and uncertainties of such predictions.
SC.912.E.7.6:	Relate the formation of severe weather to the various physical factors.
SC.912.E.7.7:	Identify, analyze, and relate the internal (Earth system) and external (astronomical) conditions that contribute to global climate change.
SC.912.E.7.8:	Explain how various atmospheric, oceanic, and hydrologic conditions in Florida have influenced and can influence human behavior, both individually and collectively.
SC.912.E.7.9:	Cite evidence that the ocean has had a significant influence on climate change by absorbing, storing, and moving heat, carbon, and water.
SC.912.L.15.1:	Explain how the scientific theory of evolution is supported by the fossil record, comparative anatomy, comparative embryology, biogeography, molecular biology, and observed evolutionary change.
SC.912.L.15.8:	Describe the scientific explanations of the origin of life on Earth.
SC.912.N.1.1:	Define a problem based on a specific body of knowledge, for example: biology, chemistry, physics, and earth/space science, and do the following: 1. **Pose questions about the natural world,** (Articulate the purpose of the investigation and identify the relevant scientific concepts). 2. **Conduct systematic observations,** (Write procedures that are clear and replicable. Identify observables and examine relationships between test (independent) variable and outcome (dependent) variable. Employ appropriate methods for accurate and consistent observations; conduct and record measurements at appropriate levels of precision. Follow safety guidelines). 3. **Examine books and other sources of information to see what is already known,** 4. **Review what is known in light of empirical evidence,** (Examine whether available empirical evidence can be interpreted in terms of existing knowledge and models, and if not, modify or develop new models). 5. **Plan investigations,** (Design and evaluate a scientific investigation). 6. **Use tools to gather, analyze, and interpret data (this includes the use of measurement in metric and other systems, and also the generation and interpretation of graphical representations of data, including data tables and graphs),** (Collect data or evidence in an organized way. Properly use instruments, equipment, and materials (e.g., scales, probeware, meter sticks, microscopes, computers) including set-up, calibration, technique, maintenance, and storage). 7. **Pose answers, explanations, or descriptions of events,** 8. **Generate explanations that explicate or describe natural phenomena (inferences),** 9. **Use appropriate evidence and reasoning to justify these explanations to others,** 10. **Communicate results of scientific investigations, and** 11. **Evaluate the merits of the explanations produced by others.**
SC.912.N.1.3:	Recognize that the strength or usefulness of a scientific claim is evaluated through scientific argumentation, which depends on critical and logical thinking, and the active consideration of alternative scientific explanations to explain the data presented.
SC.912.N.1.4:	Identify sources of information and assess their reliability according to the strict standards of scientific investigation.
SC.912.N.1.5:	Describe and provide examples of how similar investigations conducted in many parts of the world result in the same outcome.
SC.912.N.1.6:	Describe how scientific inferences are drawn from scientific observations and provide examples from the content being studied.
SC.912.N.2.1:	Identify what is science, what clearly is not science, and what superficially resembles science (but fails to meet the criteria for science).
SC.912.N.2.2:	Identify which questions can be answered through science and which questions are outside the boundaries of scientific investigation, such as questions addressed by other ways of knowing, such as art, philosophy, and religion.
SC.912.N.2.3:	Identify examples of pseudoscience (such as astrology, phrenology) in society.

SC.912.N.2.4:	Explain that scientific knowledge is both durable and robust and open to change. Scientific knowledge can change because it is often examined and re-examined by new investigations and scientific argumentation. Because of these frequent examinations, scientific knowledge becomes stronger, leading to its durability.
SC.912.N.2.5:	Describe instances in which scientists' varied backgrounds, talents, interests, and goals influence the inferences and thus the explanations that they make about observations of natural phenomena and describe that competing interpretations (explanations) of scientists are a strength of science as they are a source of new, testable ideas that have the potential to add new evidence to support one or another of the explanations.
SC.912.N.3.1:	Explain that a scientific theory is the culmination of many scientific investigations drawing together all the current evidence concerning a substantial range of phenomena; thus, a scientific theory represents the most powerful explanation scientists have to offer.
SC.912.N.3.4:	Recognize that theories do not become laws, nor do laws become theories; theories are well supported explanations and laws are well supported descriptions.
SC.912.N.3.5:	Describe the function of models in science, and identify the wide range of models used in science.
SC.912.N.4.1:	Explain how scientific knowledge and reasoning provide an empirically-based perspective to inform society's decision making.
SC.912.N.4.2:	Weigh the merits of alternative strategies for solving a specific societal problem by comparing a number of different costs and benefits, such as human, economic, and environmental.
SC.912.P.10.4:	Describe heat as the energy transferred by convection, conduction, and radiation, and explain the connection of heat to change in temperature or states of matter.
SC.912.P.10.10:	Compare the magnitude and range of the four fundamental forces (gravitational, electromagnetic, weak nuclear, strong nuclear).
SC.912.P.10.11:	Explain and compare nuclear reactions (radioactive decay, fission and fusion), the energy changes associated with them and their associated safety issues.
SC.912.P.10.16:	Explain the relationship between moving charges and magnetic fields, as well as changing magnetic fields and electric fields, and their application to modern technologies.
SC.912.P.10.18:	Explore the theory of electromagnetism by comparing and contrasting the different parts of the electromagnetic spectrum in terms of wavelength, frequency, and energy, and relate them to phenomena and applications.
SC.912.P.10.19:	Explain that all objects emit and absorb electromagnetic radiation and distinguish between objects that are blackbody radiators and those that are not.
SC.912.P.10.20:	Describe the measurable properties of waves and explain the relationships among them and how these properties change when the wave moves from one medium to another.
SC.912.P.12.2:	Analyze the motion of an object in terms of its position, velocity, and acceleration (with respect to a frame of reference) as functions of time.
SC.912.P.12.4:	Describe how the gravitational force between two objects depends on their masses and the distance between them.
MA.K12.MTR.1.1:	Mathematicians who participate in effortful learning both individually and with others: • Analyze the problem in a way that makes sense given the task. • Ask questions that will help with solving the task. • Build perseverance by modifying methods as needed while solving a challenging task. • Stay engaged and maintain a positive mindset when working to solve tasks. • Help and support each other when attempting a new method or approach. **Clarifications:** Teachers who encourage students to participate actively in effortful learning both individually and with others: • Cultivate a community of growth mindset learners. • Foster perseverance in students by choosing tasks that are challenging. • Develop students' ability to analyze and problem solve. • Recognize students' effort when solving challenging problems.
MA.K12.MTR.2.1:	Demonstrate understanding by representing problems in multiple ways. Mathematicians who demonstrate understanding by representing problems in multiple ways: • Build understanding through modeling and using manipulatives. • Represent solutions to problems in multiple ways using objects, drawings, tables, graphs and equations. • Progress from modeling problems with objects and drawings to using algorithms and equations. • Express connections between concepts and representations. • Choose a representation based on the given context or purpose. **Clarifications:** Teachers who encourage students to demonstrate understanding by representing problems in multiple ways: • Help students make connections between concepts and representations. • Provide opportunities for students to use manipulatives when investigating concepts. • Guide students from concrete to pictorial to abstract representations as understanding progresses. • Show students that various representations can have different purposes and can be useful in different situations.
MA.K12.MTR.3.1:	Complete tasks with mathematical fluency. Mathematicians who complete tasks with mathematical fluency: • Select efficient and appropriate methods for solving problems within the given context. • Maintain flexibility and accuracy while performing procedures and mental calculations. • Complete tasks accurately and with confidence. • Adapt procedures to apply them to a new context. • Use feedback to improve efficiency when performing calculations. **Clarifications:** Teachers who encourage students to complete tasks with mathematical fluency: • Provide students with the flexibility to solve problems by selecting a procedure that allows them to solve efficiently and accurately. • Offer multiple opportunities for students to practice efficient and generalizable methods. • Provide opportunities for students to reflect on the method they used and determine if a more efficient method could have been used.
	Engage in discussions that reflect on the mathematical thinking of self and others. Mathematicians who engage in discussions that reflect on the mathematical thinking of self and others: • Communicate mathematical ideas, vocabulary and methods effectively.

MA.K12.MTR.4.1:	• Analyze the mathematical thinking of others. • Compare the efficiency of a method to those expressed by others. • Recognize errors and suggest how to correctly solve the task. • Justify results by explaining methods and processes. • Construct possible arguments based on evidence. **Clarifications:** Teachers who encourage students to engage in discussions that reflect on the mathematical thinking of self and others: • Establish a culture in which students ask questions of the teacher and their peers, and error is an opportunity for learning. • Create opportunities for students to discuss their thinking with peers. • Select, sequence and present student work to advance and deepen understanding of correct and increasingly efficient methods. • Develop students' ability to justify methods and compare their responses to the responses of their peers.
MA.K12.MTR.5.1:	Use patterns and structure to help understand and connect mathematical concepts. Mathematicians who use patterns and structure to help understand and connect mathematical concepts: • Focus on relevant details within a problem. • Create plans and procedures to logically order events, steps or ideas to solve problems. • Decompose a complex problem into manageable parts. • Relate previously learned concepts to new concepts. • Look for similarities among problems. • Connect solutions of problems to more complicated large-scale situations. **Clarifications:** Teachers who encourage students to use patterns and structure to help understand and connect mathematical concepts: • Help students recognize the patterns in the world around them and connect these patterns to mathematical concepts. • Support students to develop generalizations based on the similarities found among problems. • Provide opportunities for students to create plans and procedures to solve problems. • Develop students' ability to construct relationships between their current understanding and more sophisticated ways of thinking.
MA.K12.MTR.6.1:	Assess the reasonableness of solutions. Mathematicians who assess the reasonableness of solutions: • Estimate to discover possible solutions. • Use benchmark quantities to determine if a solution makes sense. • Check calculations when solving problems. • Verify possible solutions by explaining the methods used. • Evaluate results based on the given context. **Clarifications:** Teachers who encourage students to assess the reasonableness of solutions: • Have students estimate or predict solutions prior to solving. • Prompt students to continually ask, "Does this solution make sense? How do you know?" • Reinforce that students check their work as they progress within and after a task. • Strengthen students' ability to verify solutions through justifications.
MA.K12.MTR.7.1:	Apply mathematics to real-world contexts. Mathematicians who apply mathematics to real-world contexts: • Connect mathematical concepts to everyday experiences. • Use models and methods to understand, represent and solve problems. • Perform investigations to gather data or determine if a method is appropriate. • Redesign models and methods to improve accuracy or efficiency. **Clarifications:** Teachers who encourage students to apply mathematics to real-world contexts: • Provide opportunities for students to create models, both concrete and abstract, and perform investigations. • Challenge students to question the accuracy of their models and methods. • Support students as they validate conclusions by comparing them to the given situation. • Indicate how various concepts can be applied to other disciplines.
ELA.K12.EE.1.1:	Cite evidence to explain and justify reasoning. **Clarifications:** K-1 Students include textual evidence in their oral communication with guidance and support from adults. The evidence can consist of details from the text without naming the text. During 1st grade, students learn how to incorporate the evidence in their writing. 2-3 Students include relevant textual evidence in their written and oral communication. Students should name the text when they refer to it. In 3rd grade, students should use a combination of direct and indirect citations. 4-5 Students continue with previous skills and reference comments made by speakers and peers. Students cite texts that they've directly quoted, paraphrased, or used for information. When writing, students will use the form of citation dictated by the instructor or the style guide referenced by the instructor. 6-8 Students continue with previous skills and use a style guide to create a proper citation. 9-12 Students continue with previous skills and should be aware of existing style guides and the ways in which they differ.
ELA.K12.EE.2.1:	Read and comprehend grade-level complex texts proficiently. **Clarifications:** See Text Complexity for grade-level complexity bands and a text complexity rubric.
	Make inferences to support comprehension.

ELA.K12.EE.3.1:	**Clarifications:** Students will make inferences before the words infer or inference are introduced. Kindergarten students will answer questions like "Why is the girl smiling?" or make predictions about what will happen based on the title page. Students will use the terms and apply them in 2nd grade and beyond.
ELA.K12.EE.4.1:	Use appropriate collaborative techniques and active listening skills when engaging in discussions in a variety of situations. **Clarifications:** In kindergarten, students learn to listen to one another respectfully. In grades 1-2, students build upon these skills by justifying what they are thinking. For example: "I think _____ because _____." The collaborative conversations are becoming academic conversations. In grades 3-12, students engage in academic conversations discussing claims and justifying their reasoning, refining and applying skills. Students build on ideas, propel the conversation, and support claims and counterclaims with evidence.
ELA.K12.EE.5.1:	Use the accepted rules governing a specific format to create quality work. **Clarifications:** Students will incorporate skills learned into work products to produce quality work. For students to incorporate these skills appropriately, they must receive instruction. A 3rd grade student creating a poster board display must have instruction in how to effectively present information to do quality work.
ELA.K12.EE.6.1:	Use appropriate voice and tone when speaking or writing. **Clarifications:** In kindergarten and 1st grade, students learn the difference between formal and informal language. For example, the way we talk to our friends differs from the way we speak to adults. In 2nd grade and beyond, students practice appropriate social and academic language to discuss texts.
ELD.K12.ELL.SC.1:	English language learners communicate information, ideas and concepts necessary for academic success in the content area of Science.
ELD.K12.ELL.SI.1:	English language learners communicate for social and instructional purposes within the school setting.

General Course Information and Notes

GENERAL NOTES

While the content focus of this course is consistent with the Earth/Space Science course, students will explore these concepts in greater depth. In general, the academic pace and rigor will be greatly increased for honors level course work. Laboratory investigations that include the use of scientific inquiry, research, measurement, problem solving, laboratory apparatus and technologies, experimental procedures, and safety procedures are an integral part of this course. The National Science Teachers Association (NSTA) recommends that at the high school level, all students should be in the science lab or field, collecting data every week. School laboratory investigations (labs) are defined by the National Research Council (NRC) as an experience in the laboratory, classroom, or the field that provides students with opportunities to interact directly with natural phenomena or with data collected by others using tools, materials, data collection techniques, and models (NRC, 2006, p. 3). Laboratory investigations in the high school classroom should help all students develop a growing understanding of the complexity and ambiguity of empirical work, as well as the skills to calibrate and troubleshoot equipment used to make observations. Learners should understand measurement error; and have the skills to aggregate, interpret, and present the resulting data (National Research Council, 2006, p.77; NSTA, 2007).

Honors and Advanced Level Course Note: Advanced courses require a greater demand on students through increased academic rigor. Academic rigor is obtained through the application, analysis, evaluation, and creation of complex ideas that are often abstract and multi-faceted. Students are challenged to think and collaborate critically on the content they are learning. Honors level rigor will be achieved by increasing text complexity through text selection, focus on high-level qualitative measures, and complexity of task. Instruction will be structured to give students a deeper understanding of conceptual themes and organization within and across disciplines. Academic rigor is more than simply assigning to students a greater quantity of work.

Special Notes:
Instructional Practices
Teaching from a range of complex text is optimized when teachers in all subject areas implement the following strategies on a routine basis:

1. Ensuring wide reading from complex text that varies in length.
2. Making close reading and rereading of texts central to lessons.
3. Emphasizing text-specific complex questions, and cognitively complex tasks, reinforce focus on the text and cultivate independence.
4. Emphasizing students supporting answers based upon evidence from the text.
5. Providing extensive research and writing opportunities (claims and evidence).

Science and Engineering Practices (NRC *Framework for K-12 Science Education, 2010*)

- Asking questions (for science) and defining problems (for engineering).
- Developing and using models.
- Planning and carrying out investigations.
- Analyzing and interpreting data.
- Using mathematics, information and computer technology, and computational thinking.
- Constructing explanations (for science) and designing solutions (for engineering).
- Engaging in argument from evidence.
- Obtaining, evaluating, and communicating information.

Florida's Benchmarks for Excellent Student Thinking (B.E.S.T.) Standards
This course includes Florida's B.E.S.T. ELA Expectations (EE) and Mathematical Thinking and Reasoning Standards (MTRs) for students. Florida educators should intentionally

embed these standards within the content and their instruction as applicable. For guidance on the implementation of the EEs and MTRs, please visit cpalms.org/Standards/BEST_Standards.aspx and select the appropriate B.E.S.T. Standards package.

English Language Development ELD Standards Special Notes Section:
Teachers are required to provide listening, speaking, reading and writing instruction that allows English language learners (ELL) to communicate information, ideas and concepts for academic success in the content area of Science. For the given level of English language proficiency and with visual, graphic, or interactive support, students will interact with grade level words, expressions, sentences and discourse to process or produce language necessary for academic success The ELD standard should specify a relevant content area concept or topic of study chosen by curriculum developers and teachers which maximizes an ELL's need for communication and social skills. To access an ELL supporting document which delineates performance definitions and descriptors, please click on the following link: cpalms.org/uploads/docs/standards/eld/SC.pdf

GENERAL INFORMATION

Course Number: 2001320

Course Path: Section: Grades PreK to 12 Education Courses > **Grade Group:** Grades 9 to 12 and Adult Education Courses > **Subject:** Science > **SubSubject:** Earth/Space Sciences >

Abbreviated Title: EARTH/SPA SCI HON

Number of Credits: One (1) credit

Course Length: Year (Y)

Course Attributes:

- Honors

Course Type: Core Academic Course

Course Level: 3

Course Status: Draft - Course Pending Approval

Grade Level(s): 9,10,11,12

Graduation Requirement: Equally Rigorous Science

Educator Certifications

Science (Secondary Grades 7-12)
Chemistry (Grades 6-12)
Physics (Grades 6-12)
Earth/Space Science (Grades 6-12)
Middle Grades General Science (Middle Grades 5-9)

Meteorology Honors (#2001330) 2022 - And Beyond

Course Standards

Name	Description
SC.912.CS-CP.1.3:	Analyze and manipulate data collected by a variety of data collection techniques to support a hypothesis.
SC.912.CS-CP.1.4:	Collect real-time data from sources such as simulations, scientific and robotic sensors, and device emulators, using this data to formulate strategies or algorithms to solve advanced problems.
SC.912.CS-CS.1.1:	Analyze data and identify real-world patterns through modeling and simulation.
SC.912.CS-CS.1.3:	Explain how data analysis is used to enhance the understanding of complex natural and human systems.
SC.912.E.5.4:	Explain the physical properties of the Sun and its dynamic nature and connect them to conditions and events on Earth.
SC.912.E.5.7:	Relate the history of and explain the justification for future space exploration and continuing technology development.
SC.912.E.6.6:	Analyze past, present, and potential future consequences to the environment resulting from various energy production technologies.
SC.912.E.7.1:	Analyze the movement of matter and energy through the different biogeochemical cycles, including water and carbon.
SC.912.E.7.2:	Analyze the causes of the various kinds of surface and deep water motion within the oceans and their impacts on the transfer of energy between the poles and the equator.
SC.912.E.7.3:	Differentiate and describe the various interactions among Earth systems, including: atmosphere, hydrosphere, cryosphere, geosphere, and biosphere.
SC.912.E.7.4:	Summarize the conditions that contribute to the climate of a geographic area, including the relationships to lakes and oceans.
SC.912.E.7.5:	Predict future weather conditions based on present observations and conceptual models and recognize limitations and uncertainties of such predictions.
SC.912.E.7.6:	Relate the formation of severe weather to the various physical factors.
SC.912.E.7.7:	Identify, analyze, and relate the internal (Earth system) and external (astronomical) conditions that contribute to global climate change.
SC.912.E.7.8:	Explain how various atmospheric, oceanic, and hydrologic conditions in Florida have influenced and can influence human behavior, both individually and collectively.
SC.912.E.7.9:	Cite evidence that the ocean has had a significant influence on climate change by absorbing, storing, and moving heat, carbon, and water.
SC.912.L.17.3:	Discuss how various oceanic and freshwater processes, such as currents, tides, and waves, affect the abundance of aquatic organisms.
SC.912.L.17.4:	Describe changes in ecosystems resulting from seasonal variations, climate change and succession.
SC.912.L.17.8:	Recognize the consequences of the losses of biodiversity due to catastrophic events, climate changes, human activity, and the introduction of invasive, non-native species.
SC.912.L.17.10:	Diagram and explain the biogeochemical cycles of an ecosystem, including water, carbon, and nitrogen cycle.
SC.912.L.17.11:	Evaluate the costs and benefits of renewable and nonrenewable resources, such as water, energy, fossil fuels, wildlife, and forests.
SC.912.L.17.12:	Discuss the political, social, and environmental consequences of sustainable use of land.
SC.912.L.17.13:	Discuss the need for adequate monitoring of environmental parameters when making policy decisions.
SC.912.L.17.15:	Discuss the effects of technology on environmental quality.
SC.912.L.17.16:	Discuss the large-scale environmental impacts resulting from human activity, including waste spills, oil spills, runoff, greenhouse gases, ozone depletion, and surface and groundwater pollution.
SC.912.L.18.12:	Discuss the special properties of water that contribute to Earth's suitability as an environment for life: cohesive behavior, ability to moderate temperature, expansion upon freezing, and versatility as a solvent.
SC.912.N.1.1:	Define a problem based on a specific body of knowledge, for example: biology, chemistry, physics, and earth/space science, and do the following: 1. **Pose questions about the natural world,** (Articulate the purpose of the investigation and identify the relevant scientific concepts). 2. **Conduct systematic observations,** (Write procedures that are clear and replicable. Identify observables and examine relationships between test (independent) variable and outcome (dependent) variable. Employ appropriate methods for accurate and consistent observations; conduct and record measurements at appropriate levels of precision. Follow safety guidelines). 3. **Examine books and other sources of information to see what is already known,** 4. **Review what is known in light of empirical evidence,** (Examine whether available empirical evidence can be interpreted in terms of existing knowledge and models, and if not, modify or develop new models). 5. **Plan investigations,** (Design and evaluate a scientific investigation). 6. **Use tools to gather, analyze, and interpret data (this includes the use of measurement in metric and other systems, and also the generation and interpretation of graphical representations of data, including data tables and graphs),** (Collect data or evidence in an organized way. Properly use instruments, equipment, and materials (e.g., scales, probeware, meter sticks, microscopes, computers) including set-up, calibration, technique, maintenance, and storage). 7. **Pose answers, explanations, or descriptions of events,** 8. **Generate explanations that explicate or describe natural phenomena (inferences),** 9. **Use appropriate evidence and reasoning to justify these explanations to others,** 10. **Communicate results of scientific investigations, and** 11. **Evaluate the merits of the explanations produced by others.**
SC.912.N.1.2:	Describe and explain what characterizes science and its methods.
SC.912.N.1.3:	Recognize that the strength or usefulness of a scientific claim is evaluated through scientific argumentation, which depends on critical and logical thinking, and the active consideration of alternative scientific explanations to explain the data presented.
SC.912.N.1.4:	Identify sources of information and assess their reliability according to the strict standards of scientific investigation.
SC.912.N.1.5:	Describe and provide examples of how similar investigations conducted in many parts of the world result in the same outcome.
SC.912.N.1.6:	Describe how scientific inferences are drawn from scientific observations and provide examples from the content being studied.
SC.912.N.1.7:	Recognize the role of creativity in constructing scientific questions, methods and explanations.
	Explain that scientific knowledge is both durable and robust and open to change. Scientific knowledge can change because it is often examined and

SC.912.N.2.4:	re-examined by new investigations and scientific argumentation. Because of these frequent examinations, scientific knowledge becomes stronger, leading to its durability.
SC.912.N.2.5:	Describe instances in which scientists' varied backgrounds, talents, interests, and goals influence the inferences and thus the explanations that they make about observations of natural phenomena and describe that competing interpretations (explanations) of scientists are a strength of science as they are a source of new, testable ideas that have the potential to add new evidence to support one or another of the explanations.
SC.912.N.3.5:	Describe the function of models in science, and identify the wide range of models used in science.
SC.912.N.4.1:	Explain how scientific knowledge and reasoning provide an empirically-based perspective to inform society's decision making.
SC.912.N.4.2:	Weigh the merits of alternative strategies for solving a specific societal problem by comparing a number of different costs and benefits, such as human, economic, and environmental.
SC.912.P.10.1:	Differentiate among the various forms of energy and recognize that they can be transformed from one form to others.
SC.912.P.10.2:	Explore the Law of Conservation of Energy by differentiating among open, closed, and isolated systems and explain that the total energy in an isolated system is a conserved quantity.
SC.912.P.10.4:	Describe heat as the energy transferred by convection, conduction, and radiation, and explain the connection of heat to change in temperature or states of matter.
SC.912.P.10.5:	Relate temperature to the average molecular kinetic energy.
SC.912.P.10.18:	Explore the theory of electromagnetism by comparing and contrasting the different parts of the electromagnetic spectrum in terms of wavelength, frequency, and energy, and relate them to phenomena and applications.
SC.912.P.10.19:	Explain that all objects emit and absorb electromagnetic radiation and distinguish between objects that are blackbody radiators and those that are not.
MA.K12.MTR.1.1:	Mathematicians who participate in effortful learning both individually and with others: • Analyze the problem in a way that makes sense given the task. • Ask questions that will help with solving the task. • Build perseverance by modifying methods as needed while solving a challenging task. • Stay engaged and maintain a positive mindset when working to solve tasks. • Help and support each other when attempting a new method or approach. **Clarifications:** Teachers who encourage students to participate actively in effortful learning both individually and with others: • Cultivate a community of growth mindset learners. • Foster perseverance in students by choosing tasks that are challenging. • Develop students' ability to analyze and problem solve. • Recognize students' effort when solving challenging problems.
MA.K12.MTR.2.1:	Demonstrate understanding by representing problems in multiple ways. Mathematicians who demonstrate understanding by representing problems in multiple ways: • Build understanding through modeling and using manipulatives. • Represent solutions to problems in multiple ways using objects, drawings, tables, graphs and equations. • Progress from modeling problems with objects and drawings to using algorithms and equations. • Express connections between concepts and representations. • Choose a representation based on the given context or purpose. **Clarifications:** Teachers who encourage students to demonstrate understanding by representing problems in multiple ways: • Help students make connections between concepts and representations. • Provide opportunities for students to use manipulatives when investigating concepts. • Guide students from concrete to pictorial to abstract representations as understanding progresses. • Show students that various representations can have different purposes and can be useful in different situations.
MA.K12.MTR.3.1:	Complete tasks with mathematical fluency. Mathematicians who complete tasks with mathematical fluency: • Select efficient and appropriate methods for solving problems within the given context. • Maintain flexibility and accuracy while performing procedures and mental calculations. • Complete tasks accurately and with confidence. • Adapt procedures to apply them to a new context. • Use feedback to improve efficiency when performing calculations. **Clarifications:** Teachers who encourage students to complete tasks with mathematical fluency: • Provide students with the flexibility to solve problems by selecting a procedure that allows them to solve efficiently and accurately. • Offer multiple opportunities for students to practice efficient and generalizable methods. • Provide opportunities for students to reflect on the method they used and determine if a more efficient method could have been used.
MA.K12.MTR.4.1:	Engage in discussions that reflect on the mathematical thinking of self and others. Mathematicians who engage in discussions that reflect on the mathematical thinking of self and others: • Communicate mathematical ideas, vocabulary and methods effectively. • Analyze the mathematical thinking of others. • Compare the efficiency of a method to those expressed by others. • Recognize errors and suggest how to correctly solve the task. • Justify results by explaining methods and processes. • Construct possible arguments based on evidence. **Clarifications:** Teachers who encourage students to engage in discussions that reflect on the mathematical thinking of self and others: • Establish a culture in which students ask questions of the teacher and their peers, and error is an opportunity for learning. • Create opportunities for students to discuss their thinking with peers. • Select, sequence and present student work to advance and deepen understanding of correct and increasingly efficient methods.

	• Develop students' ability to justify methods and compare their responses to the responses of their peers.
MA.K12.MTR.5.1:	Use patterns and structure to help understand and connect mathematical concepts. Mathematicians who use patterns and structure to help understand and connect mathematical concepts: • Focus on relevant details within a problem. • Create plans and procedures to logically order events, steps or ideas to solve problems. • Decompose a complex problem into manageable parts. • Relate previously learned concepts to new concepts. • Look for similarities among problems. • Connect solutions of problems to more complicated large-scale situations. **Clarifications:** Teachers who encourage students to use patterns and structure to help understand and connect mathematical concepts: • Help students recognize the patterns in the world around them and connect these patterns to mathematical concepts. • Support students to develop generalizations based on the similarities found among problems. • Provide opportunities for students to create plans and procedures to solve problems. • Develop students' ability to construct relationships between their current understanding and more sophisticated ways of thinking.
MA.K12.MTR.6.1:	Assess the reasonableness of solutions. Mathematicians who assess the reasonableness of solutions: • Estimate to discover possible solutions. • Use benchmark quantities to determine if a solution makes sense. • Check calculations when solving problems. • Verify possible solutions by explaining the methods used. • Evaluate results based on the given context. **Clarifications:** Teachers who encourage students to assess the reasonableness of solutions: • Have students estimate or predict solutions prior to solving. • Prompt students to continually ask, "Does this solution make sense? How do you know?" • Reinforce that students check their work as they progress within and after a task. • Strengthen students' ability to verify solutions through justifications.
MA.K12.MTR.7.1:	Apply mathematics to real-world contexts. Mathematicians who apply mathematics to real-world contexts: • Connect mathematical concepts to everyday experiences. • Use models and methods to understand, represent and solve problems. • Perform investigations to gather data or determine if a method is appropriate. • Redesign models and methods to improve accuracy or efficiency. **Clarifications:** Teachers who encourage students to apply mathematics to real-world contexts: • Provide opportunities for students to create models, both concrete and abstract, and perform investigations. • Challenge students to question the accuracy of their models and methods. • Support students as they validate conclusions by comparing them to the given situation. • Indicate how various concepts can be applied to other disciplines.
ELA.K12.EE.1.1:	Cite evidence to explain and justify reasoning. **Clarifications:** K-1 Students include textual evidence in their oral communication with guidance and support from adults. The evidence can consist of details from the text without naming the text. During 1st grade, students learn how to incorporate the evidence in their writing. 2-3 Students include relevant textual evidence in their written and oral communication. Students should name the text when they refer to it. In 3rd grade, students should use a combination of direct and indirect citations. 4-5 Students continue with previous skills and reference comments made by speakers and peers. Students cite texts that they've directly quoted, paraphrased, or used for information. When writing, students will use the form of citation dictated by the instructor or the style guide referenced by the instructor. 6-8 Students continue with previous skills and use a style guide to create a proper citation. 9-12 Students continue with previous skills and should be aware of existing style guides and the ways in which they differ.
ELA.K12.EE.2.1:	Read and comprehend grade-level complex texts proficiently. **Clarifications:** See Text Complexity for grade-level complexity bands and a text complexity rubric.
ELA.K12.EE.3.1:	Make inferences to support comprehension. **Clarifications:** Students will make inferences before the words infer or inference are introduced. Kindergarten students will answer questions like "Why is the girl smiling?" or make predictions about what will happen based on the title page. Students will use the terms and apply them in 2nd grade and beyond.
ELA.K12.EE.4.1:	Use appropriate collaborative techniques and active listening skills when engaging in discussions in a variety of situations. **Clarifications:** In kindergarten, students learn to listen to one another respectfully. In grades 1-2, students build upon these skills by justifying what they are thinking. For example: "I think _____ because _____." The collaborative conversations are becoming academic conversations. In grades 3-12, students engage in academic conversations discussing claims and justifying their reasoning, refining and applying skills. Students

	build on ideas, propel the conversation, and support claims and counterclaims with evidence.
ELA.K12.EE.5.1:	Use the accepted rules governing a specific format to create quality work. **Clarifications:** Students will incorporate skills learned into work products to produce quality work. For students to incorporate these skills appropriately, they must receive instruction. A 3rd grade student creating a poster board display must have instruction in how to effectively present information to do quality work.
ELA.K12.EE.6.1:	Use appropriate voice and tone when speaking or writing. **Clarifications:** In kindergarten and 1st grade, students learn the difference between formal and informal language. For example, the way we talk to our friends differs from the way we speak to adults. In 2nd grade and beyond, students practice appropriate social and academic language to discuss texts.
HE.912.C.1.3:	Evaluate how environment and personal health are interrelated. **Clarifications:** Food options within a community; prenatal-care services; availability of recreational facilities; air quality; weather-safety awareness; and weather, air, and water conditions.
HE.912.C.1.4:	Propose strategies to reduce or prevent injuries and health problems. **Clarifications:** Mandatory passenger-restraint/helmet laws, refusal skills, mandatory immunizations, healthy relationship skills, and improved inspection of food sources.

General Course Information and Notes

VERSION DESCRIPTION

This interdisciplinary science course covers the fundamentals of meteorology, emphasizing the physical and chemical processes that control Earth's weather and climate. Course topics include solar energy, atmospheric and oceanic movement, and energy transfer. Students will study and practice weather prediction using technology, data and models. In addition, students will learn the forces behind the formation of severe weather events. The course will cover the history of Earth's climate and the practices and tools used to study meteorology as well as the forces behind fluctuations in the Earth's weather and climate over time such as Milankovich Cycles, and ice ages. Students have the opportunity to access real-world empirical data to study weather patterns both globally and locally, model the processes that impact changes using basic mathematical expressions, graphing and statistics, and test the relationship between predictions and observations. The course also includes opportunities to practice science literacy by teaching from a range of complex texts that vary in length, and feature empirical evidence. Students will also be provided extensive research and writing opportunities (claims and evidence).

Honors and Advanced Level Course Note: Advanced courses require a greater demand on students through increased academic rigor. Academic rigor is obtained through the application, analysis, evaluation, and creation of complex ideas that are often abstract and multi-faceted. Students are challenged to think and collaborate critically on the content they are learning. Honors level rigor will be achieved by increasing text complexity through text selection, focus on high-level qualitative measures, and complexity of task. Instruction will be structured to give students a deeper understanding of conceptual themes and organization within and across disciplines. Academic rigor is more than simply assigning to students a greater quantity of work.

This course has been designed for the teacher to select and teach only the appropriate standards corresponding to a student's grade level and/or instructional needs.

English Language Development ELD Standards Special Notes Section:

Teachers are required to provide listening, speaking, reading and writing instruction that allows English language learners (ELL) to communicate information, ideas and concepts for academic success in the content area of Science. For the given level of English language proficiency and with visual, graphic, or interactive support, students will interact with grade level words, expressions, sentences and discourse to process or produce language necessary for academic success The ELD standard should specify a relevant content area concept or topic of study chosen by curriculum developers and teachers which maximizes an ELL's need for communication and social skills. To access an ELL supporting document which delineates performance definitions and descriptors, please click on the following link: cpalms.org/uploads/docs/standards/eld/SC.pdf.

GENERAL INFORMATION

Course Number: 2001330

Course Path: Section: Grades PreK to 12 Education Courses > **Grade Group:** Grades 9 to 12 and Adult Education Courses > **Subject:** Science > **SubSubject:** Earth/Space Sciences >
Abbreviated Title: Meteorology Honors

Number of Credits: One (1) credit

Course Length: Year (Y)

Course Attributes:

- Honors

Course Type: Elective Course

Course Level: 3

Course Status: Draft - Course Pending Approval

Educator Certifications

Chemistry (Grades 6-12)

Physics (Grades 6-12)
Biology (Grades 6-12)
Earth/Space Science (Grades 6-12)

Environmental Science (#2001340) 2022 - And Beyond

Course Standards

Name	Description
SC.912.E.6.6:	Analyze past, present, and potential future consequences to the environment resulting from various energy production technologies.
SC.912.E.7.7:	Identify, analyze, and relate the internal (Earth system) and external (astronomical) conditions that contribute to global climate change.
SC.912.E.7.8:	Explain how various atmospheric, oceanic, and hydrologic conditions in Florida have influenced and can influence human behavior, both individually and collectively.
SC.912.E.7.9:	Cite evidence that the ocean has had a significant influence on climate change by absorbing, storing, and moving heat, carbon, and water.
SC.912.L.14.6:	Explain the significance of genetic factors, environmental factors, and pathogenic agents to health from the perspectives of both individual and public health.
SC.912.L.15.3:	Describe how biological diversity is increased by the origin of new species and how it is decreased by the natural process of extinction.
SC.912.L.15.13:	Describe the conditions required for natural selection, including: overproduction of offspring, inherited variation, and the struggle to survive, which result in differential reproductive success.
SC.912.L.16.10:	Evaluate the impact of biotechnology on the individual, society and the environment, including medical and ethical issues.
SC.912.L.17.1:	Discuss the characteristics of populations, such as number of individuals, age structure, density, and pattern of distribution.
SC.912.L.17.4:	Describe changes in ecosystems resulting from seasonal variations, climate change and succession.
SC.912.L.17.5:	Analyze how population size is determined by births, deaths, immigration, emigration, and limiting factors (biotic and abiotic) that determine carrying capacity.
SC.912.L.17.6:	Compare and contrast the relationships among organisms, including predation, parasitism, competition, commensalism, and mutualism.
SC.912.L.17.7:	Characterize the biotic and abiotic components that define freshwater systems, marine systems and terrestrial systems.
SC.912.L.17.8:	Recognize the consequences of the losses of biodiversity due to catastrophic events, climate changes, human activity, and the introduction of invasive, non-native species.
SC.912.L.17.9:	Use a food web to identify and distinguish producers, consumers, and decomposers. Explain the pathway of energy transfer through trophic levels and the reduction of available energy at successive trophic levels.
SC.912.L.17.10:	Diagram and explain the biogeochemical cycles of an ecosystem, including water, carbon, and nitrogen cycle.
SC.912.L.17.11:	Evaluate the costs and benefits of renewable and nonrenewable resources, such as water, energy, fossil fuels, wildlife, and forests.
SC.912.L.17.12:	Discuss the political, social, and environmental consequences of sustainable use of land.
SC.912.L.17.13:	Discuss the need for adequate monitoring of environmental parameters when making policy decisions.
SC.912.L.17.14:	Assess the need for adequate waste management strategies.
SC.912.L.17.15:	Discuss the effects of technology on environmental quality.
SC.912.L.17.16:	Discuss the large-scale environmental impacts resulting from human activity, including waste spills, oil spills, runoff, greenhouse gases, ozone depletion, and surface and groundwater pollution.
SC.912.L.17.18:	Describe how human population size and resource use relate to environmental quality.
SC.912.L.17.19:	Describe how different natural resources are produced and how their rates of use and renewal limit availability.
SC.912.L.17.20:	Predict the impact of individuals on environmental systems and examine how human lifestyles affect sustainability.
SC.912.N.1.1:	Define a problem based on a specific body of knowledge, for example: biology, chemistry, physics, and earth/space science, and do the following: 1. **Pose questions about the natural world,** (Articulate the purpose of the investigation and identify the relevant scientific concepts). 2. **Conduct systematic observations,** (Write procedures that are clear and replicable. Identify observables and examine relationships between test (independent) variable and outcome (dependent) variable. Employ appropriate methods for accurate and consistent observations; conduct and record measurements at appropriate levels of precision. Follow safety guidelines). 3. **Examine books and other sources of information to see what is already known,** 4. **Review what is known in light of empirical evidence,** (Examine whether available empirical evidence can be interpreted in terms of existing knowledge and models, and if not, modify or develop new models). 5. **Plan investigations,** (Design and evaluate a scientific investigation). 6. **Use tools to gather, analyze, and interpret data (this includes the use of measurement in metric and other systems, and also the generation and interpretation of graphical representations of data, including data tables and graphs),** (Collect data or evidence in an organized way. Properly use instruments, equipment, and materials (e.g., scales, probeware, meter sticks, microscopes, computers) including set-up, calibration, technique, maintenance, and storage). 7. **Pose answers, explanations, or descriptions of events,** 8. **Generate explanations that explicate or describe natural phenomena (inferences),** 9. **Use appropriate evidence and reasoning to justify these explanations to others,** 10. **Communicate results of scientific investigations, and** 11. **Evaluate the merits of the explanations produced by others.**
SC.912.N.1.2:	Describe and explain what characterizes science and its methods.
SC.912.N.1.3:	Recognize that the strength or usefulness of a scientific claim is evaluated through scientific argumentation, which depends on critical and logical thinking, and the active consideration of alternative scientific explanations to explain the data presented.
SC.912.N.1.4:	Identify sources of information and assess their reliability according to the strict standards of scientific investigation.
SC.912.N.1.5:	Describe and provide examples of how similar investigations conducted in many parts of the world result in the same outcome.
SC.912.N.1.6:	Describe how scientific inferences are drawn from scientific observations and provide examples from the content being studied.
SC.912.N.2.1:	Identify what is science, what clearly is not science, and what superficially resembles science (but fails to meet the criteria for science).
SC.912.N.2.2:	Identify which questions can be answered through science and which questions are outside the boundaries of scientific investigation, such as questions addressed by other ways of knowing, such as art, philosophy, and religion.
	Explain that scientific knowledge is both durable and robust and open to change. Scientific knowledge can change because it is often examined and

SC.912.N.2.4:	re-examined by new investigations and scientific argumentation. Because of these frequent examinations, scientific knowledge becomes stronger, leading to its durability.
SC.912.N.3.1:	Explain that a scientific theory is the culmination of many scientific investigations drawing together all the current evidence concerning a substantial range of phenomena; thus, a scientific theory represents the most powerful explanation scientists have to offer.
SC.912.N.3.5:	Describe the function of models in science, and identify the wide range of models used in science.
SC.912.N.4.1:	Explain how scientific knowledge and reasoning provide an empirically-based perspective to inform society's decision making.
SC.912.P.10.1:	Differentiate among the various forms of energy and recognize that they can be transformed from one form to others.
SC.912.P.10.2:	Explore the Law of Conservation of Energy by differentiating among open, closed, and isolated systems and explain that the total energy in an isolated system is a conserved quantity.
MA.K12.MTR.1.1:	Mathematicians who participate in effortful learning both individually and with others: • Analyze the problem in a way that makes sense given the task. • Ask questions that will help with solving the task. • Build perseverance by modifying methods as needed while solving a challenging task. • Stay engaged and maintain a positive mindset when working to solve tasks. • Help and support each other when attempting a new method or approach. **Clarifications:** Teachers who encourage students to participate actively in effortful learning both individually and with others: • Cultivate a community of growth mindset learners. • Foster perseverance in students by choosing tasks that are challenging. • Develop students' ability to analyze and problem solve. • Recognize students' effort when solving challenging problems.
MA.K12.MTR.2.1:	Demonstrate understanding by representing problems in multiple ways. Mathematicians who demonstrate understanding by representing problems in multiple ways: • Build understanding through modeling and using manipulatives. • Represent solutions to problems in multiple ways using objects, drawings, tables, graphs and equations. • Progress from modeling problems with objects and drawings to using algorithms and equations. • Express connections between concepts and representations. • Choose a representation based on the given context or purpose. **Clarifications:** Teachers who encourage students to demonstrate understanding by representing problems in multiple ways: • Help students make connections between concepts and representations. • Provide opportunities for students to use manipulatives when investigating concepts. • Guide students from concrete to pictorial to abstract representations as understanding progresses. • Show students that various representations can have different purposes and can be useful in different situations.
MA.K12.MTR.3.1:	Complete tasks with mathematical fluency. Mathematicians who complete tasks with mathematical fluency: • Select efficient and appropriate methods for solving problems within the given context. • Maintain flexibility and accuracy while performing procedures and mental calculations. • Complete tasks accurately and with confidence. • Adapt procedures to apply them to a new context. • Use feedback to improve efficiency when performing calculations. **Clarifications:** Teachers who encourage students to complete tasks with mathematical fluency: • Provide students with the flexibility to solve problems by selecting a procedure that allows them to solve efficiently and accurately. • Offer multiple opportunities for students to practice efficient and generalizable methods. • Provide opportunities for students to reflect on the method they used and determine if a more efficient method could have been used.
MA.K12.MTR.4.1:	Engage in discussions that reflect on the mathematical thinking of self and others. Mathematicians who engage in discussions that reflect on the mathematical thinking of self and others: • Communicate mathematical ideas, vocabulary and methods effectively. • Analyze the mathematical thinking of others. • Compare the efficiency of a method to those expressed by others. • Recognize errors and suggest how to correctly solve the task. • Justify results by explaining methods and processes. • Construct possible arguments based on evidence. **Clarifications:** Teachers who encourage students to engage in discussions that reflect on the mathematical thinking of self and others: • Establish a culture in which students ask questions of the teacher and their peers, and error is an opportunity for learning. • Create opportunities for students to discuss their thinking with peers. • Select, sequence and present student work to advance and deepen understanding of correct and increasingly efficient methods. • Develop students' ability to justify methods and compare their responses to the responses of their peers.
	Use patterns and structure to help understand and connect mathematical concepts. Mathematicians who use patterns and structure to help understand and connect mathematical concepts: • Focus on relevant details within a problem. • Create plans and procedures to logically order events, steps or ideas to solve problems. • Decompose a complex problem into manageable parts. • Relate previously learned concepts to new concepts.

MA.K12.MTR.5.1:	• Look for similarities among problems. • Connect solutions of problems to more complicated large-scale situations. **Clarifications:** Teachers who encourage students to use patterns and structure to help understand and connect mathematical concepts: • Help students recognize the patterns in the world around them and connect these patterns to mathematical concepts. • Support students to develop generalizations based on the similarities found among problems. • Provide opportunities for students to create plans and procedures to solve problems. • Develop students' ability to construct relationships between their current understanding and more sophisticated ways of thinking.
MA.K12.MTR.6.1:	Assess the reasonableness of solutions. Mathematicians who assess the reasonableness of solutions: • Estimate to discover possible solutions. • Use benchmark quantities to determine if a solution makes sense. • Check calculations when solving problems. • Verify possible solutions by explaining the methods used. • Evaluate results based on the given context. **Clarifications:** Teachers who encourage students to assess the reasonableness of solutions: • Have students estimate or predict solutions prior to solving. • Prompt students to continually ask, "Does this solution make sense? How do you know?" • Reinforce that students check their work as they progress within and after a task. • Strengthen students' ability to verify solutions through justifications.
MA.K12.MTR.7.1:	Apply mathematics to real-world contexts. Mathematicians who apply mathematics to real-world contexts: • Connect mathematical concepts to everyday experiences. • Use models and methods to understand, represent and solve problems. • Perform investigations to gather data or determine if a method is appropriate. • Redesign models and methods to improve accuracy or efficiency. **Clarifications:** Teachers who encourage students to apply mathematics to real-world contexts: • Provide opportunities for students to create models, both concrete and abstract, and perform investigations. • Challenge students to question the accuracy of their models and methods. • Support students as they validate conclusions by comparing them to the given situation. • Indicate how various concepts can be applied to other disciplines.
ELA.K12.EE.1.1:	Cite evidence to explain and justify reasoning. **Clarifications:** K-1 Students include textual evidence in their oral communication with guidance and support from adults. The evidence can consist of details from the text without naming the text. During 1st grade, students learn how to incorporate the evidence in their writing. 2-3 Students include relevant textual evidence in their written and oral communication. Students should name the text when they refer to it. In 3rd grade, students should use a combination of direct and indirect citations. 4-5 Students continue with previous skills and reference comments made by speakers and peers. Students cite texts that they've directly quoted, paraphrased, or used for information. When writing, students will use the form of citation dictated by the instructor or the style guide referenced by the instructor. 6-8 Students continue with previous skills and use a style guide to create a proper citation. 9-12 Students continue with previous skills and should be aware of existing style guides and the ways in which they differ.
ELA.K12.EE.2.1:	Read and comprehend grade-level complex texts proficiently. **Clarifications:** See Text Complexity for grade-level complexity bands and a text complexity rubric.
ELA.K12.EE.3.1:	Make inferences to support comprehension. **Clarifications:** Students will make inferences before the words infer or inference are introduced. Kindergarten students will answer questions like "Why is the girl smiling?" or make predictions about what will happen based on the title page. Students will use the terms and apply them in 2nd grade and beyond.
ELA.K12.EE.4.1:	Use appropriate collaborative techniques and active listening skills when engaging in discussions in a variety of situations. **Clarifications:** In kindergarten, students learn to listen to one another respectfully. In grades 1-2, students build upon these skills by justifying what they are thinking. For example: "I think _____ because _____." The collaborative conversations are becoming academic conversations. In grades 3-12, students engage in academic conversations discussing claims and justifying their reasoning, refining and applying skills. Students build on ideas, propel the conversation, and support claims and counterclaims with evidence.
ELA.K12.EE.5.1:	Use the accepted rules governing a specific format to create quality work. **Clarifications:** Students will incorporate skills learned into work products to produce quality work. For students to incorporate these skills appropriately, they must receive instruction. A 3rd grade student creating a poster board display must have instruction in how to effectively present information to do quality work.
	Use appropriate voice and tone when speaking or writing.

ELA.K12.EE.6.1:	**Clarifications:** In kindergarten and 1st grade, students learn the difference between formal and informal language. For example, the way we talk to our friends differs from the way we speak to adults. In 2nd grade and beyond, students practice appropriate social and academic language to discuss texts.
ELD.K12.ELL.SC.1:	English language learners communicate information, ideas and concepts necessary for academic success in the content area of Science.
ELD.K12.ELL.SI.1:	English language learners communicate for social and instructional purposes within the school setting.
HE.912.C.1.3:	Evaluate how environment and personal health are interrelated. **Clarifications:** Food options within a community; prenatal-care services; availability of recreational facilities; air quality; weather-safety awareness; and weather, air, and water conditions.
HE.912.C.1.7:	Analyze how heredity and family history can impact personal health. **Clarifications:** Drug use, family obesity, heart disease, mental health, and non-communicable illness or disease.

General Course Information and Notes

GENERAL NOTES

Laboratory investigations that include the use of scientific inquiry, research, measurement, problem solving, laboratory apparatus and technologies, experimental procedures, and safety procedures are an integral part of this course. The National Science Teachers Association (NSTA) recommends that at the high school level, all students should be in the science lab or field, collecting data every week. School laboratory investigations (labs) are defined by the National Research Council (NRC) as an experience in the laboratory, classroom, or the field that provides students with opportunities to interact directly with natural phenomena or with data collected by others using tools, materials, data collection techniques, and models (NRC, 2006, p. 3). Laboratory investigations in the high school classroom should help all students develop a growing understanding of the complexity and ambiguity of empirical work, as well as the skills to calibrate and troubleshoot equipment used to make observations. Learners should understand measurement error; and have the skills to aggregate, interpret, and present the resulting data (National Research Council, 2006, p.77; NSTA, 2007).

Special Notes:
Instructional Practices
Teaching from a range of complex text is optimized when teachers in all subject areas implement the following strategies on a routine basis:

1. Ensuring wide reading from complex text that varies in length.
2. Making close reading and rereading of texts central to lessons.
3. Emphasizing text-specific complex questions, and cognitively complex tasks, reinforce focus on the text and cultivate independence.
4. Emphasizing students supporting answers based upon evidence from the text.
5. Providing extensive research and writing opportunities (claims and evidence).

Science and Engineering Practices (NRC *Framework for K-12 Science Education, 2010*)

- Asking questions (for science) and defining problems (for engineering).
- Developing and using models.
- Planning and carrying out investigations.
- Analyzing and interpreting data.
- Using mathematics, information and computer technology, and computational thinking.
- Constructing explanations (for science) and designing solutions (for engineering).
- Engaging in argument from evidence.
- Obtaining, evaluating, and communicating information.

Florida's Benchmarks for Excellent Student Thinking (B.E.S.T.) Standards
This course includes Florida's B.E.S.T. ELA Expectations (EE) and Mathematical Thinking and Reasoning Standards (MTRs) for students. Florida educators should intentionally embed these standards within the content and their instruction as applicable. For guidance on the implementation of the EEs and MTRs, please visit cpalms.org/Standards/BEST_Standards.aspx and select the appropriate B.E.S.T. Standards package.

English Language Development ELD Standards Special Notes Section:
Teachers are required to provide listening, speaking, reading and writing instruction that allows English language learners (ELL) to communicate information, ideas and concepts for academic success in the content area of Science. For the given level of English language proficiency and with visual, graphic, or interactive support, students will interact with grade level words, expressions, sentences and discourse to process or produce language necessary for academic success The ELD standard should specify a relevant content area concept or topic of study chosen by curriculum developers and teachers which maximizes an ELL's need for communication and social skills. To access an ELL supporting document which delineates performance definitions and descriptors, please click on the following link: cpalms.org/uploads/docs/standards/eld/SC.pdf

Additional Instructional Resources:
A.V.E. for Success Collection is provided by the Florida Association of School Administrators: fasa.net/4DCGI/cms/review.html?Action=CMS_Document&DocID=139. Please be aware that these resources have not been reviewed by CPALMS and there may be a charge for the use of some of them in this collection.

GENERAL INFORMATION

Course Number: 2001340

Course Path: Section: Grades PreK to 12 Education Courses > **Grade Group:** Grades 9 to 12 and Adult Education Courses > **Subject:** Science > **SubSubject:** Environmental Science >

Abbreviated Title: ENV SCI
Number of Credits: One (1) credit
Course Length: Year (Y)
Course Type: Core Academic Course
Course Level: 2
Course Status: Draft - Course Pending Approval
Grade Level(s): 9,10,11,12
Graduation Requirement: Equally Rigorous Science

Educator Certifications

Science (Secondary Grades 7-12)
Biology (Grades 6-12)
Chemistry (Grades 6-12)
Earth/Space Science (Grades 6-12)
Middle Grades General Science (Middle Grades 5-9)

Environmental Science Honors (#2001341) 2022 - And Beyond

Course Standards

Name	Description
SC.912.E.6.6:	Analyze past, present, and potential future consequences to the environment resulting from various energy production technologies.
SC.912.E.7.4:	Summarize the conditions that contribute to the climate of a geographic area, including the relationships to lakes and oceans.
SC.912.E.7.7:	Identify, analyze, and relate the internal (Earth system) and external (astronomical) conditions that contribute to global climate change.
SC.912.E.7.8:	Explain how various atmospheric, oceanic, and hydrologic conditions in Florida have influenced and can influence human behavior, both individually and collectively.
SC.912.E.7.9:	Cite evidence that the ocean has had a significant influence on climate change by absorbing, storing, and moving heat, carbon, and water.
SC.912.L.14.6:	Explain the significance of genetic factors, environmental factors, and pathogenic agents to health from the perspectives of both individual and public health.
SC.912.L.15.3:	Describe how biological diversity is increased by the origin of new species and how it is decreased by the natural process of extinction.
SC.912.L.15.13:	Describe the conditions required for natural selection, including: overproduction of offspring, inherited variation, and the struggle to survive, which result in differential reproductive success.
SC.912.L.16.10:	Evaluate the impact of biotechnology on the individual, society and the environment, including medical and ethical issues.
SC.912.L.17.1:	Discuss the characteristics of populations, such as number of individuals, age structure, density, and pattern of distribution.
SC.912.L.17.4:	Describe changes in ecosystems resulting from seasonal variations, climate change and succession.
SC.912.L.17.5:	Analyze how population size is determined by births, deaths, immigration, emigration, and limiting factors (biotic and abiotic) that determine carrying capacity.
SC.912.L.17.6:	Compare and contrast the relationships among organisms, including predation, parasitism, competition, commensalism, and mutualism.
SC.912.L.17.7:	Characterize the biotic and abiotic components that define freshwater systems, marine systems and terrestrial systems.
SC.912.L.17.8:	Recognize the consequences of the losses of biodiversity due to catastrophic events, climate changes, human activity, and the introduction of invasive, non-native species.
SC.912.L.17.9:	Use a food web to identify and distinguish producers, consumers, and decomposers. Explain the pathway of energy transfer through trophic levels and the reduction of available energy at successive trophic levels.
SC.912.L.17.10:	Diagram and explain the biogeochemical cycles of an ecosystem, including water, carbon, and nitrogen cycle.
SC.912.L.17.11:	Evaluate the costs and benefits of renewable and nonrenewable resources, such as water, energy, fossil fuels, wildlife, and forests.
SC.912.L.17.12:	Discuss the political, social, and environmental consequences of sustainable use of land.
SC.912.L.17.13:	Discuss the need for adequate monitoring of environmental parameters when making policy decisions.
SC.912.L.17.14:	Assess the need for adequate waste management strategies.
SC.912.L.17.15:	Discuss the effects of technology on environmental quality.
SC.912.L.17.16:	Discuss the large-scale environmental impacts resulting from human activity, including waste spills, oil spills, runoff, greenhouse gases, ozone depletion, and surface and groundwater pollution.
SC.912.L.17.17:	Assess the effectiveness of innovative methods of protecting the environment.
SC.912.L.17.18:	Describe how human population size and resource use relate to environmental quality.
SC.912.L.17.19:	Describe how different natural resources are produced and how their rates of use and renewal limit availability.
SC.912.L.17.20:	Predict the impact of individuals on environmental systems and examine how human lifestyles affect sustainability.
SC.912.L.18.12:	Discuss the special properties of water that contribute to Earth's suitability as an environment for life: cohesive behavior, ability to moderate temperature, expansion upon freezing, and versatility as a solvent.
SC.912.N.1.1:	Define a problem based on a specific body of knowledge, for example: biology, chemistry, physics, and earth/space science, and do the following: 1. **Pose questions about the natural world,** (Articulate the purpose of the investigation and identify the relevant scientific concepts). 2. **Conduct systematic observations,** (Write procedures that are clear and replicable. Identify observables and examine relationships between test (independent) variable and outcome (dependent) variable. Employ appropriate methods for accurate and consistent observations; conduct and record measurements at appropriate levels of precision. Follow safety guidelines). 3. **Examine books and other sources of information to see what is already known,** 4. **Review what is known in light of empirical evidence,** (Examine whether available empirical evidence can be interpreted in terms of existing knowledge and models, and if not, modify or develop new models). 5. **Plan investigations,** (Design and evaluate a scientific investigation). 6. **Use tools to gather, analyze, and interpret data (this includes the use of measurement in metric and other systems, and also the generation and interpretation of graphical representations of data, including data tables and graphs),** (Collect data or evidence in an organized way. Properly use instruments, equipment, and materials (e.g., scales, probeware, meter sticks, microscopes, computers) including set-up, calibration, technique, maintenance, and storage). 7. **Pose answers, explanations, or descriptions of events,** 8. **Generate explanations that explicate or describe natural phenomena (inferences),** 9. **Use appropriate evidence and reasoning to justify these explanations to others,** 10. **Communicate results of scientific investigations, and** 11. **Evaluate the merits of the explanations produced by others.**
SC.912.N.1.2:	Describe and explain what characterizes science and its methods.
SC.912.N.1.3:	Recognize that the strength or usefulness of a scientific claim is evaluated through scientific argumentation, which depends on critical and logical thinking, and the active consideration of alternative scientific explanations to explain the data presented.
SC.912.N.1.4:	Identify sources of information and assess their reliability according to the strict standards of scientific investigation.
SC.912.N.1.5:	Describe and provide examples of how similar investigations conducted in many parts of the world result in the same outcome.
SC.912.N.1.6:	Describe how scientific inferences are drawn from scientific observations and provide examples from the content being studied.

SC.912.N.2.1:	Identify what is science, what clearly is not science, and what superficially resembles science (but fails to meet the criteria for science).
SC.912.N.2.2:	Identify which questions can be answered through science and which questions are outside the boundaries of scientific investigation, such as questions addressed by other ways of knowing, such as art, philosophy, and religion.
SC.912.N.2.4:	Explain that scientific knowledge is both durable and robust and open to change. Scientific knowledge can change because it is often examined and re-examined by new investigations and scientific argumentation. Because of these frequent examinations, scientific knowledge becomes stronger, leading to its durability.
SC.912.N.3.1:	Explain that a scientific theory is the culmination of many scientific investigations drawing together all the current evidence concerning a substantial range of phenomena; thus, a scientific theory represents the most powerful explanation scientists have to offer.
SC.912.N.3.5:	Describe the function of models in science, and identify the wide range of models used in science.
SC.912.N.4.1:	Explain how scientific knowledge and reasoning provide an empirically-based perspective to inform society's decision making.
SC.912.N.4.2:	Weigh the merits of alternative strategies for solving a specific societal problem by comparing a number of different costs and benefits, such as human, economic, and environmental.
SC.912.P.10.1:	Differentiate among the various forms of energy and recognize that they can be transformed from one form to others.
SC.912.P.10.2:	Explore the Law of Conservation of Energy by differentiating among open, closed, and isolated systems and explain that the total energy in an isolated system is a conserved quantity.
SC.912.P.10.4:	Describe heat as the energy transferred by convection, conduction, and radiation, and explain the connection of heat to change in temperature or states of matter.
SS.912.G.1.1:	Design maps using a variety of technologies based on descriptive data to explain physical and cultural attributes of major world regions.
SS.912.G.1.4:	Analyze geographic information from a variety of sources including primary sources, atlases, computer, and digital sources, Geographic Information Systems (GIS), and a broad variety of maps. **Clarifications:** Examples are thematic, contour, and dot-density.
SS.912.G.3.1:	Use geographic terms to locate and describe major ecosystems of Earth.
SS.912.G.3.2:	Use geographic terms and tools to explain how weather and climate influence the natural character of a place.
SS.912.G.3.3:	Use geographic terms and tools to explain differing perspectives on the use of renewable and non-renewable resources in Florida, the United States, and the world.
SS.912.G.3.5:	Use geographic terms and tools to explain how hydrology influences the physical character of a place.
SS.912.G.5.1:	Analyze case studies of how the Earth's physical systems affect humans.
SS.912.G.5.2:	Analyze case studies of how changes in the physical environment of a place can increase or diminish its capacity to support human activity.
SS.912.G.5.3:	Analyze case studies of the effects of human use of technology on the environment of places.
SS.912.G.5.4:	Analyze case studies of how humans impact the diversity and productivity of ecosystems.
MA.K12.MTR.1.1:	Mathematicians who participate in effortful learning both individually and with others: • Analyze the problem in a way that makes sense given the task. • Ask questions that will help with solving the task. • Build perseverance by modifying methods as needed while solving a challenging task. • Stay engaged and maintain a positive mindset when working to solve tasks. • Help and support each other when attempting a new method or approach. **Clarifications:** Teachers who encourage students to participate actively in effortful learning both individually and with others: • Cultivate a community of growth mindset learners. • Foster perseverance in students by choosing tasks that are challenging. • Develop students' ability to analyze and problem solve. • Recognize students' effort when solving challenging problems.
MA.K12.MTR.2.1:	Demonstrate understanding by representing problems in multiple ways. Mathematicians who demonstrate understanding by representing problems in multiple ways: • Build understanding through modeling and using manipulatives. • Represent solutions to problems in multiple ways using objects, drawings, tables, graphs and equations. • Progress from modeling problems with objects and drawings to using algorithms and equations. • Express connections between concepts and representations. • Choose a representation based on the given context or purpose. **Clarifications:** Teachers who encourage students to demonstrate understanding by representing problems in multiple ways: • Help students make connections between concepts and representations. • Provide opportunities for students to use manipulatives when investigating concepts. • Guide students from concrete to pictorial to abstract representations as understanding progresses. • Show students that various representations can have different purposes and can be useful in different situations.
MA.K12.MTR.3.1:	Complete tasks with mathematical fluency. Mathematicians who complete tasks with mathematical fluency: • Select efficient and appropriate methods for solving problems within the given context. • Maintain flexibility and accuracy while performing procedures and mental calculations. • Complete tasks accurately and with confidence. • Adapt procedures to apply them to a new context. • Use feedback to improve efficiency when performing calculations. **Clarifications:** Teachers who encourage students to complete tasks with mathematical fluency: • Provide students with the flexibility to solve problems by selecting a procedure that allows them to solve efficiently and accurately. • Offer multiple opportunities for students to practice efficient and generalizable methods. • Provide opportunities for students to reflect on the method they used and determine if a more efficient method could have been used.

MA.K12.MTR.4.1:	Engage in discussions that reflect on the mathematical thinking of self and others. Mathematicians who engage in discussions that reflect on the mathematical thinking of self and others: • Communicate mathematical ideas, vocabulary and methods effectively. • Analyze the mathematical thinking of others. • Compare the efficiency of a method to those expressed by others. • Recognize errors and suggest how to correctly solve the task. • Justify results by explaining methods and processes. • Construct possible arguments based on evidence. **Clarifications:** Teachers who encourage students to engage in discussions that reflect on the mathematical thinking of self and others: • Establish a culture in which students ask questions of the teacher and their peers, and error is an opportunity for learning. • Create opportunities for students to discuss their thinking with peers. • Select, sequence and present student work to advance and deepen understanding of correct and increasingly efficient methods. • Develop students' ability to justify methods and compare their responses to the responses of their peers.
MA.K12.MTR.5.1:	Use patterns and structure to help understand and connect mathematical concepts. Mathematicians who use patterns and structure to help understand and connect mathematical concepts: • Focus on relevant details within a problem. • Create plans and procedures to logically order events, steps or ideas to solve problems. • Decompose a complex problem into manageable parts. • Relate previously learned concepts to new concepts. • Look for similarities among problems. • Connect solutions of problems to more complicated large-scale situations. **Clarifications:** Teachers who encourage students to use patterns and structure to help understand and connect mathematical concepts: • Help students recognize the patterns in the world around them and connect these patterns to mathematical concepts. • Support students to develop generalizations based on the similarities found among problems. • Provide opportunities for students to create plans and procedures to solve problems. • Develop students' ability to construct relationships between their current understanding and more sophisticated ways of thinking.
MA.K12.MTR.6.1:	Assess the reasonableness of solutions. Mathematicians who assess the reasonableness of solutions: • Estimate to discover possible solutions. • Use benchmark quantities to determine if a solution makes sense. • Check calculations when solving problems. • Verify possible solutions by explaining the methods used. • Evaluate results based on the given context. **Clarifications:** Teachers who encourage students to assess the reasonableness of solutions: • Have students estimate or predict solutions prior to solving. • Prompt students to continually ask, "Does this solution make sense? How do you know?" • Reinforce that students check their work as they progress within and after a task. • Strengthen students' ability to verify solutions through justifications.
MA.K12.MTR.7.1:	Apply mathematics to real-world contexts. Mathematicians who apply mathematics to real-world contexts: • Connect mathematical concepts to everyday experiences. • Use models and methods to understand, represent and solve problems. • Perform investigations to gather data or determine if a method is appropriate. • Redesign models and methods to improve accuracy or efficiency. **Clarifications:** Teachers who encourage students to apply mathematics to real-world contexts: • Provide opportunities for students to create models, both concrete and abstract, and perform investigations. • Challenge students to question the accuracy of their models and methods. • Support students as they validate conclusions by comparing them to the given situation. • Indicate how various concepts can be applied to other disciplines.
ELA.K12.EE.1.1:	Cite evidence to explain and justify reasoning. **Clarifications:** K-1 Students include textual evidence in their oral communication with guidance and support from adults. The evidence can consist of details from the text without naming the text. During 1st grade, students learn how to incorporate the evidence in their writing. 2-3 Students include relevant textual evidence in their written and oral communication. Students should name the text when they refer to it. In 3rd grade, students should use a combination of direct and indirect citations. 4-5 Students continue with previous skills and reference comments made by speakers and peers. Students cite texts that they've directly quoted, paraphrased, or used for information. When writing, students will use the form of citation dictated by the instructor or the style guide referenced by the instructor. 6-8 Students continue with previous skills and use a style guide to create a proper citation. 9-12 Students continue with previous skills and should be aware of existing style guides and the ways in which they differ.
	Read and comprehend grade-level complex texts proficiently.

ELA.K12.EE.2.1:	**Clarifications:** See Text Complexity for grade-level complexity bands and a text complexity rubric.
ELA.K12.EE.3.1:	Make inferences to support comprehension. **Clarifications:** Students will make inferences before the words infer or inference are introduced. Kindergarten students will answer questions like "Why is the girl smiling?" or make predictions about what will happen based on the title page. Students will use the terms and apply them in 2nd grade and beyond.
ELA.K12.EE.4.1:	Use appropriate collaborative techniques and active listening skills when engaging in discussions in a variety of situations. **Clarifications:** In kindergarten, students learn to listen to one another respectfully. In grades 1-2, students build upon these skills by justifying what they are thinking. For example: "I think _____ because _____." The collaborative conversations are becoming academic conversations. In grades 3-12, students engage in academic conversations discussing claims and justifying their reasoning, refining and applying skills. Students build on ideas, propel the conversation, and support claims and counterclaims with evidence.
ELA.K12.EE.5.1:	Use the accepted rules governing a specific format to create quality work. **Clarifications:** Students will incorporate skills learned into work products to produce quality work. For students to incorporate these skills appropriately, they must receive instruction. A 3rd grade student creating a poster board display must have instruction in how to effectively present information to do quality work.
ELA.K12.EE.6.1:	Use appropriate voice and tone when speaking or writing. **Clarifications:** In kindergarten and 1st grade, students learn the difference between formal and informal language. For example, the way we talk to our friends differs from the way we speak to adults. In 2nd grade and beyond, students practice appropriate social and academic language to discuss texts.
ELD.K12.ELL.SC.1:	English language learners communicate information, ideas and concepts necessary for academic success in the content area of Science.
ELD.K12.ELL.SI.1:	English language learners communicate for social and instructional purposes within the school setting.
HE.912.C.1.3:	Evaluate how environment and personal health are interrelated. **Clarifications:** Food options within a community; prenatal-care services; availability of recreational facilities; air quality; weather-safety awareness; and weather, air, and water conditions.

General Course Information and Notes

GENERAL NOTES

This course is designed as an interdisciplinary course to provide students with scientific principles, concepts, and methodologies required to identify and analyze environmental problems and to evaluate risks and alternative solutions for resolving and/or preventing them. Laboratory investigations that include the use of scientific inquiry, research, measurement, problem solving, laboratory apparatus and technologies, experimental procedures, and safety procedures are an integral part of this course. The National Science Teachers Association (NSTA) recommends that at the high school level, all students should be in the science lab or field, collecting data every week. School laboratory investigations (labs) are defined by the National Research Council (NRC) as an experience in the laboratory, classroom, or the field that provides students with opportunities to interact directly with natural phenomena or with data collected by others using tools, materials, data collection techniques, and models (NRC, 2006, p.3). Laboratory investigations in the high school classroom should help all students develop a growing understanding of the complexity and ambiguity of empirical work, as well as the skills to calibrate and troubleshoot equipment used to make observations. Learners should understand measurement error; and have skills to aggregate, interpret, and present the resulting data (NRC, 2006, p.77; NSTA, 2007).

Special Notes:
Instructional Practices
Teaching from a range of complex text is optimized when teachers in all subject areas implement the following strategies on a routine basis:

1. Ensuring wide reading from complex text that varies in length.
2. Making close reading and rereading of texts central to lessons.
3. Emphasizing text-specific complex questions, and cognitively complex tasks, reinforce focus on the text and cultivate independence.
4. Emphasizing students supporting answers based upon evidence from the text.
5. Providing extensive research and writing opportunities (claims and evidence).

Science and Engineering Practices (NRC *Framework for K-12 Science Education, 2010*)

- Asking questions (for science) and defining problems (for engineering).
- Developing and using models.
- Planning and carrying out investigations.
- Analyzing and interpreting data.
- Using mathematics, information and computer technology, and computational thinking.
- Constructing explanations (for science) and designing solutions (for engineering).
- Engaging in argument from evidence.
- Obtaining, evaluating, and communicating information.

Honors and Advanced Level Course Note: Advanced courses require a greater demand on students through increased academic rigor. Academic rigor is obtained through the application, analysis, evaluation, and creation of complex ideas that are often abstract and multi-faceted. Students are challenged to think and collaborate critically on the content they are learning. Honors level rigor will be achieved by increasing text complexity through text selection, focus on high-level qualitative measures, and complexity of task. Instruction will be structured to give students a deeper understanding of conceptual themes and organization within and across disciplines. Academic

rigor is more than simply assigning to students a greater quantity of work.

Florida's Benchmarks for Excellent Student Thinking (B.E.S.T.) Standards:

This course includes Florida's B.E.S.T. ELA Expectations (EE) and Mathematical Thinking and Reasoning Standards (MTRs) for students. Florida educators should intentionally embed these standards within the content and their instruction as applicable. For guidance on the implementation of the EEs and MTRs, please visit cpalms.org/Standards/BEST_Standards.aspx and select the appropriate B.E.S.T. Standards package.

English Language Development (ELD) Standards Special Notes Section:

Teachers are required to provide listening, speaking, reading and writing instruction that allows English language learners (ELL) to communicate information, ideas and concepts for academic success in the content area of Science. For the given level of English language proficiency and with visual, graphic, or interactive support, students will interact with grade level words, expressions, sentences and discourse to process or produce language necessary for academic success The ELD standard should specify a relevant content area concept or topic of study chosen by curriculum developers and teachers which maximizes an ELL's need for communication and social skills. To access an ELL supporting document which delineates performance definitions and descriptors, please click on the following link: cpalms.org/uploads/docs/standards/eld/SC.pdf.

GENERAL INFORMATION

Course Number: 2001341

Course Path: Section: Grades PreK to 12 Education Courses > **Grade Group:** Grades 9 to 12 and Adult Education Courses > **Subject:** Science > **SubSubject:** Environmental Science >

Abbreviated Title: ENV SCI HON

Number of Credits: One (1) credit

Course Length: Year (Y)

Course Attributes:

- Honors

Course Type: Core Academic Course

Course Level: 3

Course Status: Draft - Course Pending Approval

Grade Level(s): 9,10,11,12

Graduation Requirement: Equally Rigorous Science

Educator Certifications

Science (Secondary Grades 7-12)
Biology (Grades 6-12)
Chemistry (Grades 6-12)
Earth/Space Science (Grades 6-12)

Astronomy Solar/Galactic (#2001350) 2022 - And Beyond

Course Standards

Name	Description
SC.912.E.5.6:	Develop logical connections through physical principles, including Kepler's and Newton's Laws about the relationships and the effects of Earth, Moon, and Sun on each other.
SC.912.E.5.7:	Relate the history of and explain the justification for future space exploration and continuing technology development.
SC.912.E.5.8:	Connect the concepts of radiation and the electromagnetic spectrum to the use of historical and newly-developed observational tools.
SC.912.E.5.9:	Analyze the broad effects of space exploration on the economy and culture of Florida.
SC.912.E.5.11:	Distinguish the various methods of measuring astronomical distances and apply each in appropriate situations.
SC.912.E.6.2:	Connect surface features to surface processes that are responsible for their formation.
SC.912.E.7.7:	Identify, analyze, and relate the internal (Earth system) and external (astronomical) conditions that contribute to global climate change.
SC.912.N.1.1:	Define a problem based on a specific body of knowledge, for example: biology, chemistry, physics, and earth/space science, and do the following: 1. **Pose questions about the natural world,** (Articulate the purpose of the investigation and identify the relevant scientific concepts). 2. **Conduct systematic observations,** (Write procedures that are clear and replicable. Identify observables and examine relationships between test (independent) variable and outcome (dependent) variable. Employ appropriate methods for accurate and consistent observations; conduct and record measurements at appropriate levels of precision. Follow safety guidelines). 3. **Examine books and other sources of information to see what is already known,** 4. **Review what is known in light of empirical evidence,** (Examine whether available empirical evidence can be interpreted in terms of existing knowledge and models, and if not, modify or develop new models). 5. **Plan investigations,** (Design and evaluate a scientific investigation). 6. **Use tools to gather, analyze, and interpret data (this includes the use of measurement in metric and other systems, and also the generation and interpretation of graphical representations of data, including data tables and graphs),** (Collect data or evidence in an organized way. Properly use instruments, equipment, and materials (e.g., scales, probeware, meter sticks, microscopes, computers) including set-up, calibration, technique, maintenance, and storage). 7. **Pose answers, explanations, or descriptions of events,** 8. **Generate explanations that explicate or describe natural phenomena (inferences),** 9. **Use appropriate evidence and reasoning to justify these explanations to others,** 10. **Communicate results of scientific investigations, and** 11. **Evaluate the merits of the explanations produced by others.**
SC.912.N.1.2:	Describe and explain what characterizes science and its methods.
SC.912.N.1.3:	Recognize that the strength or usefulness of a scientific claim is evaluated through scientific argumentation, which depends on critical and logical thinking, and the active consideration of alternative scientific explanations to explain the data presented.
SC.912.N.1.4:	Identify sources of information and assess their reliability according to the strict standards of scientific investigation.
SC.912.N.1.5:	Describe and provide examples of how similar investigations conducted in many parts of the world result in the same outcome.
SC.912.N.1.6:	Describe how scientific inferences are drawn from scientific observations and provide examples from the content being studied.
SC.912.N.1.7:	Recognize the role of creativity in constructing scientific questions, methods and explanations.
SC.912.N.2.1:	Identify what is science, what clearly is not science, and what superficially resembles science (but fails to meet the criteria for science).
SC.912.N.2.2:	Identify which questions can be answered through science and which questions are outside the boundaries of scientific investigation, such as questions addressed by other ways of knowing, such as art, philosophy, and religion.
SC.912.N.2.3:	Identify examples of pseudoscience (such as astrology, phrenology) in society.
SC.912.N.2.4:	Explain that scientific knowledge is both durable and robust and open to change. Scientific knowledge can change because it is often examined and re-examined by new investigations and scientific argumentation. Because of these frequent examinations, scientific knowledge becomes stronger, leading to its durability.
SC.912.N.2.5:	Describe instances in which scientists' varied backgrounds, talents, interests, and goals influence the inferences and thus the explanations that they make about observations of natural phenomena and describe that competing interpretations (explanations) of scientists are a strength of science as they are a source of new, testable ideas that have the potential to add new evidence to support one or another of the explanations.
SC.912.N.3.1:	Explain that a scientific theory is the culmination of many scientific investigations drawing together all the current evidence concerning a substantial range of phenomena; thus, a scientific theory represents the most powerful explanation scientists have to offer.
SC.912.N.3.2:	Describe the role consensus plays in the historical development of a theory in any one of the disciplines of science.
SC.912.N.3.3:	Explain that scientific laws are descriptions of specific relationships under given conditions in nature, but do not offer explanations for those relationships.
SC.912.N.3.4:	Recognize that theories do not become laws, nor do laws become theories; theories are well supported explanations and laws are well supported descriptions.
SC.912.N.3.5:	Describe the function of models in science, and identify the wide range of models used in science.
SC.912.N.4.1:	Explain how scientific knowledge and reasoning provide an empirically-based perspective to inform society's decision making.
SC.912.P.8.1:	Differentiate among the four states of matter.
SC.912.P.8.4:	Explore the scientific theory of atoms (also known as atomic theory) by describing the structure of atoms in terms of protons, neutrons and electrons, and differentiate among these particles in terms of their mass, electrical charges and locations within the atom.
SC.912.P.10.4:	Describe heat as the energy transferred by convection, conduction, and radiation, and explain the connection of heat to change in temperature or states of matter.
SC.912.P.10.9:	Describe the quantization of energy at the atomic level.
SC.912.P.10.11:	Explain and compare nuclear reactions (radioactive decay, fission and fusion), the energy changes associated with them and their associated safety issues.

SC.912.P.10.18:	Explore the theory of electromagnetism by comparing and contrasting the different parts of the electromagnetic spectrum in terms of wavelength, frequency, and energy, and relate them to phenomena and applications.
SC.912.P.10.19:	Explain that all objects emit and absorb electromagnetic radiation and distinguish between objects that are blackbody radiators and those that are not.
SC.912.P.10.20:	Describe the measurable properties of waves and explain the relationships among them and how these properties change when the wave moves from one medium to another.
SC.912.P.10.21:	Qualitatively describe the shift in frequency in sound or electromagnetic waves due to the relative motion of a source or a receiver.
SC.912.P.10.22:	Construct ray diagrams and use thin lens and mirror equations to locate the images formed by lenses and mirrors.
SC.912.P.12.2:	Analyze the motion of an object in terms of its position, velocity, and acceleration (with respect to a frame of reference) as functions of time.
SC.912.P.12.4:	Describe how the gravitational force between two objects depends on their masses and the distance between them.
SC.912.P.12.6:	Qualitatively apply the concept of angular momentum.
SC.912.P.12.7:	Recognize that nothing travels faster than the speed of light in vacuum which is the same for all observers no matter how they or the light source are moving.
MA.K12.MTR.1.1:	Mathematicians who participate in effortful learning both individually and with others: • Analyze the problem in a way that makes sense given the task. • Ask questions that will help with solving the task. • Build perseverance by modifying methods as needed while solving a challenging task. • Stay engaged and maintain a positive mindset when working to solve tasks. • Help and support each other when attempting a new method or approach. **Clarifications:** Teachers who encourage students to participate actively in effortful learning both individually and with others: • Cultivate a community of growth mindset learners. • Foster perseverance in students by choosing tasks that are challenging. • Develop students' ability to analyze and problem solve. • Recognize students' effort when solving challenging problems.
MA.K12.MTR.2.1:	Demonstrate understanding by representing problems in multiple ways. Mathematicians who demonstrate understanding by representing problems in multiple ways: • Build understanding through modeling and using manipulatives. • Represent solutions to problems in multiple ways using objects, drawings, tables, graphs and equations. • Progress from modeling problems with objects and drawings to using algorithms and equations. • Express connections between concepts and representations. • Choose a representation based on the given context or purpose. **Clarifications:** Teachers who encourage students to demonstrate understanding by representing problems in multiple ways: • Help students make connections between concepts and representations. • Provide opportunities for students to use manipulatives when investigating concepts. • Guide students from concrete to pictorial to abstract representations as understanding progresses. • Show students that various representations can have different purposes and can be useful in different situations.
MA.K12.MTR.3.1:	Complete tasks with mathematical fluency. Mathematicians who complete tasks with mathematical fluency: • Select efficient and appropriate methods for solving problems within the given context. • Maintain flexibility and accuracy while performing procedures and mental calculations. • Complete tasks accurately and with confidence. • Adapt procedures to apply them to a new context. • Use feedback to improve efficiency when performing calculations. **Clarifications:** Teachers who encourage students to complete tasks with mathematical fluency: • Provide students with the flexibility to solve problems by selecting a procedure that allows them to solve efficiently and accurately. • Offer multiple opportunities for students to practice efficient and generalizable methods. • Provide opportunities for students to reflect on the method they used and determine if a more efficient method could have been used.
MA.K12.MTR.4.1:	Engage in discussions that reflect on the mathematical thinking of self and others. Mathematicians who engage in discussions that reflect on the mathematical thinking of self and others: • Communicate mathematical ideas, vocabulary and methods effectively. • Analyze the mathematical thinking of others. • Compare the efficiency of a method to those expressed by others. • Recognize errors and suggest how to correctly solve the task. • Justify results by explaining methods and processes. • Construct possible arguments based on evidence. **Clarifications:** Teachers who encourage students to engage in discussions that reflect on the mathematical thinking of self and others: • Establish a culture in which students ask questions of the teacher and their peers, and error is an opportunity for learning. • Create opportunities for students to discuss their thinking with peers. • Select, sequence and present student work to advance and deepen understanding of correct and increasingly efficient methods. • Develop students' ability to justify methods and compare their responses to the responses of their peers.
	Use patterns and structure to help understand and connect mathematical concepts. Mathematicians who use patterns and structure to help understand and connect mathematical concepts: • Focus on relevant details within a problem. • Create plans and procedures to logically order events, steps or ideas to solve problems.

MA.K12.MTR.5.1:	• Decompose a complex problem into manageable parts. • Relate previously learned concepts to new concepts. • Look for similarities among problems. • Connect solutions of problems to more complicated large-scale situations. **Clarifications:** Teachers who encourage students to use patterns and structure to help understand and connect mathematical concepts: • Help students recognize the patterns in the world around them and connect these patterns to mathematical concepts. • Support students to develop generalizations based on the similarities found among problems. • Provide opportunities for students to create plans and procedures to solve problems. • Develop students' ability to construct relationships between their current understanding and more sophisticated ways of thinking.
MA.K12.MTR.6.1:	Assess the reasonableness of solutions. Mathematicians who assess the reasonableness of solutions: • Estimate to discover possible solutions. • Use benchmark quantities to determine if a solution makes sense. • Check calculations when solving problems. • Verify possible solutions by explaining the methods used. • Evaluate results based on the given context. **Clarifications:** Teachers who encourage students to assess the reasonableness of solutions: • Have students estimate or predict solutions prior to solving. • Prompt students to continually ask, "Does this solution make sense? How do you know?" • Reinforce that students check their work as they progress within and after a task. • Strengthen students' ability to verify solutions through justifications.
MA.K12.MTR.7.1:	Apply mathematics to real-world contexts. Mathematicians who apply mathematics to real-world contexts: • Connect mathematical concepts to everyday experiences. • Use models and methods to understand, represent and solve problems. • Perform investigations to gather data or determine if a method is appropriate. • Redesign models and methods to improve accuracy or efficiency. **Clarifications:** Teachers who encourage students to apply mathematics to real-world contexts: • Provide opportunities for students to create models, both concrete and abstract, and perform investigations. • Challenge students to question the accuracy of their models and methods. • Support students as they validate conclusions by comparing them to the given situation. • Indicate how various concepts can be applied to other disciplines.
ELA.K12.EE.1.1:	Cite evidence to explain and justify reasoning. **Clarifications:** K-1 Students include textual evidence in their oral communication with guidance and support from adults. The evidence can consist of details from the text without naming the text. During 1st grade, students learn how to incorporate the evidence in their writing. 2-3 Students include relevant textual evidence in their written and oral communication. Students should name the text when they refer to it. In 3rd grade, students should use a combination of direct and indirect citations. 4-5 Students continue with previous skills and reference comments made by speakers and peers. Students cite texts that they've directly quoted, paraphrased, or used for information. When writing, students will use the form of citation dictated by the instructor or the style guide referenced by the instructor. 6-8 Students continue with previous skills and use a style guide to create a proper citation. 9-12 Students continue with previous skills and should be aware of existing style guides and the ways in which they differ.
ELA.K12.EE.2.1:	Read and comprehend grade-level complex texts proficiently. **Clarifications:** See Text Complexity for grade-level complexity bands and a text complexity rubric.
ELA.K12.EE.3.1:	Make inferences to support comprehension. **Clarifications:** Students will make inferences before the words infer or inference are introduced. Kindergarten students will answer questions like "Why is the girl smiling?" or make predictions about what will happen based on the title page. Students will use the terms and apply them in 2nd grade and beyond.
ELA.K12.EE.4.1:	Use appropriate collaborative techniques and active listening skills when engaging in discussions in a variety of situations. **Clarifications:** In kindergarten, students learn to listen to one another respectfully. In grades 1-2, students build upon these skills by justifying what they are thinking. For example: "I think _____ because _____." The collaborative conversations are becoming academic conversations. In grades 3-12, students engage in academic conversations discussing claims and justifying their reasoning, refining and applying skills. Students build on ideas, propel the conversation, and support claims and counterclaims with evidence.
ELA.K12.EE.5.1:	Use the accepted rules governing a specific format to create quality work. **Clarifications:** Students will incorporate skills learned into work products to produce quality work. For students to incorporate these skills appropriately, they must receive instruction. A 3rd grade student creating a poster board display must have instruction in how to effectively present information to

	do quality work.
ELA.K12.EE.6.1:	Use appropriate voice and tone when speaking or writing. **Clarifications:** In kindergarten and 1st grade, students learn the difference between formal and informal language. For example, the way we talk to our friends differs from the way we speak to adults. In 2nd grade and beyond, students practice appropriate social and academic language to discuss texts.
ELD.K12.ELL.SC.1:	English language learners communicate information, ideas and concepts necessary for academic success in the content area of Science.
ELD.K12.ELL.SI.1:	English language learners communicate for social and instructional purposes within the school setting.

General Course Information and Notes

GENERAL NOTES

Laboratory investigations that include the use of scientific inquiry, research, measurement, problem solving, laboratory apparatus and technologies, experimental procedures, and safety procedures are an integral part of this course. The National Science Teachers Association (NSTA) recommends that at the high school level, all students should be in the science lab or field, collecting data every week. School laboratory investigations (labs) are defined by the National Research Council (NRC) as an experience in the laboratory, classroom, or the field that provides students with opportunities to interact directly with natural phenomena or with data collected by others using tools, materials, data collection techniques, and models (NRC, 2006, p. 3). Laboratory investigations in the high school classroom should help all students develop a growing understanding of the complexity and ambiguity of empirical work, as well as the skills to calibrate and troubleshoot equipment used to make observations. Learners should understand measurement error; and have the skills to aggregate, interpret, and present the resulting data (National Research Council, 2006, p.77; NSTA, 2007).

Special Notes:

Instructional Practices

Teaching from a range of complex text is optimized when teachers in all subject areas implement the following strategies on a routine basis:

1. Ensuring wide reading from complex text that varies in length.
2. Making close reading and rereading of texts central to lessons.
3. Emphasizing text-specific complex questions, and cognitively complex tasks, reinforce focus on the text and cultivate independence.
4. Emphasizing students supporting answers based upon evidence from the text.
5. Providing extensive research and writing opportunities (claims and evidence).

Science and Engineering Practices (NRC *Framework for K-12 Science Education, 2010*)

- Asking questions (for science) and defining problems (for engineering).
- Developing and using models.
- Planning and carrying out investigations.
- Analyzing and interpreting data.
- Using mathematics, information and computer technology, and computational thinking.
- Constructing explanations (for science) and designing solutions (for engineering).
- Engaging in argument from evidence.
- Obtaining, evaluating, and communicating information.

Florida's Benchmarks for Excellent Student Thinking (B.E.S.T.) Standards

This course includes Florida's B.E.S.T. ELA Expectations (EE) and Mathematical Thinking and Reasoning Standards (MTRs) for students. Florida educators should intentionally embed these standards within the content and their instruction as applicable. For guidance on the implementation of the EEs and MTRs, please visit cpalms.org/Standards/BEST_Standards.aspx and select the appropriate B.E.S.T. Standards package.

English Language Development ELD Standards Special Notes Section:

Teachers are required to provide listening, speaking, reading and writing instruction that allows English language learners (ELL) to communicate information, ideas and concepts for academic success in the content area of Science. For the given level of English language proficiency and with visual, graphic, or interactive support, students will interact with grade level words, expressions, sentences and discourse to process or produce language necessary for academic success The ELD standard should specify a relevant content area concept or topic of study chosen by curriculum developers and teachers which maximizes an ELL's need for communication and social skills. To access an ELL supporting document which delineates performance definitions and descriptors, please click on the following link: cpalms.org/uploads/docs/standards/eld/SC.pdf

GENERAL INFORMATION

Course Number: 2001350

Course Path: Section: Grades PreK to 12 Education Courses > **Grade Group:** Grades 9 to 12 and Adult Education Courses > **Subject:** Science > **SubSubject:** Earth/Space Sciences > **Abbreviated Title:** ASTRONOMY S/G

Number of Credits: One (1) credit

Course Length: Year (Y)

Course Type: Elective Course

Course Level: 2

Course Status: Draft - Course Pending Approval

Grade Level(s): 9,10,11,12

Educator Certifications

Science (Secondary Grades 7-12)
Physics (Grades 6-12)
Earth/Space Science (Grades 6-12)
Middle Grades General Science (Middle Grades 5-9)

M/J Comprehensive Science 1 (#2002040) 2022 - And Beyond

Course Standards

Name	Description
SC.6.E.6.1:	Describe and give examples of ways in which Earth's surface is built up and torn down by physical and chemical weathering, erosion, and deposition.
SC.6.E.6.2:	Recognize that there are a variety of different landforms on Earth's surface such as coastlines, dunes, rivers, mountains, glaciers, deltas, and lakes and relate these landforms as they apply to Florida.
SC.6.E.7.1:	Differentiate among radiation, conduction, and convection, the three mechanisms by which heat is transferred through Earth's system.
SC.6.E.7.2:	Investigate and apply how the cycling of water between the atmosphere and hydrosphere has an effect on weather patterns and climate.
SC.6.E.7.3:	Describe how global patterns such as the jet stream and ocean currents influence local weather in measurable terms such as temperature, air pressure, wind direction and speed, and humidity and precipitation.
SC.6.E.7.4:	Differentiate and show interactions among the geosphere, hydrosphere, cryosphere, atmosphere, and biosphere.
SC.6.E.7.5:	Explain how energy provided by the sun influences global patterns of atmospheric movement and the temperature differences between air, water, and land.
SC.6.E.7.6:	Differentiate between weather and climate.
SC.6.E.7.7:	Investigate how natural disasters have affected human life in Florida.
SC.6.E.7.8:	Describe ways human beings protect themselves from hazardous weather and sun exposure.
SC.6.E.7.9:	Describe how the composition and structure of the atmosphere protects life and insulates the planet.
SC.6.L.14.1:	Describe and identify patterns in the hierarchical organization of organisms from atoms to molecules and cells to tissues to organs to organ systems to organisms.
SC.6.L.14.2:	Investigate and explain the components of the scientific theory of cells (cell theory): all organisms are composed of cells (single-celled or multi-cellular), all cells come from pre-existing cells, and cells are the basic unit of life.
SC.6.L.14.3:	Recognize and explore how cells of all organisms undergo similar processes to maintain homeostasis, including extracting energy from food, getting rid of waste, and reproducing.
SC.6.L.14.4:	Compare and contrast the structure and function of major organelles of plant and animal cells, including cell wall, cell membrane, nucleus, cytoplasm, chloroplasts, mitochondria, and vacuoles.
SC.6.L.14.5:	Identify and investigate the general functions of the major systems of the human body (digestive, respiratory, circulatory, reproductive, excretory, immune, nervous, and musculoskeletal) and describe ways these systems interact with each other to maintain homeostasis.
SC.6.L.14.6:	Compare and contrast types of infectious agents that may infect the human body, including viruses, bacteria, fungi, and parasites.
SC.6.L.15.1:	Analyze and describe how and why organisms are classified according to shared characteristics with emphasis on the Linnaean system combined with the concept of Domains.
SC.6.N.1.1:	Define a problem from the sixth grade curriculum, use appropriate reference materials to support scientific understanding, plan and carry out scientific investigation of various types, such as systematic observations or experiments, identify variables, collect and organize data, interpret data in charts, tables, and graphics, analyze information, make predictions, and defend conclusions.
SC.6.N.1.2:	Explain why scientific investigations should be replicable.
SC.6.N.1.3:	Explain the difference between an experiment and other types of scientific investigation, and explain the relative benefits and limitations of each.
SC.6.N.1.4:	Discuss, compare, and negotiate methods used, results obtained, and explanations among groups of students conducting the same investigation.
SC.6.N.1.5:	Recognize that science involves creativity, not just in designing experiments, but also in creating explanations that fit evidence.
SC.6.N.2.1:	Distinguish science from other activities involving thought.
SC.6.N.2.2:	Explain that scientific knowledge is durable because it is open to change as new evidence or interpretations are encountered.
SC.6.N.2.3:	Recognize that scientists who make contributions to scientific knowledge come from all kinds of backgrounds and possess varied talents, interests, and goals.
SC.6.N.3.1:	Recognize and explain that a scientific theory is a well-supported and widely accepted explanation of nature and is not simply a claim posed by an individual. Thus, the use of the term theory in science is very different than how it is used in everyday life.
SC.6.N.3.2:	Recognize and explain that a scientific law is a description of a specific relationship under given conditions in the natural world. Thus, scientific laws are different from societal laws.
SC.6.N.3.3:	Give several examples of scientific laws.
SC.6.N.3.4:	Identify the role of models in the context of the sixth grade science benchmarks.
SC.6.P.11.1:	Explore the Law of Conservation of Energy by differentiating between potential and kinetic energy. Identify situations where kinetic energy is transformed into potential energy and vice versa.
SC.6.P.12.1:	Measure and graph distance versus time for an object moving at a constant speed. Interpret this relationship.
SC.6.P.13.1:	Investigate and describe types of forces including contact forces and forces acting at a distance, such as electrical, magnetic, and gravitational.
SC.6.P.13.2:	Explore the Law of Gravity by recognizing that every object exerts gravitational force on every other object and that the force depends on how much mass the objects have and how far apart they are.
SC.6.P.13.3:	Investigate and describe that an unbalanced force acting on an object changes its speed, or direction of motion, or both.
MA.K12.MTR.1.1:	Mathematicians who participate in effortful learning both individually and with others: • Analyze the problem in a way that makes sense given the task. • Ask questions that will help with solving the task. • Build perseverance by modifying methods as needed while solving a challenging task. • Stay engaged and maintain a positive mindset when working to solve tasks. • Help and support each other when attempting a new method or approach. **Clarifications:** Teachers who encourage students to participate actively in effortful learning both individually and with others: • Cultivate a community of growth mindset learners. • Foster perseverance in students by choosing tasks that are challenging.

- Develop students' ability to analyze and problem solve.
- Recognize students' effort when solving challenging problems.

MA.K12.MTR.2.1:

Demonstrate understanding by representing problems in multiple ways.
Mathematicians who demonstrate understanding by representing problems in multiple ways:

- Build understanding through modeling and using manipulatives.
- Represent solutions to problems in multiple ways using objects, drawings, tables, graphs and equations.
- Progress from modeling problems with objects and drawings to using algorithms and equations.
- Express connections between concepts and representations.
- Choose a representation based on the given context or purpose.

Clarifications:
Teachers who encourage students to demonstrate understanding by representing problems in multiple ways:

- Help students make connections between concepts and representations.
- Provide opportunities for students to use manipulatives when investigating concepts.
- Guide students from concrete to pictorial to abstract representations as understanding progresses.
- Show students that various representations can have different purposes and can be useful in different situations.

MA.K12.MTR.3.1:

Complete tasks with mathematical fluency.
Mathematicians who complete tasks with mathematical fluency:

- Select efficient and appropriate methods for solving problems within the given context.
- Maintain flexibility and accuracy while performing procedures and mental calculations.
- Complete tasks accurately and with confidence.
- Adapt procedures to apply them to a new context.
- Use feedback to improve efficiency when performing calculations.

Clarifications:
Teachers who encourage students to complete tasks with mathematical fluency:

- Provide students with the flexibility to solve problems by selecting a procedure that allows them to solve efficiently and accurately.
- Offer multiple opportunities for students to practice efficient and generalizable methods.
- Provide opportunities for students to reflect on the method they used and determine if a more efficient method could have been used.

MA.K12.MTR.4.1:

Engage in discussions that reflect on the mathematical thinking of self and others.
Mathematicians who engage in discussions that reflect on the mathematical thinking of self and others:

- Communicate mathematical ideas, vocabulary and methods effectively.
- Analyze the mathematical thinking of others.
- Compare the efficiency of a method to those expressed by others.
- Recognize errors and suggest how to correctly solve the task.
- Justify results by explaining methods and processes.
- Construct possible arguments based on evidence.

Clarifications:
Teachers who encourage students to engage in discussions that reflect on the mathematical thinking of self and others:

- Establish a culture in which students ask questions of the teacher and their peers, and error is an opportunity for learning.
- Create opportunities for students to discuss their thinking with peers.
- Select, sequence and present student work to advance and deepen understanding of correct and increasingly efficient methods.
- Develop students' ability to justify methods and compare their responses to the responses of their peers.

MA.K12.MTR.5.1:

Use patterns and structure to help understand and connect mathematical concepts.
Mathematicians who use patterns and structure to help understand and connect mathematical concepts:

- Focus on relevant details within a problem.
- Create plans and procedures to logically order events, steps or ideas to solve problems.
- Decompose a complex problem into manageable parts.
- Relate previously learned concepts to new concepts.
- Look for similarities among problems.
- Connect solutions of problems to more complicated large-scale situations.

Clarifications:
Teachers who encourage students to use patterns and structure to help understand and connect mathematical concepts:

- Help students recognize the patterns in the world around them and connect these patterns to mathematical concepts.
- Support students to develop generalizations based on the similarities found among problems.
- Provide opportunities for students to create plans and procedures to solve problems.
- Develop students' ability to construct relationships between their current understanding and more sophisticated ways of thinking.

MA.K12.MTR.6.1:

Assess the reasonableness of solutions.
Mathematicians who assess the reasonableness of solutions:

- Estimate to discover possible solutions.
- Use benchmark quantities to determine if a solution makes sense.
- Check calculations when solving problems.
- Verify possible solutions by explaining the methods used.
- Evaluate results based on the given context.

Clarifications:
Teachers who encourage students to assess the reasonableness of solutions:

- Have students estimate or predict solutions prior to solving.

	• Prompt students to continually ask, "Does this solution make sense? How do you know?" • Reinforce that students check their work as they progress within and after a task. • Strengthen students' ability to verify solutions through justifications.
MA.K12.MTR.7.1:	Apply mathematics to real-world contexts. Mathematicians who apply mathematics to real-world contexts: • Connect mathematical concepts to everyday experiences. • Use models and methods to understand, represent and solve problems. • Perform investigations to gather data or determine if a method is appropriate. • Redesign models and methods to improve accuracy or efficiency. **Clarifications:** Teachers who encourage students to apply mathematics to real-world contexts: • Provide opportunities for students to create models, both concrete and abstract, and perform investigations. • Challenge students to question the accuracy of their models and methods. • Support students as they validate conclusions by comparing them to the given situation. • Indicate how various concepts can be applied to other disciplines.
ELA.K12.EE.1.1:	Cite evidence to explain and justify reasoning. **Clarifications:** K-1 Students include textual evidence in their oral communication with guidance and support from adults. The evidence can consist of details from the text without naming the text. During 1st grade, students learn how to incorporate the evidence in their writing. 2-3 Students include relevant textual evidence in their written and oral communication. Students should name the text when they refer to it. In 3rd grade, students should use a combination of direct and indirect citations. 4-5 Students continue with previous skills and reference comments made by speakers and peers. Students cite texts that they've directly quoted, paraphrased, or used for information. When writing, students will use the form of citation dictated by the instructor or the style guide referenced by the instructor. 6-8 Students continue with previous skills and use a style guide to create a proper citation. 9-12 Students continue with previous skills and should be aware of existing style guides and the ways in which they differ.
ELA.K12.EE.2.1:	Read and comprehend grade-level complex texts proficiently. **Clarifications:** See Text Complexity for grade-level complexity bands and a text complexity rubric.
ELA.K12.EE.3.1:	Make inferences to support comprehension. **Clarifications:** Students will make inferences before the words infer or inference are introduced. Kindergarten students will answer questions like "Why is the girl smiling?" or make predictions about what will happen based on the title page. Students will use the terms and apply them in 2nd grade and beyond.
ELA.K12.EE.4.1:	Use appropriate collaborative techniques and active listening skills when engaging in discussions in a variety of situations. **Clarifications:** In kindergarten, students learn to listen to one another respectfully. In grades 1-2, students build upon these skills by justifying what they are thinking. For example: "I think _____ because _____." The collaborative conversations are becoming academic conversations. In grades 3-12, students engage in academic conversations discussing claims and justifying their reasoning, refining and applying skills. Students build on ideas, propel the conversation, and support claims and counterclaims with evidence.
ELA.K12.EE.5.1:	Use the accepted rules governing a specific format to create quality work. **Clarifications:** Students will incorporate skills learned into work products to produce quality work. For students to incorporate these skills appropriately, they must receive instruction. A 3rd grade student creating a poster board display must have instruction in how to effectively present information to do quality work.
ELA.K12.EE.6.1:	Use appropriate voice and tone when speaking or writing. **Clarifications:** In kindergarten and 1st grade, students learn the difference between formal and informal language. For example, the way we talk to our friends differs from the way we speak to adults. In 2nd grade and beyond, students practice appropriate social and academic language to discuss texts.
ELD.K12.ELL.SC.1:	English language learners communicate information, ideas and concepts necessary for academic success in the content area of Science.
ELD.K12.ELL.SI.1:	English language learners communicate for social and instructional purposes within the school setting.
HE.6.C.1.3:	Identify environmental factors that affect personal health. **Clarifications:** Air and water quality, availability of sidewalks, contaminated food, and road hazards.
HE.6.C.1.5:	Explain how body systems are impacted by hereditary factors and infectious agents. **Clarifications:** Cystic fibrosis affects respiratory and a digestive system, sickle-cell anemia affects the circulatory system, and influenza affects the respiratory system.

General Course Information and Notes

GENERAL NOTES

Laboratory investigations that include the use of scientific inquiry, research, measurement, problem solving, laboratory apparatus and technologies, experimental procedures, and safety procedures are an integral part of this course. The National Science Teachers Association (NSTA) recommends that at the middle school level, all students should have multiple opportunities every week to explore science laboratory investigations (labs). School laboratory investigations are defined by the National Research Council (NRC) as an experience in the laboratory, classroom, or the field that provides students with opportunities to interact directly with natural phenomena or with data collected by others using tools, materials, data collection techniques, and models (NRC, 2006, p. 3). Laboratory investigations in the middle school classroom should help all students develop a growing understanding of the complexity and ambiguity of empirical work, as well as the skills to calibrate and troubleshoot equipment used to make observations. Learners should understand measurement error and have the skills to aggregate, interpret, and present the resulting data (NRC 2006, p. 77; NSTA, 2007).

Special Notes:

Instructional Practices
Teaching from a range of complex text is optimized when teachers in all subject areas implement the following strategies on a routine basis:

1. Ensuring wide reading from complex text that varies in length.
2. Making close reading and rereading of texts central to lessons.
3. Emphasizing text-specific complex questions, and cognitively complex tasks, reinforce focus on the text and cultivate independence.
4. Emphasizing students supporting answers based upon evidence from the text.
5. Providing extensive research and writing opportunities (claims and evidence).

Science and Engineering Practices (NRC *Framework for K-12 Science Education, 2010*)

- Asking questions (for science) and defining problems (for engineering).
- Developing and using models.
- Planning and carrying out investigations.
- Analyzing and interpreting data.
- Using mathematics, information and computer technology, and computational thinking.
- Constructing explanations (for science) and designing solutions (for engineering).
- Engaging in argument from evidence.
- Obtaining, evaluating, and communicating information.

Florida's Benchmarks for Excellent Student Thinking (B.E.S.T.) Standards
This course includes Florida's B.E.S.T. ELA Expectations (EE) and Mathematical Thinking and Reasoning Standards (MTRs) for students. Florida educators should intentionally embed these standards within the content and their instruction as applicable. For guidance on the implementation of the EEs and MTRs, please visit cpalms.org/Standards/BEST_Standards.aspx and select the appropriate B.E.S.T. Standards package.

English Language Development ELD Standards Special Notes Section:
Teachers are required to provide listening, speaking, reading and writing instruction that allows English language learners (ELL) to communicate information, ideas and concepts for academic success in the content area of Science. For the given level of English language proficiency and with visual, graphic, or interactive support, students will interact with grade level words, expressions, sentences and discourse to process or produce language necessary for academic success The ELD standard should specify a relevant content area concept or topic of study chosen by curriculum developers and teachers which maximizes an ELL's need for communication and social skills. To access an ELL supporting document which delineates performance definitions and descriptors, please click on the following link: cpalms.org/uploads/docs/standards/eld/SC.pdf

Additional Instructional Resources:
A.V.E. for Success Collection: fasa.net/4DCGI/cms/review.html?Action=CMS_Document&DocID=139

GENERAL INFORMATION

Course Number: 2002040

Course Path: Section: Grades PreK to 12 Education Courses > **Grade Group:** Grades 6 to 8 Education Courses > **Subject:** Science > **SubSubject:** General Sciences >

Abbreviated Title: M/J COMP SCI 1

Course Length: Year (Y)

Course Attributes:

- Class Size Core Required

Course Level: 2

Course Status: Draft - Course Pending Approval

Grade Level(s): 6,7,8

Educator Certifications

Science (Elementary Grades 1-6)
Science (Secondary Grades 7-12)
Physics (Grades 6-12)
Earth/Space Science (Grades 6-12)

Middle Grades General Science (Middle Grades 5-9)
Middle Grades Integrated Curriculum (Middle Grades 5-9)
Chemistry (Grades 6-12)
Biology (Grades 6-12)
Elementary Education (Grades K-6)
Elementary Education (Elementary Grades 1-6)

M/J Comprehensive Science 1, Advanced (#2002050) 2022 -

And Beyond

Course Standards

Name	Description
SC.6.E.6.1:	Describe and give examples of ways in which Earth's surface is built up and torn down by physical and chemical weathering, erosion, and deposition.
SC.6.E.6.2:	Recognize that there are a variety of different landforms on Earth's surface such as coastlines, dunes, rivers, mountains, glaciers, deltas, and lakes and relate these landforms as they apply to Florida.
SC.6.E.7.1:	Differentiate among radiation, conduction, and convection, the three mechanisms by which heat is transferred through Earth's system.
SC.6.E.7.2:	Investigate and apply how the cycling of water between the atmosphere and hydrosphere has an effect on weather patterns and climate.
SC.6.E.7.3:	Describe how global patterns such as the jet stream and ocean currents influence local weather in measurable terms such as temperature, air pressure, wind direction and speed, and humidity and precipitation.
SC.6.E.7.4:	Differentiate and show interactions among the geosphere, hydrosphere, cryosphere, atmosphere, and biosphere.
SC.6.E.7.5:	Explain how energy provided by the sun influences global patterns of atmospheric movement and the temperature differences between air, water, and land.
SC.6.E.7.6:	Differentiate between weather and climate.
SC.6.E.7.7:	Investigate how natural disasters have affected human life in Florida.
SC.6.E.7.8:	Describe ways human beings protect themselves from hazardous weather and sun exposure.
SC.6.E.7.9:	Describe how the composition and structure of the atmosphere protects life and insulates the planet.
SC.6.L.14.1:	Describe and identify patterns in the hierarchical organization of organisms from atoms to molecules and cells to tissues to organs to organ systems to organisms.
SC.6.L.14.2:	Investigate and explain the components of the scientific theory of cells (cell theory): all organisms are composed of cells (single-celled or multi-cellular), all cells come from pre-existing cells, and cells are the basic unit of life.
SC.6.L.14.3:	Recognize and explore how cells of all organisms undergo similar processes to maintain homeostasis, including extracting energy from food, getting rid of waste, and reproducing.
SC.6.L.14.4:	Compare and contrast the structure and function of major organelles of plant and animal cells, including cell wall, cell membrane, nucleus, cytoplasm, chloroplasts, mitochondria, and vacuoles.
SC.6.L.14.5:	Identify and investigate the general functions of the major systems of the human body (digestive, respiratory, circulatory, reproductive, excretory, immune, nervous, and musculoskeletal) and describe ways these systems interact with each other to maintain homeostasis.
SC.6.L.14.6:	Compare and contrast types of infectious agents that may infect the human body, including viruses, bacteria, fungi, and parasites.
SC.6.L.15.1:	Analyze and describe how and why organisms are classified according to shared characteristics with emphasis on the Linnaean system combined with the concept of Domains.
SC.6.N.1.1:	Define a problem from the sixth grade curriculum, use appropriate reference materials to support scientific understanding, plan and carry out scientific investigation of various types, such as systematic observations or experiments, identify variables, collect and organize data, interpret data in charts, tables, and graphics, analyze information, make predictions, and defend conclusions.
SC.6.N.1.2:	Explain why scientific investigations should be replicable.
SC.6.N.1.3:	Explain the difference between an experiment and other types of scientific investigation, and explain the relative benefits and limitations of each.
SC.6.N.1.4:	Discuss, compare, and negotiate methods used, results obtained, and explanations among groups of students conducting the same investigation.
SC.6.N.1.5:	Recognize that science involves creativity, not just in designing experiments, but also in creating explanations that fit evidence.
SC.6.N.2.1:	Distinguish science from other activities involving thought.
SC.6.N.2.2:	Explain that scientific knowledge is durable because it is open to change as new evidence or interpretations are encountered.
SC.6.N.2.3:	Recognize that scientists who make contributions to scientific knowledge come from all kinds of backgrounds and possess varied talents, interests, and goals.
SC.6.N.3.1:	Recognize and explain that a scientific theory is a well-supported and widely accepted explanation of nature and is not simply a claim posed by an individual. Thus, the use of the term theory in science is very different than how it is used in everyday life.
SC.6.N.3.2:	Recognize and explain that a scientific law is a description of a specific relationship under given conditions in the natural world. Thus, scientific laws are different from societal laws.
SC.6.N.3.3:	Give several examples of scientific laws.
SC.6.N.3.4:	Identify the role of models in the context of the sixth grade science benchmarks.
SC.6.P.11.1:	Explore the Law of Conservation of Energy by differentiating between potential and kinetic energy. Identify situations where kinetic energy is transformed into potential energy and vice versa.
SC.6.P.12.1:	Measure and graph distance versus time for an object moving at a constant speed. Interpret this relationship.
SC.6.P.13.1:	Investigate and describe types of forces including contact forces and forces acting at a distance, such as electrical, magnetic, and gravitational.
SC.6.P.13.2:	Explore the Law of Gravity by recognizing that every object exerts gravitational force on every other object and that the force depends on how much mass the objects have and how far apart they are.
SC.6.P.13.3:	Investigate and describe that an unbalanced force acting on an object changes its speed, or direction of motion, or both.
SC.912.E.7.3:	Differentiate and describe the various interactions among Earth systems, including: atmosphere, hydrosphere, cryosphere, geosphere, and biosphere.
SC.912.E.7.5:	Predict future weather conditions based on present observations and conceptual models and recognize limitations and uncertainties of such predictions.
SC.912.E.7.6:	Relate the formation of severe weather to the various physical factors.
SC.912.L.14.2:	Relate structure to function for the components of plant and animal cells. Explain the role of cell membranes as a highly selective barrier (passive and active transport).
SC.912.L.14.3:	Compare and contrast the general structures of plant and animal cells. Compare and contrast the general structures of prokaryotic and eukaryotic cells.

SC.912.L.16.14:	Describe the cell cycle, including the process of mitosis. Explain the role of mitosis in the formation of new cells and its importance in maintaining chromosome number during asexual reproduction.
SC.912.P.10.4:	Describe heat as the energy transferred by convection, conduction, and radiation, and explain the connection of heat to change in temperature or states of matter.
MA.K12.MTR.1.1:	Mathematicians who participate in effortful learning both individually and with others: • Analyze the problem in a way that makes sense given the task. • Ask questions that will help with solving the task. • Build perseverance by modifying methods as needed while solving a challenging task. • Stay engaged and maintain a positive mindset when working to solve tasks. • Help and support each other when attempting a new method or approach. **Clarifications:** Teachers who encourage students to participate actively in effortful learning both individually and with others: • Cultivate a community of growth mindset learners. • Foster perseverance in students by choosing tasks that are challenging. • Develop students' ability to analyze and problem solve. • Recognize students' effort when solving challenging problems.
MA.K12.MTR.2.1:	Demonstrate understanding by representing problems in multiple ways. Mathematicians who demonstrate understanding by representing problems in multiple ways: • Build understanding through modeling and using manipulatives. • Represent solutions to problems in multiple ways using objects, drawings, tables, graphs and equations. • Progress from modeling problems with objects and drawings to using algorithms and equations. • Express connections between concepts and representations. • Choose a representation based on the given context or purpose. **Clarifications:** Teachers who encourage students to demonstrate understanding by representing problems in multiple ways: • Help students make connections between concepts and representations. • Provide opportunities for students to use manipulatives when investigating concepts. • Guide students from concrete to pictorial to abstract representations as understanding progresses. • Show students that various representations can have different purposes and can be useful in different situations.
MA.K12.MTR.3.1:	Complete tasks with mathematical fluency. Mathematicians who complete tasks with mathematical fluency: • Select efficient and appropriate methods for solving problems within the given context. • Maintain flexibility and accuracy while performing procedures and mental calculations. • Complete tasks accurately and with confidence. • Adapt procedures to apply them to a new context. • Use feedback to improve efficiency when performing calculations. **Clarifications:** Teachers who encourage students to complete tasks with mathematical fluency: • Provide students with the flexibility to solve problems by selecting a procedure that allows them to solve efficiently and accurately. • Offer multiple opportunities for students to practice efficient and generalizable methods. • Provide opportunities for students to reflect on the method they used and determine if a more efficient method could have been used.
MA.K12.MTR.4.1:	Engage in discussions that reflect on the mathematical thinking of self and others. Mathematicians who engage in discussions that reflect on the mathematical thinking of self and others: • Communicate mathematical ideas, vocabulary and methods effectively. • Analyze the mathematical thinking of others. • Compare the efficiency of a method to those expressed by others. • Recognize errors and suggest how to correctly solve the task. • Justify results by explaining methods and processes. • Construct possible arguments based on evidence. **Clarifications:** Teachers who encourage students to engage in discussions that reflect on the mathematical thinking of self and others: • Establish a culture in which students ask questions of the teacher and their peers, and error is an opportunity for learning. • Create opportunities for students to discuss their thinking with peers. • Select, sequence and present student work to advance and deepen understanding of correct and increasingly efficient methods. • Develop students' ability to justify methods and compare their responses to the responses of their peers.
MA.K12.MTR.5.1:	Use patterns and structure to help understand and connect mathematical concepts. Mathematicians who use patterns and structure to help understand and connect mathematical concepts: • Focus on relevant details within a problem. • Create plans and procedures to logically order events, steps or ideas to solve problems. • Decompose a complex problem into manageable parts. • Relate previously learned concepts to new concepts. • Look for similarities among problems. • Connect solutions of problems to more complicated large-scale situations. **Clarifications:** Teachers who encourage students to use patterns and structure to help understand and connect mathematical concepts: • Help students recognize the patterns in the world around them and connect these patterns to mathematical concepts.

	• Support students to develop generalizations based on the similarities found among problems. • Provide opportunities for students to create plans and procedures to solve problems. • Develop students' ability to construct relationships between their current understanding and more sophisticated ways of thinking.
MA.K12.MTR.6.1:	Assess the reasonableness of solutions. Mathematicians who assess the reasonableness of solutions: • Estimate to discover possible solutions. • Use benchmark quantities to determine if a solution makes sense. • Check calculations when solving problems. • Verify possible solutions by explaining the methods used. • Evaluate results based on the given context. **Clarifications:** Teachers who encourage students to assess the reasonableness of solutions: • Have students estimate or predict solutions prior to solving. • Prompt students to continually ask, "Does this solution make sense? How do you know?" • Reinforce that students check their work as they progress within and after a task. • Strengthen students' ability to verify solutions through justifications.
MA.K12.MTR.7.1:	Apply mathematics to real-world contexts. Mathematicians who apply mathematics to real-world contexts: • Connect mathematical concepts to everyday experiences. • Use models and methods to understand, represent and solve problems. • Perform investigations to gather data or determine if a method is appropriate. • Redesign models and methods to improve accuracy or efficiency. **Clarifications:** Teachers who encourage students to apply mathematics to real-world contexts: • Provide opportunities for students to create models, both concrete and abstract, and perform investigations. • Challenge students to question the accuracy of their models and methods. • Support students as they validate conclusions by comparing them to the given situation. • Indicate how various concepts can be applied to other disciplines.
ELA.K12.EE.1.1:	Cite evidence to explain and justify reasoning. **Clarifications:** K-1 Students include textual evidence in their oral communication with guidance and support from adults. The evidence can consist of details from the text without naming the text. During 1st grade, students learn how to incorporate the evidence in their writing. 2-3 Students include relevant textual evidence in their written and oral communication. Students should name the text when they refer to it. In 3rd grade, students should use a combination of direct and indirect citations. 4-5 Students continue with previous skills and reference comments made by speakers and peers. Students cite texts that they've directly quoted, paraphrased, or used for information. When writing, students will use the form of citation dictated by the instructor or the style guide referenced by the instructor. 6-8 Students continue with previous skills and use a style guide to create a proper citation. 9-12 Students continue with previous skills and should be aware of existing style guides and the ways in which they differ.
ELA.K12.EE.2.1:	Read and comprehend grade-level complex texts proficiently. **Clarifications:** See Text Complexity for grade-level complexity bands and a text complexity rubric.
ELA.K12.EE.3.1:	Make inferences to support comprehension. **Clarifications:** Students will make inferences before the words infer or inference are introduced. Kindergarten students will answer questions like "Why is the girl smiling?" or make predictions about what will happen based on the title page. Students will use the terms and apply them in 2nd grade and beyond.
ELA.K12.EE.4.1:	Use appropriate collaborative techniques and active listening skills when engaging in discussions in a variety of situations. **Clarifications:** In kindergarten, students learn to listen to one another respectfully. In grades 1-2, students build upon these skills by justifying what they are thinking. For example: "I think _____ because _____." The collaborative conversations are becoming academic conversations. In grades 3-12, students engage in academic conversations discussing claims and justifying their reasoning, refining and applying skills. Students build on ideas, propel the conversation, and support claims and counterclaims with evidence.
ELA.K12.EE.5.1:	Use the accepted rules governing a specific format to create quality work. **Clarifications:** Students will incorporate skills learned into work products to produce quality work. For students to incorporate these skills appropriately, they must receive instruction. A 3rd grade student creating a poster board display must have instruction in how to effectively present information to do quality work.
ELA.K12.EE.6.1:	Use appropriate voice and tone when speaking or writing. **Clarifications:** In kindergarten and 1st grade, students learn the difference between formal and informal language. For example, the way we talk to our friends differs from the way we speak to adults. In 2nd grade and beyond, students practice appropriate social and academic language to discuss texts.
ELD.K12.ELL.SC.1:	English language learners communicate information, ideas and concepts necessary for academic success in the content area of Science.
ELD.K12.ELL.SI.1:	English language learners communicate for social and instructional purposes within the school setting.

HE.6.C.1.3:	Identify environmental factors that affect personal health. **Clarifications:** Air and water quality, availability of sidewalks, contaminated food, and road hazards.
HE.6.C.1.5:	Explain how body systems are impacted by hereditary factors and infectious agents. **Clarifications:** Cystic fibrosis affects respiratory and a digestive system, sickle-cell anemia affects the circulatory system, and influenza affects the respiratory system.

General Course Information and Notes

GENERAL NOTES

Laboratory investigations that include the use of scientific inquiry, research, measurement, problem solving, laboratory apparatus and technologies, experimental procedures, and safety procedures are an integral part of this course. The National Science Teachers Association (NSTA) recommends that at the middle school level, all students should have multiple opportunities every week to explore science laboratory investigations (labs). School laboratory investigations are defined by the National Research Council (NRC) as an experience in the laboratory, classroom, or the field that provides students with opportunities to interact directly with natural phenomena or with data collected by others using tools, materials, data collection techniques, and models (NRC, 2006, p. 3). Laboratory investigations in the middle school classroom should help all students develop a growing understanding of the complexity and ambiguity of empirical work, as well as the skills to calibrate and troubleshoot equipment used to make observations. Learners should understand measurement error; and have the skills to aggregate, interpret, and present the resulting data (NRC 2006, p. 77; NSTA, 2007).

Honors and Advanced Level Course Note: Advanced courses require a greater demand on students through increased academic rigor. Academic rigor is obtained through the application, analysis, evaluation, and creation of complex ideas that are often abstract and multi-faceted. Students are challenged to think and collaborate critically on the content they are learning. Honors level rigor will be achieved by increasing text complexity through text selection, focus on high-level qualitative measures, and complexity of task. Instruction will be structured to give students a deeper understanding of conceptual themes and organization within and across disciplines. Academic rigor is more than simply assigning to students a greater quantity of work.

Special Notes:

Instructional Practices
Teaching from a range of complex text is optimized when teachers in all subject areas implement the following strategies on a routine basis:

1. Ensuring wide reading from complex text that varies in length.
2. Making close reading and rereading of texts central to lessons.
3. Emphasizing text-specific complex questions, and cognitively complex tasks, reinforce focus on the text and cultivate independence.
4. Emphasizing students supporting answers based upon evidence from the text.
5. Providing extensive research and writing opportunities (claims and evidence).

Science and Engineering Practices (NRC *Framework for K-12 Science Education, 2010*)

- Asking questions (for science) and defining problems (for engineering).
- Developing and using models.
- Planning and carrying out investigations.
- Analyzing and interpreting data.
- Using mathematics, information and computer technology, and computational thinking.
- Constructing explanations (for science) and designing solutions (for engineering).
- Engaging in argument from evidence.
- Obtaining, evaluating, and communicating information.

Florida's Benchmarks for Excellent Student Thinking (B.E.S.T.) Standards
This course includes Florida's B.E.S.T. ELA Expectations (EE) and Mathematical Thinking and Reasoning Standards (MTRs) for students. Florida educators should intentionally embed these standards within the content and their instruction as applicable. For guidance on the implementation of the EEs and MTRs, please visit cpalms.org/Standards/BEST_Standards.aspx and select the appropriate B.E.S.T. Standards package.

English Language Development ELD Standards Special Notes Section:
Teachers are required to provide listening, speaking, reading and writing instruction that allows English language learners (ELL) to communicate information, ideas and concepts for academic success in the content area of Science. For the given level of English language proficiency and with visual, graphic, or interactive support, students will interact with grade level words, expressions, sentences and discourse to process or produce language necessary for academic success The ELD standard should specify a relevant content area concept or topic of study chosen by curriculum developers and teachers which maximizes an ELL's need for communication and social skills. To access an ELL supporting document which delineates performance definitions and descriptors, please click on the following link: cpalms.org/uploads/docs/standards/eld/SC.pdf

GENERAL INFORMATION

Course Number: 2002050

Course Path: Section: Grades PreK to 12 Education Courses > **Grade Group:** Grades 6 to 8 Education Courses > **Subject:** Science > **SubSubject:** General Sciences >
Abbreviated Title: M/J COMP SCI 1 ADV

Course Length: Year (Y)

Course Attributes:

- Class Size Core Required

Course Level: 3

Course Status: Draft - Course Pending Approval

Grade Level(s): 6,7,8

Educator Certifications

Science (Elementary Grades 1-6)
Science (Secondary Grades 7-12)
Middle Grades Integrated Curriculum (Middle Grades 5-9)
Chemistry (Grades 6-12)
Biology (Grades 6-12)
Middle Grades General Science (Middle Grades 5-9)
Physics (Grades 6-12)
Earth/Space Science (Grades 6-12)
Elementary Education (Grades K-6)
Elementary Education (Elementary Grades 1-6)

M/J Comprehensive Science 1 Accelerated Honors (#2002055) 2022 - And Beyond

Course Standards

Name	Description
SC.6.E.6.1:	Describe and give examples of ways in which Earth's surface is built up and torn down by physical and chemical weathering, erosion, and deposition.
SC.6.E.6.2:	Recognize that there are a variety of different landforms on Earth's surface such as coastlines, dunes, rivers, mountains, glaciers, deltas, and lakes and relate these landforms as they apply to Florida.
SC.6.E.7.1:	Differentiate among radiation, conduction, and convection, the three mechanisms by which heat is transferred through Earth's system.
SC.6.E.7.2:	Investigate and apply how the cycling of water between the atmosphere and hydrosphere has an effect on weather patterns and climate.
SC.6.E.7.3:	Describe how global patterns such as the jet stream and ocean currents influence local weather in measurable terms such as temperature, air pressure, wind direction and speed, and humidity and precipitation.
SC.6.E.7.4:	Differentiate and show interactions among the geosphere, hydrosphere, cryosphere, atmosphere, and biosphere.
SC.6.E.7.5:	Explain how energy provided by the sun influences global patterns of atmospheric movement and the temperature differences between air, water, and land.
SC.6.E.7.6:	Differentiate between weather and climate.
SC.6.E.7.7:	Investigate how natural disasters have affected human life in Florida.
SC.6.E.7.8:	Describe ways human beings protect themselves from hazardous weather and sun exposure.
SC.6.E.7.9:	Describe how the composition and structure of the atmosphere protects life and insulates the planet.
SC.6.L.14.1:	Describe and identify patterns in the hierarchical organization of organisms from atoms to molecules and cells to tissues to organs to organ systems to organisms.
SC.6.L.14.2:	Investigate and explain the components of the scientific theory of cells (cell theory): all organisms are composed of cells (single-celled or multi-cellular), all cells come from pre-existing cells, and cells are the basic unit of life.
SC.6.L.14.3:	Recognize and explore how cells of all organisms undergo similar processes to maintain homeostasis, including extracting energy from food, getting rid of waste, and reproducing.
SC.6.L.14.4:	Compare and contrast the structure and function of major organelles of plant and animal cells, including cell wall, cell membrane, nucleus, cytoplasm, chloroplasts, mitochondria, and vacuoles.
SC.6.L.14.5:	Identify and investigate the general functions of the major systems of the human body (digestive, respiratory, circulatory, reproductive, excretory, immune, nervous, and musculoskeletal) and describe ways these systems interact with each other to maintain homeostasis.
SC.6.L.14.6:	Compare and contrast types of infectious agents that may infect the human body, including viruses, bacteria, fungi, and parasites.
SC.6.L.15.1:	Analyze and describe how and why organisms are classified according to shared characteristics with emphasis on the Linnaean system combined with the concept of Domains.
SC.6.N.1.1:	Define a problem from the sixth grade curriculum, use appropriate reference materials to support scientific understanding, plan and carry out scientific investigation of various types, such as systematic observations or experiments, identify variables, collect and organize data, interpret data in charts, tables, and graphics, analyze information, make predictions, and defend conclusions.
SC.6.N.1.2:	Explain why scientific investigations should be replicable.
SC.6.N.1.3:	Explain the difference between an experiment and other types of scientific investigation, and explain the relative benefits and limitations of each.
SC.6.N.1.4:	Discuss, compare, and negotiate methods used, results obtained, and explanations among groups of students conducting the same investigation.
SC.6.N.1.5:	Recognize that science involves creativity, not just in designing experiments, but also in creating explanations that fit evidence.
SC.6.N.2.1:	Distinguish science from other activities involving thought.
SC.6.N.2.2:	Explain that scientific knowledge is durable because it is open to change as new evidence or interpretations are encountered.
SC.6.N.2.3:	Recognize that scientists who make contributions to scientific knowledge come from all kinds of backgrounds and possess varied talents, interests, and goals.
SC.6.N.3.1:	Recognize and explain that a scientific theory is a well-supported and widely accepted explanation of nature and is not simply a claim posed by an individual. Thus, the use of the term theory in science is very different than how it is used in everyday life.
SC.6.N.3.2:	Recognize and explain that a scientific law is a description of a specific relationship under given conditions in the natural world. Thus, scientific laws are different from societal laws.
SC.6.N.3.3:	Give several examples of scientific laws.
SC.6.N.3.4:	Identify the role of models in the context of the sixth grade science benchmarks.
SC.6.P.11.1:	Explore the Law of Conservation of Energy by differentiating between potential and kinetic energy. Identify situations where kinetic energy is transformed into potential energy and vice versa.
SC.6.P.12.1:	Measure and graph distance versus time for an object moving at a constant speed. Interpret this relationship.
SC.6.P.13.1:	Investigate and describe types of forces including contact forces and forces acting at a distance, such as electrical, magnetic, and gravitational.
SC.6.P.13.2:	Explore the Law of Gravity by recognizing that every object exerts gravitational force on every other object and that the force depends on how much mass the objects have and how far apart they are.
SC.6.P.13.3:	Investigate and describe that an unbalanced force acting on an object changes its speed, or direction of motion, or both.
SC.8.N.1.2:	Design and conduct a study using repeated trials and replication.
SC.8.N.1.3:	Use phrases such as "results support" or "fail to support" in science, understanding that science does not offer conclusive 'proof' of a knowledge claim.
SC.8.N.1.4:	Explain how hypotheses are valuable if they lead to further investigations, even if they turn out not to be supported by the data.
SC.8.N.1.5:	Analyze the methods used to develop a scientific explanation as seen in different fields of science.
SC.8.N.1.6:	Understand that scientific investigations involve the collection of relevant empirical evidence, the use of logical reasoning, and the application of imagination in devising hypotheses, predictions, explanations and models to make sense of the collected evidence.
SC.8.P.8.1:	Explore the scientific theory of atoms (also known as atomic theory) by using models to explain the motion of particles in solids, liquids, and gases.

SC.8.P.8.2:	Differentiate between weight and mass recognizing that weight is the amount of gravitational pull on an object and is distinct from, though proportional to, mass.
SC.8.P.8.3:	Explore and describe the densities of various materials through measurement of their masses and volumes.
SC.8.P.8.4:	Classify and compare substances on the basis of characteristic physical properties that can be demonstrated or measured; for example, density, thermal or electrical conductivity, solubility, magnetic properties, melting and boiling points, and know that these properties are independent of the amount of the sample.
SC.8.P.8.5:	Recognize that there are a finite number of elements and that their atoms combine in a multitude of ways to produce compounds that make up all of the living and nonliving things that we encounter.
SC.8.P.8.6:	Recognize that elements are grouped in the periodic table according to similarities of their properties.
SC.8.P.8.7:	Explore the scientific theory of atoms (also known as atomic theory) by recognizing that atoms are the smallest unit of an element and are composed of sub-atomic particles (electrons surrounding a nucleus containing protons and neutrons).
SC.8.P.8.8:	Identify basic examples of and compare and classify the properties of compounds, including acids, bases, and salts.
SC.8.P.8.9:	Distinguish among mixtures (including solutions) and pure substances.
SC.912.E.5.4:	Explain the physical properties of the Sun and its dynamic nature and connect them to conditions and events on Earth.
SC.912.E.7.3:	Differentiate and describe the various interactions among Earth systems, including: atmosphere, hydrosphere, cryosphere, geosphere, and biosphere.
SC.912.E.7.5:	Predict future weather conditions based on present observations and conceptual models and recognize limitations and uncertainties of such predictions.
SC.912.E.7.6:	Relate the formation of severe weather to the various physical factors.
SC.912.L.14.2:	Relate structure to function for the components of plant and animal cells. Explain the role of cell membranes as a highly selective barrier (passive and active transport).
SC.912.L.14.3:	Compare and contrast the general structures of plant and animal cells. Compare and contrast the general structures of prokaryotic and eukaryotic cells.
SC.912.L.16.14:	Describe the cell cycle, including the process of mitosis. Explain the role of mitosis in the formation of new cells and its importance in maintaining chromosome number during asexual reproduction.
SC.912.P.8.1:	Differentiate among the four states of matter.
SC.912.P.8.2:	Differentiate between physical and chemical properties and physical and chemical changes of matter.
SC.912.P.8.7:	Interpret formula representations of molecules and compounds in terms of composition and structure.
SC.912.P.10.4:	Describe heat as the energy transferred by convection, conduction, and radiation, and explain the connection of heat to change in temperature or states of matter.
MA.K12.MTR.1.1:	Mathematicians who participate in effortful learning both individually and with others: • Analyze the problem in a way that makes sense given the task. • Ask questions that will help with solving the task. • Build perseverance by modifying methods as needed while solving a challenging task. • Stay engaged and maintain a positive mindset when working to solve tasks. • Help and support each other when attempting a new method or approach. **Clarifications:** Teachers who encourage students to participate actively in effortful learning both individually and with others: • Cultivate a community of growth mindset learners. • Foster perseverance in students by choosing tasks that are challenging. • Develop students' ability to analyze and problem solve. • Recognize students' effort when solving challenging problems.
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MA.K12.MTR.3.1:	Complete tasks with mathematical fluency. Mathematicians who complete tasks with mathematical fluency: • Select efficient and appropriate methods for solving problems within the given context. • Maintain flexibility and accuracy while performing procedures and mental calculations. • Complete tasks accurately and with confidence. • Adapt procedures to apply them to a new context. • Use feedback to improve efficiency when performing calculations. **Clarifications:** Teachers who encourage students to complete tasks with mathematical fluency: • Provide students with the flexibility to solve problems by selecting a procedure that allows them to solve efficiently and accurately. • Offer multiple opportunities for students to practice efficient and generalizable methods. • Provide opportunities for students to reflect on the method they used and determine if a more efficient method could have been used.
	Engage in discussions that reflect on the mathematical thinking of self and others. Mathematicians who engage in discussions that reflect on the mathematical thinking of self and others: • Communicate mathematical ideas, vocabulary and methods effectively.

MA.K12.MTR.4.1:	• Analyze the mathematical thinking of others. • Compare the efficiency of a method to those expressed by others. • Recognize errors and suggest how to correctly solve the task. • Justify results by explaining methods and processes. • Construct possible arguments based on evidence. **Clarifications:** Teachers who encourage students to engage in discussions that reflect on the mathematical thinking of self and others: • Establish a culture in which students ask questions of the teacher and their peers, and error is an opportunity for learning. • Create opportunities for students to discuss their thinking with peers. • Select, sequence and present student work to advance and deepen understanding of correct and increasingly efficient methods. • Develop students' ability to justify methods and compare their responses to the responses of their peers.
MA.K12.MTR.5.1:	Use patterns and structure to help understand and connect mathematical concepts. Mathematicians who use patterns and structure to help understand and connect mathematical concepts: • Focus on relevant details within a problem. • Create plans and procedures to logically order events, steps or ideas to solve problems. • Decompose a complex problem into manageable parts. • Relate previously learned concepts to new concepts. • Look for similarities among problems. • Connect solutions of problems to more complicated large-scale situations. **Clarifications:** Teachers who encourage students to use patterns and structure to help understand and connect mathematical concepts: • Help students recognize the patterns in the world around them and connect these patterns to mathematical concepts. • Support students to develop generalizations based on the similarities found among problems. • Provide opportunities for students to create plans and procedures to solve problems. • Develop students' ability to construct relationships between their current understanding and more sophisticated ways of thinking.
MA.K12.MTR.6.1:	Assess the reasonableness of solutions. Mathematicians who assess the reasonableness of solutions: • Estimate to discover possible solutions. • Use benchmark quantities to determine if a solution makes sense. • Check calculations when solving problems. • Verify possible solutions by explaining the methods used. • Evaluate results based on the given context. **Clarifications:** Teachers who encourage students to assess the reasonableness of solutions: • Have students estimate or predict solutions prior to solving. • Prompt students to continually ask, "Does this solution make sense? How do you know?" • Reinforce that students check their work as they progress within and after a task. • Strengthen students' ability to verify solutions through justifications.
MA.K12.MTR.7.1:	Apply mathematics to real-world contexts. Mathematicians who apply mathematics to real-world contexts: • Connect mathematical concepts to everyday experiences. • Use models and methods to understand, represent and solve problems. • Perform investigations to gather data or determine if a method is appropriate. • Redesign models and methods to improve accuracy or efficiency. **Clarifications:** Teachers who encourage students to apply mathematics to real-world contexts: • Provide opportunities for students to create models, both concrete and abstract, and perform investigations. • Challenge students to question the accuracy of their models and methods. • Support students as they validate conclusions by comparing them to the given situation. • Indicate how various concepts can be applied to other disciplines.
ELA.K12.EE.1.1:	Cite evidence to explain and justify reasoning. **Clarifications:** K-1 Students include textual evidence in their oral communication with guidance and support from adults. The evidence can consist of details from the text without naming the text. During 1st grade, students learn how to incorporate the evidence in their writing. 2-3 Students include relevant textual evidence in their written and oral communication. Students should name the text when they refer to it. In 3rd grade, students should use a combination of direct and indirect citations. 4-5 Students continue with previous skills and reference comments made by speakers and peers. Students cite texts that they've directly quoted, paraphrased, or used for information. When writing, students will use the form of citation dictated by the instructor or the style guide referenced by the instructor. 6-8 Students continue with previous skills and use a style guide to create a proper citation. 9-12 Students continue with previous skills and should be aware of existing style guides and the ways in which they differ.
ELA.K12.EE.2.1:	Read and comprehend grade-level complex texts proficiently. **Clarifications:** See Text Complexity for grade-level complexity bands and a text complexity rubric.
	Make inferences to support comprehension.

ELA.K12.EE.3.1:	**Clarifications:** Students will make inferences before the words infer or inference are introduced. Kindergarten students will answer questions like "Why is the girl smiling?" or make predictions about what will happen based on the title page. Students will use the terms and apply them in 2nd grade and beyond.
ELA.K12.EE.4.1:	Use appropriate collaborative techniques and active listening skills when engaging in discussions in a variety of situations. **Clarifications:** In kindergarten, students learn to listen to one another respectfully. In grades 1-2, students build upon these skills by justifying what they are thinking. For example: "I think _____ because _____." The collaborative conversations are becoming academic conversations. In grades 3-12, students engage in academic conversations discussing claims and justifying their reasoning, refining and applying skills. Students build on ideas, propel the conversation, and support claims and counterclaims with evidence.
ELA.K12.EE.5.1:	Use the accepted rules governing a specific format to create quality work. **Clarifications:** Students will incorporate skills learned into work products to produce quality work. For students to incorporate these skills appropriately, they must receive instruction. A 3rd grade student creating a poster board display must have instruction in how to effectively present information to do quality work.
ELA.K12.EE.6.1:	Use appropriate voice and tone when speaking or writing. **Clarifications:** In kindergarten and 1st grade, students learn the difference between formal and informal language. For example, the way we talk to our friends differs from the way we speak to adults. In 2nd grade and beyond, students practice appropriate social and academic language to discuss texts.
ELD.K12.ELL.SC.1:	English language learners communicate information, ideas and concepts necessary for academic success in the content area of Science.
ELD.K12.ELL.SI.1:	English language learners communicate for social and instructional purposes within the school setting.
HE.7.C.1.3:	Analyze how environmental factors affect personal health. **Clarifications:** Food refrigeration, appropriate home heating and cooling, air/water quality, and garbage/trash collection.
HE.7.C.1.7:	Describe how heredity can affect personal health. **Clarifications:** Sickle-cell anemia, diabetes, and acne.

General Course Information and Notes

GENERAL NOTES

Laboratory investigations that include the use of scientific inquiry, research, measurement, problem solving, laboratory apparatus and technologies, experimental procedures, and safety procedures are an integral part of this course. The National Science Teachers Association (NSTA) recommends that at the middle school level, all students should have multiple opportunities every week to explore science laboratory investigations (labs). School laboratory investigations are defined by the National Research Council (NRC) as an experience in the laboratory, classroom, or the field that provides students with opportunities to interact directly with natural phenomena or with data collected by others using tools, materials, data collection techniques, and models (NRC, 2006, p. 3). Laboratory investigations in the middle school classroom should help all students develop a growing understanding of the complexity and ambiguity of empirical work, as well as the skills to calibrate and troubleshoot equipment used to make observations. Learners should understand measurement error; and have the skills to aggregate, interpret, and present the resulting data (NRC 2006, p. 77; NSTA, 2007).

Honors and Advanced Level Course Note: Advanced courses require a greater demand on students through increased academic rigor. Academic rigor is obtained through the application, analysis, evaluation, and creation of complex ideas that are often abstract and multi-faceted. Students are challenged to think and collaborate critically on the content they are learning. Honors level rigor will be achieved by increasing text complexity through text selection, focus on high-level qualitative measures, and complexity of task. Instruction will be structured to give students a deeper understanding of conceptual themes and organization within and across disciplines. Academic rigor is more than simply assigning to students a greater quantity of work.

Special Notes:

Instructional Practices
Teaching from a range of complex text is optimized when teachers in all subject areas implement the following strategies on a routine basis:

1. Ensuring wide reading from complex text that varies in length.
2. Making close reading and rereading of texts central to lessons.
3. Emphasizing text-specific complex questions, and cognitively complex tasks, reinforce focus on the text and cultivate independence.
4. Emphasizing students supporting answers based upon evidence from the text.
5. Providing extensive research and writing opportunities (claims and evidence).

Science and Engineering Practices (NRC *Framework for K-12 Science Education, 2010*)

- Asking questions (for science) and defining problems (for engineering).
- Developing and using models.
- Planning and carrying out investigations.
- Analyzing and interpreting data.
- Using mathematics, information and computer technology, and computational thinking.
- Constructing explanations (for science) and designing solutions (for engineering).
- Engaging in argument from evidence.
- Obtaining, evaluating, and communicating information.

Florida's Benchmarks for Excellent Student Thinking (B.E.S.T.) Standards
This course includes Florida's B.E.S.T. ELA Expectations (EE) and Mathematical Thinking and Reasoning Standards (MTRs) for students. Florida educators should intentionally embed these standards within the content and their instruction as applicable. For guidance on the implementation of the EEs and MTRs, please visit cpalms.org/Standards/BEST_Standards.aspx and select the appropriate B.E.S.T. Standards package.

English Language Development ELD Standards Special Notes Section:
Teachers are required to provide listening, speaking, reading and writing instruction that allows English language learners (ELL) to communicate information, ideas and concepts for academic success in the content area of Science. For the given level of English language proficiency and with visual, graphic, or interactive support, students will interact with grade level words, expressions, sentences and discourse to process or produce language necessary for academic success The ELD standard should specify a relevant content area concept or topic of study chosen by curriculum developers and teachers which maximizes an ELL's need for communication and social skills. To access an ELL supporting document which delineates performance definitions and descriptors, please click on the following link: cpalms.org/uploads/docs/standards/eld/SC.pdf

GENERAL INFORMATION

Course Number: 2002055

Course Path: Section: Grades PreK to 12 Education Courses > **Grade Group:** Grades 6 to 8 Education Courses > **Subject:** Science > **SubSubject:** General Sciences >

Abbreviated Title: M/J COMPSCI1 ACC HON

Course Length: Year (Y)

Course Attributes:

- Class Size Core Required

Course Level: 3

Course Status: Draft - Course Pending Approval

Grade Level(s): 6,7,8

Educator Certifications

Biology (Grades 6-12)
Earth/Space Science (Grades 6-12)
Middle Grades General Science (Middle Grades 5-9)
Chemistry (Grades 6-12)
Physics (Grades 6-12)
Science (Secondary Grades 7-12)

M/J Comprehensive Science 2 (#2002070) 2022 - And Beyond

Course Standards

Name	Description
SC.7.E.6.1:	Describe the layers of the solid Earth, including the lithosphere, the hot convecting mantle, and the dense metallic liquid and solid cores.
SC.7.E.6.2:	Identify the patterns within the rock cycle and relate them to surface events (weathering and erosion) and sub-surface events (plate tectonics and mountain building).
SC.7.E.6.3:	Identify current methods for measuring the age of Earth and its parts, including the law of superposition and radioactive dating.
SC.7.E.6.4:	Explain and give examples of how physical evidence supports scientific theories that Earth has evolved over geologic time due to natural processes.
SC.7.E.6.5:	Explore the scientific theory of plate tectonics by describing how the movement of Earth's crustal plates causes both slow and rapid changes in Earth's surface, including volcanic eruptions, earthquakes, and mountain building.
SC.7.E.6.6:	Identify the impact that humans have had on Earth, such as deforestation, urbanization, desertification, erosion, air and water quality, changing the flow of water.
SC.7.E.6.7:	Recognize that heat flow and movement of material within Earth causes earthquakes and volcanic eruptions, and creates mountains and ocean basins.
SC.7.L.15.1:	Recognize that fossil evidence is consistent with the scientific theory of evolution that living things evolved from earlier species.
SC.7.L.15.2:	Explore the scientific theory of evolution by recognizing and explaining ways in which genetic variation and environmental factors contribute to evolution by natural selection and diversity of organisms.
SC.7.L.15.3:	Explore the scientific theory of evolution by relating how the inability of a species to adapt within a changing environment may contribute to the extinction of that species.
SC.7.L.16.1:	Understand and explain that every organism requires a set of instructions that specifies its traits, that this hereditary information (DNA) contains genes located in the chromosomes of each cell, and that heredity is the passage of these instructions from one generation to another.
SC.7.L.16.2:	Determine the probabilities for genotype and phenotype combinations using Punnett Squares and pedigrees.
SC.7.L.16.3:	Compare and contrast the general processes of sexual reproduction requiring meiosis and asexual reproduction requiring mitosis.
SC.7.L.16.4:	Recognize and explore the impact of biotechnology (cloning, genetic engineering, artificial selection) on the individual, society and the environment.
SC.7.L.17.1:	Explain and illustrate the roles of and relationships among producers, consumers, and decomposers in the process of energy transfer in a food web.
SC.7.L.17.2:	Compare and contrast the relationships among organisms such as mutualism, predation, parasitism, competition, and commensalism.
SC.7.L.17.3:	Describe and investigate various limiting factors in the local ecosystem and their impact on native populations, including food, shelter, water, space, disease, parasitism, predation, and nesting sites.
SC.7.N.1.1:	Define a problem from the seventh grade curriculum, use appropriate reference materials to support scientific understanding, plan and carry out scientific investigation of various types, such as systematic observations or experiments, identify variables, collect and organize data, interpret data in charts, tables, and graphics, analyze information, make predictions, and defend conclusions.
SC.7.N.1.2:	Differentiate replication (by others) from repetition (multiple trials).
SC.7.N.1.3:	Distinguish between an experiment (which must involve the identification and control of variables) and other forms of scientific investigation and explain that not all scientific knowledge is derived from experimentation.
SC.7.N.1.4:	Identify test variables (independent variables) and outcome variables (dependent variables) in an experiment.
SC.7.N.1.5:	Describe the methods used in the pursuit of a scientific explanation as seen in different fields of science such as biology, geology, and physics.
SC.7.N.1.6:	Explain that empirical evidence is the cumulative body of observations of a natural phenomenon on which scientific explanations are based.
SC.7.N.1.7:	Explain that scientific knowledge is the result of a great deal of debate and confirmation within the science community.
SC.7.N.2.1:	Identify an instance from the history of science in which scientific knowledge has changed when new evidence or new interpretations are encountered.
SC.7.N.3.1:	Recognize and explain the difference between theories and laws and give several examples of scientific theories and the evidence that supports them.
SC.7.N.3.2:	Identify the benefits and limitations of the use of scientific models.
SC.7.P.10.1:	Illustrate that the sun's energy arrives as radiation with a wide range of wavelengths, including infrared, visible, and ultraviolet, and that white light is made up of a spectrum of many different colors.
SC.7.P.10.2:	Observe and explain that light can be reflected, refracted, and/or absorbed.
SC.7.P.10.3:	Recognize that light waves, sound waves, and other waves move at different speeds in different materials.
SC.7.P.11.1:	Recognize that adding heat to or removing heat from a system may result in a temperature change and possibly a change of state.
SC.7.P.11.2:	Investigate and describe the transformation of energy from one form to another.
SC.7.P.11.3:	Cite evidence to explain that energy cannot be created nor destroyed, only changed from one form to another.
SC.7.P.11.4:	Observe and describe that heat flows in predictable ways, moving from warmer objects to cooler ones until they reach the same temperature.
MA.K12.MTR.1.1:	Mathematicians who participate in effortful learning both individually and with others: • Analyze the problem in a way that makes sense given the task. • Ask questions that will help with solving the task. • Build perseverance by modifying methods as needed while solving a challenging task. • Stay engaged and maintain a positive mindset when working to solve tasks. • Help and support each other when attempting a new method or approach. **Clarifications:** Teachers who encourage students to participate actively in effortful learning both individually and with others: • Cultivate a community of growth mindset learners. • Foster perseverance in students by choosing tasks that are challenging. • Develop students' ability to analyze and problem solve. • Recognize students' effort when solving challenging problems.
	Demonstrate understanding by representing problems in multiple ways. Mathematicians who demonstrate understanding by representing problems in multiple ways:

- Build understanding through modeling and using manipulatives.
- Represent solutions to problems in multiple ways using objects, drawings, tables, graphs and equations.
- Progress from modeling problems with objects and drawings to using algorithms and equations.
- Express connections between concepts and representations.

MA.K12.MTR.2.1:

- Choose a representation based on the given context or purpose.

Clarifications:
Teachers who encourage students to demonstrate understanding by representing problems in multiple ways:

- Help students make connections between concepts and representations.
- Provide opportunities for students to use manipulatives when investigating concepts.
- Guide students from concrete to pictorial to abstract representations as understanding progresses.
- Show students that various representations can have different purposes and can be useful in different situations.

Complete tasks with mathematical fluency.
Mathematicians who complete tasks with mathematical fluency:

- Select efficient and appropriate methods for solving problems within the given context.
- Maintain flexibility and accuracy while performing procedures and mental calculations.
- Complete tasks accurately and with confidence.
- Adapt procedures to apply them to a new context.

MA.K12.MTR.3.1:

- Use feedback to improve efficiency when performing calculations.

Clarifications:
Teachers who encourage students to complete tasks with mathematical fluency:

- Provide students with the flexibility to solve problems by selecting a procedure that allows them to solve efficiently and accurately.
- Offer multiple opportunities for students to practice efficient and generalizable methods.
- Provide opportunities for students to reflect on the method they used and determine if a more efficient method could have been used.

Engage in discussions that reflect on the mathematical thinking of self and others.
Mathematicians who engage in discussions that reflect on the mathematical thinking of self and others:

- Communicate mathematical ideas, vocabulary and methods effectively.
- Analyze the mathematical thinking of others.
- Compare the efficiency of a method to those expressed by others.
- Recognize errors and suggest how to correctly solve the task.
- Justify results by explaining methods and processes.

MA.K12.MTR.4.1:

- Construct possible arguments based on evidence.

Clarifications:
Teachers who encourage students to engage in discussions that reflect on the mathematical thinking of self and others:

- Establish a culture in which students ask questions of the teacher and their peers, and error is an opportunity for learning.
- Create opportunities for students to discuss their thinking with peers.
- Select, sequence and present student work to advance and deepen understanding of correct and increasingly efficient methods.
- Develop students' ability to justify methods and compare their responses to the responses of their peers.

Use patterns and structure to help understand and connect mathematical concepts.
Mathematicians who use patterns and structure to help understand and connect mathematical concepts:

- Focus on relevant details within a problem.
- Create plans and procedures to logically order events, steps or ideas to solve problems.
- Decompose a complex problem into manageable parts.
- Relate previously learned concepts to new concepts.
- Look for similarities among problems.

MA.K12.MTR.5.1:

- Connect solutions of problems to more complicated large-scale situations.

Clarifications:
Teachers who encourage students to use patterns and structure to help understand and connect mathematical concepts:

- Help students recognize the patterns in the world around them and connect these patterns to mathematical concepts.
- Support students to develop generalizations based on the similarities found among problems.
- Provide opportunities for students to create plans and procedures to solve problems.
- Develop students' ability to construct relationships between their current understanding and more sophisticated ways of thinking.

Assess the reasonableness of solutions.
Mathematicians who assess the reasonableness of solutions:

- Estimate to discover possible solutions.
- Use benchmark quantities to determine if a solution makes sense.
- Check calculations when solving problems.
- Verify possible solutions by explaining the methods used.

MA.K12.MTR.6.1:

- Evaluate results based on the given context.

Clarifications:
Teachers who encourage students to assess the reasonableness of solutions:

- Have students estimate or predict solutions prior to solving.
- Prompt students to continually ask, "Does this solution make sense? How do you know?"
- Reinforce that students check their work as they progress within and after a task.
- Strengthen students' ability to verify solutions through justifications.

Apply mathematics to real-world contexts.
Mathematicians who apply mathematics to real-world contexts:

MA.K12.MTR.7.1:	• Connect mathematical concepts to everyday experiences. • Use models and methods to understand, represent and solve problems. • Perform investigations to gather data or determine if a method is appropriate. • Redesign models and methods to improve accuracy or efficiency. **Clarifications:** Teachers who encourage students to apply mathematics to real-world contexts: • Provide opportunities for students to create models, both concrete and abstract, and perform investigations. • Challenge students to question the accuracy of their models and methods. • Support students as they validate conclusions by comparing them to the given situation. • Indicate how various concepts can be applied to other disciplines.
ELA.K12.EE.1.1:	Cite evidence to explain and justify reasoning. **Clarifications:** K-1 Students include textual evidence in their oral communication with guidance and support from adults. The evidence can consist of details from the text without naming the text. During 1st grade, students learn how to incorporate the evidence in their writing. 2-3 Students include relevant textual evidence in their written and oral communication. Students should name the text when they refer to it. In 3rd grade, students should use a combination of direct and indirect citations. 4-5 Students continue with previous skills and reference comments made by speakers and peers. Students cite texts that they've directly quoted, paraphrased, or used for information. When writing, students will use the form of citation dictated by the instructor or the style guide referenced by the instructor. 6-8 Students continue with previous skills and use a style guide to create a proper citation. 9-12 Students continue with previous skills and should be aware of existing style guides and the ways in which they differ.
ELA.K12.EE.2.1:	Read and comprehend grade-level complex texts proficiently. **Clarifications:** See Text Complexity for grade-level complexity bands and a text complexity rubric.
ELA.K12.EE.3.1:	Make inferences to support comprehension. **Clarifications:** Students will make inferences before the words infer or inference are introduced. Kindergarten students will answer questions like "Why is the girl smiling?" or make predictions about what will happen based on the title page. Students will use the terms and apply them in 2nd grade and beyond.
ELA.K12.EE.4.1:	Use appropriate collaborative techniques and active listening skills when engaging in discussions in a variety of situations. **Clarifications:** In kindergarten, students learn to listen to one another respectfully. In grades 1-2, students build upon these skills by justifying what they are thinking. For example: "I think _____ because _____." The collaborative conversations are becoming academic conversations. In grades 3-12, students engage in academic conversations discussing claims and justifying their reasoning, refining and applying skills. Students build on ideas, propel the conversation, and support claims and counterclaims with evidence.
ELA.K12.EE.5.1:	Use the accepted rules governing a specific format to create quality work. **Clarifications:** Students will incorporate skills learned into work products to produce quality work. For students to incorporate these skills appropriately, they must receive instruction. A 3rd grade student creating a poster board display must have instruction in how to effectively present information to do quality work.
ELA.K12.EE.6.1:	Use appropriate voice and tone when speaking or writing. **Clarifications:** In kindergarten and 1st grade, students learn the difference between formal and informal language. For example, the way we talk to our friends differs from the way we speak to adults. In 2nd grade and beyond, students practice appropriate social and academic language to discuss texts.
ELD.K12.ELL.SC.1:	English language learners communicate information, ideas and concepts necessary for academic success in the content area of Science.
ELD.K12.ELL.SI.1:	English language learners communicate for social and instructional purposes within the school setting.
HE.7.C.1.3:	Analyze how environmental factors affect personal health. **Clarifications:** Food refrigeration, appropriate home heating and cooling, air/water quality, and garbage/trash collection.
HE.7.C.1.8:	Explain the likelihood of injury or illness if engaging in unhealthy/risky behaviors. **Clarifications:** Abuse of over-the-counter medications, sexually transmitted diseases and sexually transmitted infections from sexual relationships, injury, or death from unsupervised handling of firearms, and physical/emotional injury, or impact from abusive dating partner.

General Course Information and Notes

GENERAL NOTES

Laboratory investigations that include the use of scientific inquiry, research, measurement, problem solving, laboratory apparatus and technologies, experimental procedures, and safety procedures are an integral part of this course. The National Science Teachers Association (NSTA) recommends that at the middle school level, all students should have multiple opportunities every week to explore science laboratory investigations (labs). School laboratory investigations are defined by the National Research Council (NRC) as an experience in the laboratory, classroom, or the field that provides students with opportunities to interact directly with natural phenomena or with data collected by

others using tools, materials, data collection techniques, and models (NRC, 2006, p. 3). Laboratory investigations in the middle school classroom should help all students develop a growing understanding of the complexity and ambiguity of empirical work, as well as the skills to calibrate and troubleshoot equipment used to make observations. Learners should understand measurement error and have the skills to aggregate, interpret, and present the resulting data (NRC 2006, p. 77; NSTA, 2007).

Special Notes:

Instructional Practices
Teaching from a range of complex text is optimized when teachers in all subject areas implement the following strategies on a routine basis:

1. Ensuring wide reading from complex text that varies in length.
2. Making close reading and rereading of texts central to lessons.
3. Emphasizing text-specific complex questions, and cognitively complex tasks, reinforce focus on the text and cultivate independence.
4. Emphasizing students supporting answers based upon evidence from the text.
5. Providing extensive research and writing opportunities (claims and evidence).

Science and Engineering Practices (NRC *Framework for K-12 Science Education, 2010*)

- Asking questions (for science) and defining problems (for engineering).
- Developing and using models.
- Planning and carrying out investigations.
- Analyzing and interpreting data.
- Using mathematics, information and computer technology, and computational thinking.
- Constructing explanations (for science) and designing solutions (for engineering).
- Engaging in argument from evidence.
- Obtaining, evaluating, and communicating information.

Florida's Benchmarks for Excellent Student Thinking (B.E.S.T.) Standards
This course includes Florida's B.E.S.T. ELA Expectations (EE) and Mathematical Thinking and Reasoning Standards (MTRs) for students. Florida educators should intentionally embed these standards within the content and their instruction as applicable. For guidance on the implementation of the EEs and MTRs, please visit cpalms.org/Standards/BEST_Standards.aspx and select the appropriate B.E.S.T. Standards package.

English Language Development ELD Standards Special Notes Section:
Teachers are required to provide listening, speaking, reading and writing instruction that allows English language learners (ELL) to communicate information, ideas and concepts for academic success in the content area of Science. For the given level of English language proficiency and with visual, graphic, or interactive support, students will interact with grade level words, expressions, sentences and discourse to process or produce language necessary for academic success The ELD standard should specify a relevant content area concept or topic of study chosen by curriculum developers and teachers which maximizes an ELL's need for communication and social skills. To access an ELL supporting document which delineates performance definitions and descriptors, please click on the following link: cpalms.org/uploads/docs/standards/eld/SC.pdf

Additional Instructional Resources:
A.V.E. for Success Collection: fasa.net/4DCGI/cms/review.html?Action=CMS_Document&DocID=139

GENERAL INFORMATION

Course Number: 2002070

Course Path: Section: Grades PreK to 12 Education Courses > **Grade Group:** Grades 6 to 8 Education Courses > **Subject:** Science > **SubSubject:** General Sciences >

Abbreviated Title: M/J COMPRE SCI 2

Course Length: Year (Y)

Course Attributes:

- Class Size Core Required

Course Level: 2

Course Status: Draft - Course Pending Approval

Grade Level(s): 6,7,8

Educator Certifications

Science (Secondary Grades 7-12)
Middle Grades Integrated Curriculum (Middle Grades 5-9)
Physics (Grades 6-12)
Earth/Space Science (Grades 6-12)
Middle Grades General Science (Middle Grades 5-9)
Biology (Grades 6-12)
Chemistry (Grades 6-12)

M/J Comprehensive Science 2, Advanced (#2002080) 2022 -

And Beyond

Course Standards

Name	Description
SC.7.E.6.1:	Describe the layers of the solid Earth, including the lithosphere, the hot convecting mantle, and the dense metallic liquid and solid cores.
SC.7.E.6.2:	Identify the patterns within the rock cycle and relate them to surface events (weathering and erosion) and sub-surface events (plate tectonics and mountain building).
SC.7.E.6.3:	Identify current methods for measuring the age of Earth and its parts, including the law of superposition and radioactive dating.
SC.7.E.6.4:	Explain and give examples of how physical evidence supports scientific theories that Earth has evolved over geologic time due to natural processes.
SC.7.E.6.5:	Explore the scientific theory of plate tectonics by describing how the movement of Earth's crustal plates causes both slow and rapid changes in Earth's surface, including volcanic eruptions, earthquakes, and mountain building.
SC.7.E.6.6:	Identify the impact that humans have had on Earth, such as deforestation, urbanization, desertification, erosion, air and water quality, changing the flow of water.
SC.7.E.6.7:	Recognize that heat flow and movement of material within Earth causes earthquakes and volcanic eruptions, and creates mountains and ocean basins.
SC.7.L.15.1:	Recognize that fossil evidence is consistent with the scientific theory of evolution that living things evolved from earlier species.
SC.7.L.15.2:	Explore the scientific theory of evolution by recognizing and explaining ways in which genetic variation and environmental factors contribute to evolution by natural selection and diversity of organisms.
SC.7.L.15.3:	Explore the scientific theory of evolution by relating how the inability of a species to adapt within a changing environment may contribute to the extinction of that species.
SC.7.L.16.1:	Understand and explain that every organism requires a set of instructions that specifies its traits, that this hereditary information (DNA) contains genes located in the chromosomes of each cell, and that heredity is the passage of these instructions from one generation to another.
SC.7.L.16.2:	Determine the probabilities for genotype and phenotype combinations using Punnett Squares and pedigrees.
SC.7.L.16.3:	Compare and contrast the general processes of sexual reproduction requiring meiosis and asexual reproduction requiring mitosis.
SC.7.L.16.4:	Recognize and explore the impact of biotechnology (cloning, genetic engineering, artificial selection) on the individual, society and the environment.
SC.7.L.17.1:	Explain and illustrate the roles of and relationships among producers, consumers, and decomposers in the process of energy transfer in a food web.
SC.7.L.17.2:	Compare and contrast the relationships among organisms such as mutualism, predation, parasitism, competition, and commensalism.
SC.7.L.17.3:	Describe and investigate various limiting factors in the local ecosystem and their impact on native populations, including food, shelter, water, space, disease, parasitism, predation, and nesting sites.
SC.7.N.1.1:	Define a problem from the seventh grade curriculum, use appropriate reference materials to support scientific understanding, plan and carry out scientific investigation of various types, such as systematic observations or experiments, identify variables, collect and organize data, interpret data in charts, tables, and graphics, analyze information, make predictions, and defend conclusions.
SC.7.N.1.2:	Differentiate replication (by others) from repetition (multiple trials).
SC.7.N.1.3:	Distinguish between an experiment (which must involve the identification and control of variables) and other forms of scientific investigation and explain that not all scientific knowledge is derived from experimentation.
SC.7.N.1.4:	Identify test variables (independent variables) and outcome variables (dependent variables) in an experiment.
SC.7.N.1.5:	Describe the methods used in the pursuit of a scientific explanation as seen in different fields of science such as biology, geology, and physics.
SC.7.N.1.6:	Explain that empirical evidence is the cumulative body of observations of a natural phenomenon on which scientific explanations are based.
SC.7.N.1.7:	Explain that scientific knowledge is the result of a great deal of debate and confirmation within the science community.
SC.7.N.2.1:	Identify an instance from the history of science in which scientific knowledge has changed when new evidence or new interpretations are encountered.
SC.7.N.3.1:	Recognize and explain the difference between theories and laws and give several examples of scientific theories and the evidence that supports them.
SC.7.N.3.2:	Identify the benefits and limitations of the use of scientific models.
SC.7.P.10.1:	Illustrate that the sun's energy arrives as radiation with a wide range of wavelengths, including infrared, visible, and ultraviolet, and that white light is made up of a spectrum of many different colors.
SC.7.P.10.2:	Observe and explain that light can be reflected, refracted, and/or absorbed.
SC.7.P.10.3:	Recognize that light waves, sound waves, and other waves move at different speeds in different materials.
SC.7.P.11.1:	Recognize that adding heat to or removing heat from a system may result in a temperature change and possibly a change of state.
SC.7.P.11.2:	Investigate and describe the transformation of energy from one form to another.
SC.7.P.11.3:	Cite evidence to explain that energy cannot be created nor destroyed, only changed from one form to another.
SC.7.P.11.4:	Observe and describe that heat flows in predictable ways, moving from warmer objects to cooler ones until they reach the same temperature.
SC.912.E.6.1:	Describe and differentiate the layers of Earth and the interactions among them.
SC.912.E.6.2:	Connect surface features to surface processes that are responsible for their formation.
SC.912.E.6.3:	Analyze the scientific theory of plate tectonics and identify related major processes and features as a result of moving plates.
SC.912.L.15.6:	Discuss distinguishing characteristics of the domains and kingdoms of living organisms.
SC.912.L.15.13:	Describe the conditions required for natural selection, including: overproduction of offspring, inherited variation, and the struggle to survive, which result in differential reproductive success.
SC.912.L.16.2:	Discuss observed inheritance patterns caused by various modes of inheritance, including dominant, recessive, codominant, sex-linked, polygenic, and multiple alleles.
SC.912.L.16.16:	Describe the process of meiosis, including independent assortment and crossing over. Explain how reduction division results in the formation of haploid gametes or spores.
SC.912.L.17.6:	Compare and contrast the relationships among organisms, including predation, parasitism, competition, commensalism, and mutualism.

SC.912.L.17.9:	Use a food web to identify and distinguish producers, consumers, and decomposers. Explain the pathway of energy transfer through trophic levels and the reduction of available energy at successive trophic levels.
SC.912.P.10.1:	Differentiate among the various forms of energy and recognize that they can be transformed from one form to others.
SC.912.P.10.5:	Relate temperature to the average molecular kinetic energy.
MA.K12.MTR.1.1:	Mathematicians who participate in effortful learning both individually and with others: • Analyze the problem in a way that makes sense given the task. • Ask questions that will help with solving the task. • Build perseverance by modifying methods as needed while solving a challenging task. • Stay engaged and maintain a positive mindset when working to solve tasks. • Help and support each other when attempting a new method or approach. **Clarifications:** Teachers who encourage students to participate actively in effortful learning both individually and with others: • Cultivate a community of growth mindset learners. • Foster perseverance in students by choosing tasks that are challenging. • Develop students' ability to analyze and problem solve. • Recognize students' effort when solving challenging problems.
MA.K12.MTR.2.1:	Demonstrate understanding by representing problems in multiple ways. Mathematicians who demonstrate understanding by representing problems in multiple ways: • Build understanding through modeling and using manipulatives. • Represent solutions to problems in multiple ways using objects, drawings, tables, graphs and equations. • Progress from modeling problems with objects and drawings to using algorithms and equations. • Express connections between concepts and representations. • Choose a representation based on the given context or purpose. **Clarifications:** Teachers who encourage students to demonstrate understanding by representing problems in multiple ways: • Help students make connections between concepts and representations. • Provide opportunities for students to use manipulatives when investigating concepts. • Guide students from concrete to pictorial to abstract representations as understanding progresses. • Show students that various representations can have different purposes and can be useful in different situations.
MA.K12.MTR.3.1:	Complete tasks with mathematical fluency. Mathematicians who complete tasks with mathematical fluency: • Select efficient and appropriate methods for solving problems within the given context. • Maintain flexibility and accuracy while performing procedures and mental calculations. • Complete tasks accurately and with confidence. • Adapt procedures to apply them to a new context. • Use feedback to improve efficiency when performing calculations. **Clarifications:** Teachers who encourage students to complete tasks with mathematical fluency: • Provide students with the flexibility to solve problems by selecting a procedure that allows them to solve efficiently and accurately. • Offer multiple opportunities for students to practice efficient and generalizable methods. • Provide opportunities for students to reflect on the method they used and determine if a more efficient method could have been used.
MA.K12.MTR.4.1:	Engage in discussions that reflect on the mathematical thinking of self and others. Mathematicians who engage in discussions that reflect on the mathematical thinking of self and others: • Communicate mathematical ideas, vocabulary and methods effectively. • Analyze the mathematical thinking of others. • Compare the efficiency of a method to those expressed by others. • Recognize errors and suggest how to correctly solve the task. • Justify results by explaining methods and processes. • Construct possible arguments based on evidence. **Clarifications:** Teachers who encourage students to engage in discussions that reflect on the mathematical thinking of self and others: • Establish a culture in which students ask questions of the teacher and their peers, and error is an opportunity for learning. • Create opportunities for students to discuss their thinking with peers. • Select, sequence and present student work to advance and deepen understanding of correct and increasingly efficient methods. • Develop students' ability to justify methods and compare their responses to the responses of their peers.
MA.K12.MTR.5.1:	Use patterns and structure to help understand and connect mathematical concepts. Mathematicians who use patterns and structure to help understand and connect mathematical concepts: • Focus on relevant details within a problem. • Create plans and procedures to logically order events, steps or ideas to solve problems. • Decompose a complex problem into manageable parts. • Relate previously learned concepts to new concepts. • Look for similarities among problems. • Connect solutions of problems to more complicated large-scale situations. **Clarifications:** Teachers who encourage students to use patterns and structure to help understand and connect mathematical concepts: • Help students recognize the patterns in the world around them and connect these patterns to mathematical concepts.

	• Support students to develop generalizations based on the similarities found among problems. • Provide opportunities for students to create plans and procedures to solve problems. • Develop students' ability to construct relationships between their current understanding and more sophisticated ways of thinking.
MA.K12.MTR.6.1:	Assess the reasonableness of solutions. Mathematicians who assess the reasonableness of solutions: • Estimate to discover possible solutions. • Use benchmark quantities to determine if a solution makes sense. • Check calculations when solving problems. • Verify possible solutions by explaining the methods used. • Evaluate results based on the given context. **Clarifications:** Teachers who encourage students to assess the reasonableness of solutions: • Have students estimate or predict solutions prior to solving. • Prompt students to continually ask, "Does this solution make sense? How do you know?" • Reinforce that students check their work as they progress within and after a task. • Strengthen students' ability to verify solutions through justifications.
MA.K12.MTR.7.1:	Apply mathematics to real-world contexts. Mathematicians who apply mathematics to real-world contexts: • Connect mathematical concepts to everyday experiences. • Use models and methods to understand, represent and solve problems. • Perform investigations to gather data or determine if a method is appropriate. • Redesign models and methods to improve accuracy or efficiency. **Clarifications:** Teachers who encourage students to apply mathematics to real-world contexts: • Provide opportunities for students to create models, both concrete and abstract, and perform investigations. • Challenge students to question the accuracy of their models and methods. • Support students as they validate conclusions by comparing them to the given situation. • Indicate how various concepts can be applied to other disciplines.
ELA.K12.EE.1.1:	Cite evidence to explain and justify reasoning. **Clarifications:** K-1 Students include textual evidence in their oral communication with guidance and support from adults. The evidence can consist of details from the text without naming the text. During 1st grade, students learn how to incorporate the evidence in their writing. 2-3 Students include relevant textual evidence in their written and oral communication. Students should name the text when they refer to it. In 3rd grade, students should use a combination of direct and indirect citations. 4-5 Students continue with previous skills and reference comments made by speakers and peers. Students cite texts that they've directly quoted, paraphrased, or used for information. When writing, students will use the form of citation dictated by the instructor or the style guide referenced by the instructor. 6-8 Students continue with previous skills and use a style guide to create a proper citation. 9-12 Students continue with previous skills and should be aware of existing style guides and the ways in which they differ.
ELA.K12.EE.2.1:	Read and comprehend grade-level complex texts proficiently. **Clarifications:** See Text Complexity for grade-level complexity bands and a text complexity rubric.
ELA.K12.EE.3.1:	Make inferences to support comprehension. **Clarifications:** Students will make inferences before the words infer or inference are introduced. Kindergarten students will answer questions like "Why is the girl smiling?" or make predictions about what will happen based on the title page. Students will use the terms and apply them in 2nd grade and beyond.
ELA.K12.EE.4.1:	Use appropriate collaborative techniques and active listening skills when engaging in discussions in a variety of situations. **Clarifications:** In kindergarten, students learn to listen to one another respectfully. In grades 1-2, students build upon these skills by justifying what they are thinking. For example: "I think _____ because _____." The collaborative conversations are becoming academic conversations. In grades 3-12, students engage in academic conversations discussing claims and justifying their reasoning, refining and applying skills. Students build on ideas, propel the conversation, and support claims and counterclaims with evidence.
ELA.K12.EE.5.1:	Use the accepted rules governing a specific format to create quality work. **Clarifications:** Students will incorporate skills learned into work products to produce quality work. For students to incorporate these skills appropriately, they must receive instruction. A 3rd grade student creating a poster board display must have instruction in how to effectively present information to do quality work.
ELA.K12.EE.6.1:	Use appropriate voice and tone when speaking or writing. **Clarifications:** In kindergarten and 1st grade, students learn the difference between formal and informal language. For example, the way we talk to our friends differs from the way we speak to adults. In 2nd grade and beyond, students practice appropriate social and academic language to discuss texts.
ELD.K12.ELL.SC.1:	English language learners communicate information, ideas and concepts necessary for academic success in the content area of Science.
ELD.K12.ELL.SI.1:	English language learners communicate for social and instructional purposes within the school setting.

	Analyze how environmental factors affect personal health.
HE.7.C.1.3:	**Clarifications:** Food refrigeration, appropriate home heating and cooling, air/water quality, and garbage/trash collection.
	Describe how heredity can affect personal health.
HE.7.C.1.7:	**Clarifications:** Sickle-cell anemia, diabetes, and acne.

General Course Information and Notes

GENERAL NOTES

Laboratory investigations that include the use of scientific inquiry, research, measurement, problem solving, laboratory apparatus and technologies, experimental procedures, and safety procedures are an integral part of this course. The National Science Teachers Association (NSTA) recommends that at the middle school level, all students should have multiple opportunities every week to explore science laboratory investigations (labs). School laboratory investigations are defined by the National Research Council (NRC) as an experience in the laboratory, classroom, or the field that provides students with opportunities to interact directly with natural phenomena or with data collected by others using tools, materials, data collection techniques, and models (NRC, 2006, p. 3). Laboratory investigations in the middle school classroom should help all students develop a growing understanding of the complexity and ambiguity of empirical work, as well as the skills to calibrate and troubleshoot equipment used to make observations. Learners should understand measurement error; and have the skills to aggregate, interpret, and present the resulting data (NRC 2006, p. 77; NSTA, 2007).

Honors and Advanced Level Course Note: Advanced courses require a greater demand on students through increased academic rigor. Academic rigor is obtained through the application, analysis, evaluation, and creation of complex ideas that are often abstract and multi-faceted. Students are challenged to think and collaborate critically on the content they are learning. Honors level rigor will be achieved by increasing text complexity through text selection, focus on high-level qualitative measures, and complexity of task. Instruction will be structured to give students a deeper understanding of conceptual themes and organization within and across disciplines. Academic rigor is more than simply assigning to students a greater quantity of work.

Special Notes:

Instructional Practices
Teaching from a range of complex text is optimized when teachers in all subject areas implement the following strategies on a routine basis:

1. Ensuring wide reading from complex text that varies in length.
2. Making close reading and rereading of texts central to lessons.
3. Emphasizing text-specific complex questions, and cognitively complex tasks, reinforce focus on the text and cultivate independence.
4. Emphasizing students supporting answers based upon evidence from the text.
5. Providing extensive research and writing opportunities (claims and evidence).

Science and Engineering Practices (NRC *Framework for K-12 Science Education, 2010*)

- Asking questions (for science) and defining problems (for engineering).
- Developing and using models.
- Planning and carrying out investigations.
- Analyzing and interpreting data.
- Using mathematics, information and computer technology, and computational thinking.
- Constructing explanations (for science) and designing solutions (for engineering).
- Engaging in argument from evidence.
- Obtaining, evaluating, and communicating information.

Florida's Benchmarks for Excellent Student Thinking (B.E.S.T.) Standards
This course includes Florida's B.E.S.T. ELA Expectations (EE) and Mathematical Thinking and Reasoning Standards (MTRs) for students. Florida educators should intentionally embed these standards within the content and their instruction as applicable. For guidance on the implementation of the EEs and MTRs, please visit cpalms.org/Standards/BEST_Standards.aspx and select the appropriate B.E.S.T. Standards package.

English Language Development ELD Standards Special Notes Section:
Teachers are required to provide listening, speaking, reading and writing instruction that allows English language learners (ELL) to communicate information, ideas and concepts for academic success in the content area of Science. For the given level of English language proficiency and with visual, graphic, or interactive support, students will interact with grade level words, expressions, sentences and discourse to process or produce language necessary for academic success The ELD standard should specify a relevant content area concept or topic of study chosen by curriculum developers and teachers which maximizes an ELL's need for communication and social skills. To access an ELL supporting document which delineates performance definitions and descriptors, please click on the following link: cpalms.org/uploads/docs/standards/eld/SC.pdf

Additional Instructional Resources:
A.V.E. for Success Collection is provided by the Florida Association of School Administrators: fasa.net/4DCGI/cms/review.html?Action=CMS_Document&DocID=139. Please be aware that these resources have not been reviewed by CPALMS and there may be a charge for the use of some of them in this collection.

GENERAL INFORMATION

Course Path: Section: Grades PreK to 12 Education

Course Number: 2002080

Courses > **Grade Group:** Grades 6 to 8 Education Courses > **Subject:** Science > **SubSubject:** General Sciences >

Abbreviated Title: M/J COMPRE SCI 2 ADV

Course Length: Year (Y)

Course Attributes:

- Class Size Core Required

Course Level: 3

Course Status: Draft - Course Pending Approval

Grade Level(s): 6,7,8

Educator Certifications

Science (Secondary Grades 7-12)
Middle Grades Integrated Curriculum (Middle Grades 5-9)
Physics (Grades 6-12)
Earth/Space Science (Grades 6-12)
Middle Grades General Science (Middle Grades 5-9)
Chemistry (Grades 6-12)
Biology (Grades 6-12)

M/J Comprehensive Science 2 Accelerated Honors (#2002085) 2022 - And Beyond

Course Standards

Name	Description
SC.7.E.6.1:	Describe the layers of the solid Earth, including the lithosphere, the hot convecting mantle, and the dense metallic liquid and solid cores.
SC.7.E.6.2:	Identify the patterns within the rock cycle and relate them to surface events (weathering and erosion) and sub-surface events (plate tectonics and mountain building).
SC.7.E.6.3:	Identify current methods for measuring the age of Earth and its parts, including the law of superposition and radioactive dating.
SC.7.E.6.4:	Explain and give examples of how physical evidence supports scientific theories that Earth has evolved over geologic time due to natural processes.
SC.7.E.6.5:	Explore the scientific theory of plate tectonics by describing how the movement of Earth's crustal plates causes both slow and rapid changes in Earth's surface, including volcanic eruptions, earthquakes, and mountain building.
SC.7.E.6.6:	Identify the impact that humans have had on Earth, such as deforestation, urbanization, desertification, erosion, air and water quality, changing the flow of water.
SC.7.E.6.7:	Recognize that heat flow and movement of material within Earth causes earthquakes and volcanic eruptions, and creates mountains and ocean basins.
SC.7.L.15.1:	Recognize that fossil evidence is consistent with the scientific theory of evolution that living things evolved from earlier species.
SC.7.L.15.2:	Explore the scientific theory of evolution by recognizing and explaining ways in which genetic variation and environmental factors contribute to evolution by natural selection and diversity of organisms.
SC.7.L.15.3:	Explore the scientific theory of evolution by relating how the inability of a species to adapt within a changing environment may contribute to the extinction of that species.
SC.7.L.16.1:	Understand and explain that every organism requires a set of instructions that specifies its traits, that this hereditary information (DNA) contains genes located in the chromosomes of each cell, and that heredity is the passage of these instructions from one generation to another.
SC.7.L.16.2:	Determine the probabilities for genotype and phenotype combinations using Punnett Squares and pedigrees.
SC.7.L.16.3:	Compare and contrast the general processes of sexual reproduction requiring meiosis and asexual reproduction requiring mitosis.
SC.7.L.16.4:	Recognize and explore the impact of biotechnology (cloning, genetic engineering, artificial selection) on the individual, society and the environment.
SC.7.L.17.1:	Explain and illustrate the roles of and relationships among producers, consumers, and decomposers in the process of energy transfer in a food web.
SC.7.L.17.2:	Compare and contrast the relationships among organisms such as mutualism, predation, parasitism, competition, and commensalism.
SC.7.L.17.3:	Describe and investigate various limiting factors in the local ecosystem and their impact on native populations, including food, shelter, water, space, disease, parasitism, predation, and nesting sites.
SC.7.N.1.1:	Define a problem from the seventh grade curriculum, use appropriate reference materials to support scientific understanding, plan and carry out scientific investigation of various types, such as systematic observations or experiments, identify variables, collect and organize data, interpret data in charts, tables, and graphics, analyze information, make predictions, and defend conclusions.
SC.7.N.1.2:	Differentiate replication (by others) from repetition (multiple trials).
SC.7.N.1.3:	Distinguish between an experiment (which must involve the identification and control of variables) and other forms of scientific investigation and explain that not all scientific knowledge is derived from experimentation.
SC.7.N.1.4:	Identify test variables (independent variables) and outcome variables (dependent variables) in an experiment.
SC.7.N.1.5:	Describe the methods used in the pursuit of a scientific explanation as seen in different fields of science such as biology, geology, and physics.
SC.7.N.1.6:	Explain that empirical evidence is the cumulative body of observations of a natural phenomenon on which scientific explanations are based.
SC.7.N.1.7:	Explain that scientific knowledge is the result of a great deal of debate and confirmation within the science community.
SC.7.N.2.1:	Identify an instance from the history of science in which scientific knowledge has changed when new evidence or new interpretations are encountered.
SC.7.N.3.1:	Recognize and explain the difference between theories and laws and give several examples of scientific theories and the evidence that supports them.
SC.7.N.3.2:	Identify the benefits and limitations of the use of scientific models.
SC.7.P.10.1:	Illustrate that the sun's energy arrives as radiation with a wide range of wavelengths, including infrared, visible, and ultraviolet, and that white light is made up of a spectrum of many different colors.
SC.7.P.10.2:	Observe and explain that light can be reflected, refracted, and/or absorbed.
SC.7.P.10.3:	Recognize that light waves, sound waves, and other waves move at different speeds in different materials.
SC.7.P.11.1:	Recognize that adding heat to or removing heat from a system may result in a temperature change and possibly a change of state.
SC.7.P.11.2:	Investigate and describe the transformation of energy from one form to another.
SC.7.P.11.3:	Cite evidence to explain that energy cannot be created nor destroyed, only changed from one form to another.
SC.7.P.11.4:	Observe and describe that heat flows in predictable ways, moving from warmer objects to cooler ones until they reach the same temperature.
SC.8.E.5.1:	Recognize that there are enormous distances between objects in space and apply our knowledge of light and space travel to understand this distance.
SC.8.E.5.2:	Recognize that the universe contains many billions of galaxies and that each galaxy contains many billions of stars.
SC.8.E.5.3:	Distinguish the hierarchical relationships between planets and other astronomical bodies relative to solar system, galaxy, and universe, including distance, size, and composition.
SC.8.E.5.4:	Explore the Law of Universal Gravitation by explaining the role that gravity plays in the formation of planets, stars, and solar systems and in determining their motions.
SC.8.E.5.5:	Describe and classify specific physical properties of stars: apparent magnitude (brightness), temperature (color), size, and luminosity (absolute brightness).
SC.8.E.5.6:	Create models of solar properties including: rotation, structure of the Sun, convection, sunspots, solar flares, and prominences.
SC.8.E.5.7:	Compare and contrast the properties of objects in the Solar System including the Sun, planets, and moons to those of Earth, such as gravitational force, distance from the Sun, speed, movement, temperature, and atmospheric conditions.
SC.8.E.5.8:	Compare various historical models of the Solar System, including geocentric and heliocentric.

SC.8.E.5.9:	Explain the impact of objects in space on each other including: 1. the Sun on the Earth including seasons and gravitational attraction 2. the Moon on the Earth, including phases, tides, and eclipses, and the relative position of each body.
SC.8.E.5.10:	Assess how technology is essential to science for such purposes as access to outer space and other remote locations, sample collection, measurement, data collection and storage, computation, and communication of information.
SC.8.E.5.11:	Identify and compare characteristics of the electromagnetic spectrum such as wavelength, frequency, use, and hazards and recognize its application to an understanding of planetary images and satellite photographs.
SC.8.E.5.12:	Summarize the effects of space exploration on the economy and culture of Florida.
SC.8.L.18.1:	Describe and investigate the process of photosynthesis, such as the roles of light, carbon dioxide, water and chlorophyll; production of food; release of oxygen.
SC.8.L.18.2:	Describe and investigate how cellular respiration breaks down food to provide energy and releases carbon dioxide.
SC.8.L.18.3:	Construct a scientific model of the carbon cycle to show how matter and energy are continuously transferred within and between organisms and their physical environment.
SC.8.L.18.4:	Cite evidence that living systems follow the Laws of Conservation of Mass and Energy.
SC.8.N.1.1:	Define a problem from the eighth grade curriculum using appropriate reference materials to support scientific understanding, plan and carry out scientific investigations of various types, such as systematic observations or experiments, identify variables, collect and organize data, interpret data in charts, tables, and graphics, analyze information, make predictions, and defend conclusions.
SC.8.N.2.1:	Distinguish between scientific and pseudoscientific ideas.
SC.8.N.2.2:	Discuss what characterizes science and its methods.
SC.8.N.3.1:	Select models useful in relating the results of their own investigations.
SC.8.N.3.2:	Explain why theories may be modified but are rarely discarded.
SC.8.N.4.1:	Explain that science is one of the processes that can be used to inform decision making at the community, state, national, and international levels.
SC.8.N.4.2:	Explain how political, social, and economic concerns can affect science, and vice versa.
SC.8.P.9.1:	Explore the Law of Conservation of Mass by demonstrating and concluding that mass is conserved when substances undergo physical and chemical changes.
SC.8.P.9.2:	Differentiate between physical changes and chemical changes.
SC.8.P.9.3:	Investigate and describe how temperature influences chemical changes.
SC.912.E.6.1:	Describe and differentiate the layers of Earth and the interactions among them.
SC.912.E.6.2:	Connect surface features to surface processes that are responsible for their formation.
SC.912.E.6.3:	Analyze the scientific theory of plate tectonics and identify related major processes and features as a result of moving plates.
SC.912.L.15.6:	Discuss distinguishing characteristics of the domains and kingdoms of living organisms.
SC.912.L.15.13:	Describe the conditions required for natural selection, including: overproduction of offspring, inherited variation, and the struggle to survive, which result in differential reproductive success.
SC.912.L.16.2:	Discuss observed inheritance patterns caused by various modes of inheritance, including dominant, recessive, codominant, sex-linked, polygenic, and multiple alleles.
SC.912.L.16.16:	Describe the process of meiosis, including independent assortment and crossing over. Explain how reduction division results in the formation of haploid gametes or spores.
SC.912.L.17.6:	Compare and contrast the relationships among organisms, including predation, parasitism, competition, commensalism, and mutualism.
SC.912.L.17.9:	Use a food web to identify and distinguish producers, consumers, and decomposers. Explain the pathway of energy transfer through trophic levels and the reduction of available energy at successive trophic levels.
SC.912.L.18.7:	Identify the reactants, products, and basic functions of photosynthesis.
SC.912.L.18.8:	Identify the reactants, products, and basic functions of aerobic and anaerobic cellular respiration.
SC.912.L.18.9:	Explain the interrelated nature of photosynthesis and cellular respiration.
SC.912.P.8.4:	Explore the scientific theory of atoms (also known as atomic theory) by describing the structure of atoms in terms of protons, neutrons and electrons, and differentiate among these particles in terms of their mass, electrical charges and locations within the atom.
SC.912.P.8.5:	Relate properties of atoms and their position in the periodic table to the arrangement of their electrons.
SC.912.P.8.11:	Relate acidity and basicity to hydronium and hydroxyl ion concentration and pH.
SC.912.P.10.1:	Differentiate among the various forms of energy and recognize that they can be transformed from one form to others.
SC.912.P.10.5:	Relate temperature to the average molecular kinetic energy.
MA.K12.MTR.1.1:	Mathematicians who participate in effortful learning both individually and with others: • Analyze the problem in a way that makes sense given the task. • Ask questions that will help with solving the task. • Build perseverance by modifying methods as needed while solving a challenging task. • Stay engaged and maintain a positive mindset when working to solve tasks. • Help and support each other when attempting a new method or approach. **Clarifications:** Teachers who encourage students to participate actively in effortful learning both individually and with others: • Cultivate a community of growth mindset learners. • Foster perseverance in students by choosing tasks that are challenging. • Develop students' ability to analyze and problem solve. • Recognize students' effort when solving challenging problems.
MA.K12.MTR.2.1:	Demonstrate understanding by representing problems in multiple ways. Mathematicians who demonstrate understanding by representing problems in multiple ways: • Build understanding through modeling and using manipulatives. • Represent solutions to problems in multiple ways using objects, drawings, tables, graphs and equations. • Progress from modeling problems with objects and drawings to using algorithms and equations. • Express connections between concepts and representations. • Choose a representation based on the given context or purpose. **Clarifications:**

Teachers who encourage students to demonstrate understanding by representing problems in multiple ways:

- Help students make connections between concepts and representations.
- Provide opportunities for students to use manipulatives when investigating concepts.
- Guide students from concrete to pictorial to abstract representations as understanding progresses.
- Show students that various representations can have different purposes and can be useful in different situations.

MA.K12.MTR.3.1:

Complete tasks with mathematical fluency.
Mathematicians who complete tasks with mathematical fluency:

- Select efficient and appropriate methods for solving problems within the given context.
- Maintain flexibility and accuracy while performing procedures and mental calculations.
- Complete tasks accurately and with confidence.
- Adapt procedures to apply them to a new context.
- Use feedback to improve efficiency when performing calculations.

Clarifications:
Teachers who encourage students to complete tasks with mathematical fluency:

- Provide students with the flexibility to solve problems by selecting a procedure that allows them to solve efficiently and accurately.
- Offer multiple opportunities for students to practice efficient and generalizable methods.
- Provide opportunities for students to reflect on the method they used and determine if a more efficient method could have been used.

MA.K12.MTR.4.1:

Engage in discussions that reflect on the mathematical thinking of self and others.
Mathematicians who engage in discussions that reflect on the mathematical thinking of self and others:

- Communicate mathematical ideas, vocabulary and methods effectively.
- Analyze the mathematical thinking of others.
- Compare the efficiency of a method to those expressed by others.
- Recognize errors and suggest how to correctly solve the task.
- Justify results by explaining methods and processes.
- Construct possible arguments based on evidence.

Clarifications:
Teachers who encourage students to engage in discussions that reflect on the mathematical thinking of self and others:

- Establish a culture in which students ask questions of the teacher and their peers, and error is an opportunity for learning.
- Create opportunities for students to discuss their thinking with peers.
- Select, sequence and present student work to advance and deepen understanding of correct and increasingly efficient methods.
- Develop students' ability to justify methods and compare their responses to the responses of their peers.

MA.K12.MTR.5.1:

Use patterns and structure to help understand and connect mathematical concepts.
Mathematicians who use patterns and structure to help understand and connect mathematical concepts:

- Focus on relevant details within a problem.
- Create plans and procedures to logically order events, steps or ideas to solve problems.
- Decompose a complex problem into manageable parts.
- Relate previously learned concepts to new concepts.
- Look for similarities among problems.
- Connect solutions of problems to more complicated large-scale situations.

Clarifications:
Teachers who encourage students to use patterns and structure to help understand and connect mathematical concepts:

- Help students recognize the patterns in the world around them and connect these patterns to mathematical concepts.
- Support students to develop generalizations based on the similarities found among problems.
- Provide opportunities for students to create plans and procedures to solve problems.
- Develop students' ability to construct relationships between their current understanding and more sophisticated ways of thinking.

MA.K12.MTR.6.1:

Assess the reasonableness of solutions.
Mathematicians who assess the reasonableness of solutions:

- Estimate to discover possible solutions.
- Use benchmark quantities to determine if a solution makes sense.
- Check calculations when solving problems.
- Verify possible solutions by explaining the methods used.
- Evaluate results based on the given context.

Clarifications:
Teachers who encourage students to assess the reasonableness of solutions:

- Have students estimate or predict solutions prior to solving.
- Prompt students to continually ask, "Does this solution make sense? How do you know?"
- Reinforce that students check their work as they progress within and after a task.
- Strengthen students' ability to verify solutions through justifications.

MA.K12.MTR.7.1:

Apply mathematics to real-world contexts.
Mathematicians who apply mathematics to real-world contexts:

- Connect mathematical concepts to everyday experiences.
- Use models and methods to understand, represent and solve problems.
- Perform investigations to gather data or determine if a method is appropriate. • Redesign models and methods to improve accuracy or efficiency.

Clarifications:
Teachers who encourage students to apply mathematics to real-world contexts:

- Provide opportunities for students to create models, both concrete and abstract, and perform investigations.

	• Challenge students to question the accuracy of their models and methods. • Support students as they validate conclusions by comparing them to the given situation. • Indicate how various concepts can be applied to other disciplines.
ELA.K12.EE.1.1:	Cite evidence to explain and justify reasoning. **Clarifications:** K-1 Students include textual evidence in their oral communication with guidance and support from adults. The evidence can consist of details from the text without naming the text. During 1st grade, students learn how to incorporate the evidence in their writing. 2-3 Students include relevant textual evidence in their written and oral communication. Students should name the text when they refer to it. In 3rd grade, students should use a combination of direct and indirect citations. 4-5 Students continue with previous skills and reference comments made by speakers and peers. Students cite texts that they've directly quoted, paraphrased, or used for information. When writing, students will use the form of citation dictated by the instructor or the style guide referenced by the instructor. 6-8 Students continue with previous skills and use a style guide to create a proper citation. 9-12 Students continue with previous skills and should be aware of existing style guides and the ways in which they differ.
ELA.K12.EE.2.1:	Read and comprehend grade-level complex texts proficiently. **Clarifications:** See Text Complexity for grade-level complexity bands and a text complexity rubric.
ELA.K12.EE.3.1:	Make inferences to support comprehension. **Clarifications:** Students will make inferences before the words infer or inference are introduced. Kindergarten students will answer questions like "Why is the girl smiling?" or make predictions about what will happen based on the title page. Students will use the terms and apply them in 2nd grade and beyond.
ELA.K12.EE.4.1:	Use appropriate collaborative techniques and active listening skills when engaging in discussions in a variety of situations. **Clarifications:** In kindergarten, students learn to listen to one another respectfully. In grades 1-2, students build upon these skills by justifying what they are thinking. For example: "I think _____ because _____." The collaborative conversations are becoming academic conversations. In grades 3-12, students engage in academic conversations discussing claims and justifying their reasoning, refining and applying skills. Students build on ideas, propel the conversation, and support claims and counterclaims with evidence.
ELA.K12.EE.5.1:	Use the accepted rules governing a specific format to create quality work. **Clarifications:** Students will incorporate skills learned into work products to produce quality work. For students to incorporate these skills appropriately, they must receive instruction. A 3rd grade student creating a poster board display must have instruction in how to effectively present information to do quality work.
ELA.K12.EE.6.1:	Use appropriate voice and tone when speaking or writing. **Clarifications:** In kindergarten and 1st grade, students learn the difference between formal and informal language. For example, the way we talk to our friends differs from the way we speak to adults. In 2nd grade and beyond, students practice appropriate social and academic language to discuss texts.
ELD.K12.ELL.SC.1:	English language learners communicate information, ideas and concepts necessary for academic success in the content area of Science.
ELD.K12.ELL.SI.1:	English language learners communicate for social and instructional purposes within the school setting.
HE.7.C.1.4:	Describe ways to reduce or prevent injuries and adolescent health problems. **Clarifications:** Helmet use, seat-belt use, pedestrian safety, unsupervised handling of firearms, and proper use of over-the-counter medications.

General Course Information and Notes

GENERAL NOTES

Laboratory investigations that include the use of scientific inquiry, research, measurement, problem solving, laboratory apparatus and technologies, experimental procedures, and safety procedures are an integral part of this course. The National Science Teachers Association (NSTA) recommends that at the middle school level, all students should have multiple opportunities every week to explore science laboratory investigations (labs). School laboratory investigations are defined by the National Research Council (NRC) as an experience in the laboratory, classroom, or the field that provides students with opportunities to interact directly with natural phenomena or with data collected by others using tools, materials, data collection techniques, and models (NRC, 2006, p. 3). Laboratory investigations in the middle school classroom should help all students develop a growing understanding of the complexity and ambiguity of empirical work, as well as the skills to calibrate and troubleshoot equipment used to make observations. Learners should understand measurement error; and have the skills to aggregate, interpret, and present the resulting data (NRC 2006, p. 77; NSTA, 2007).

Honors and Advanced Level Course Note: Advanced courses require a greater demand on students through increased academic rigor. Academic rigor is obtained through the application, analysis, evaluation, and creation of complex ideas that are often abstract and multi-faceted. Students are challenged to think and collaborate critically on the content they are learning. Honors level rigor will be achieved by increasing text complexity through text selection, focus on high-level qualitative measures, and complexity of task. Instruction will be structured to give students a deeper understanding of conceptual themes and organization within and across disciplines. Academic rigor is more than simply assigning to students a greater quantity of work.

Special Notes:

Instructional Practices

Teaching from a range of complex text is optimized when teachers in all subject areas implement the following strategies on a routine basis:

1. Ensuring wide reading from complex text that varies in length.
2. Making close reading and rereading of texts central to lessons.
3. Emphasizing text-specific complex questions, and cognitively complex tasks, reinforce focus on the text and cultivate independence.
4. Emphasizing students supporting answers based upon evidence from the text.
5. Providing extensive research and writing opportunities (claims and evidence).

Science and Engineering Practices (NRC *Framework for K-12 Science Education, 2010*)

- Asking questions (for science) and defining problems (for engineering).
- Developing and using models.
- Planning and carrying out investigations.
- Analyzing and interpreting data.
- Using mathematics, information and computer technology, and computational thinking.
- Constructing explanations (for science) and designing solutions (for engineering).
- Engaging in argument from evidence.
- Obtaining, evaluating, and communicating information.

Florida's Benchmarks for Excellent Student Thinking (B.E.S.T.) Standards
This course includes Florida's B.E.S.T. ELA Expectations (EE) and Mathematical Thinking and Reasoning Standards (MTRs) for students. Florida educators should intentionally embed these standards within the content and their instruction as applicable. For guidance on the implementation of the EEs and MTRs, please visit cpalms.org/Standards/BEST_Standards.aspx and select the appropriate B.E.S.T. Standards package.

English Language Development ELD Standards Special Notes Section:
Teachers are required to provide listening, speaking, reading and writing instruction that allows English language learners (ELL) to communicate information, ideas and concepts for academic success in the content area of Science. For the given level of English language proficiency and with visual, graphic, or interactive support, students will interact with grade level words, expressions, sentences and discourse to process or produce language necessary for academic success The ELD standard should specify a relevant content area concept or topic of study chosen by curriculum developers and teachers which maximizes an ELL's need for communication and social skills. To access an ELL supporting document which delineates performance definitions and descriptors, please click on the following link: cpalms.org/uploads/docs/standards/eld/SC.pdf

GENERAL INFORMATION

Course Number: 2002085

Course Path: Section: Grades PreK to 12 Education Courses > **Grade Group:** Grades 6 to 8 Education Courses > **Subject:** Science > **SubSubject:** General Sciences >

Abbreviated Title: M/J COMPSCI2 ACC HON

Course Length: Year (Y)

Course Attributes:

- Class Size Core Required

Course Level: 3

Course Status: Draft - Course Pending Approval

Grade Level(s): 6,7,8

Educator Certifications

Biology (Grades 6-12)
Earth/Space Science (Grades 6-12)
Middle Grades General Science (Middle Grades 5-9)
Chemistry (Grades 6-12)
Physics (Grades 6-12)
Science (Secondary Grades 7-12)

M/J Comprehensive Science 3 (#2002100) 2022 - And Beyond

Course Standards

Name	Description
SC.8.E.5.1:	Recognize that there are enormous distances between objects in space and apply our knowledge of light and space travel to understand this distance.
SC.8.E.5.2:	Recognize that the universe contains many billions of galaxies and that each galaxy contains many billions of stars.
SC.8.E.5.3:	Distinguish the hierarchical relationships between planets and other astronomical bodies relative to solar system, galaxy, and universe, including distance, size, and composition.
SC.8.E.5.4:	Explore the Law of Universal Gravitation by explaining the role that gravity plays in the formation of planets, stars, and solar systems and in determining their motions.
SC.8.E.5.5:	Describe and classify specific physical properties of stars: apparent magnitude (brightness), temperature (color), size, and luminosity (absolute brightness).
SC.8.E.5.6:	Create models of solar properties including: rotation, structure of the Sun, convection, sunspots, solar flares, and prominences.
SC.8.E.5.7:	Compare and contrast the properties of objects in the Solar System including the Sun, planets, and moons to those of Earth, such as gravitational force, distance from the Sun, speed, movement, temperature, and atmospheric conditions.
SC.8.E.5.8:	Compare various historical models of the Solar System, including geocentric and heliocentric.
SC.8.E.5.9:	Explain the impact of objects in space on each other including: 1. the Sun on the Earth including seasons and gravitational attraction 2. the Moon on the Earth, including phases, tides, and eclipses, and the relative position of each body.
SC.8.E.5.10:	Assess how technology is essential to science for such purposes as access to outer space and other remote locations, sample collection, measurement, data collection and storage, computation, and communication of information.
SC.8.E.5.11:	Identify and compare characteristics of the electromagnetic spectrum such as wavelength, frequency, use, and hazards and recognize its application to an understanding of planetary images and satellite photographs.
SC.8.E.5.12:	Summarize the effects of space exploration on the economy and culture of Florida.
SC.8.L.18.1:	Describe and investigate the process of photosynthesis, such as the roles of light, carbon dioxide, water and chlorophyll; production of food; release of oxygen.
SC.8.L.18.2:	Describe and investigate how cellular respiration breaks down food to provide energy and releases carbon dioxide.
SC.8.L.18.3:	Construct a scientific model of the carbon cycle to show how matter and energy are continuously transferred within and between organisms and their physical environment.
SC.8.L.18.4:	Cite evidence that living systems follow the Laws of Conservation of Mass and Energy.
SC.8.N.1.1:	Define a problem from the eighth grade curriculum using appropriate reference materials to support scientific understanding, plan and carry out scientific investigations of various types, such as systematic observations or experiments, identify variables, collect and organize data, interpret data in charts, tables, and graphics, analyze information, make predictions, and defend conclusions.
SC.8.N.1.2:	Design and conduct a study using repeated trials and replication.
SC.8.N.1.3:	Use phrases such as "results support" or "fail to support" in science, understanding that science does not offer conclusive 'proof' of a knowledge claim.
SC.8.N.1.4:	Explain how hypotheses are valuable if they lead to further investigations, even if they turn out not to be supported by the data.
SC.8.N.1.5:	Analyze the methods used to develop a scientific explanation as seen in different fields of science.
SC.8.N.1.6:	Understand that scientific investigations involve the collection of relevant empirical evidence, the use of logical reasoning, and the application of imagination in devising hypotheses, predictions, explanations and models to make sense of the collected evidence.
SC.8.N.2.1:	Distinguish between scientific and pseudoscientific ideas.
SC.8.N.2.2:	Discuss what characterizes science and its methods.
SC.8.N.3.1:	Select models useful in relating the results of their own investigations.
SC.8.N.3.2:	Explain why theories may be modified but are rarely discarded.
SC.8.N.4.1:	Explain that science is one of the processes that can be used to inform decision making at the community, state, national, and international levels.
SC.8.N.4.2:	Explain how political, social, and economic concerns can affect science, and vice versa.
SC.8.P.8.1:	Explore the scientific theory of atoms (also known as atomic theory) by using models to explain the motion of particles in solids, liquids, and gases.
SC.8.P.8.2:	Differentiate between weight and mass recognizing that weight is the amount of gravitational pull on an object and is distinct from, though proportional to, mass.
SC.8.P.8.3:	Explore and describe the densities of various materials through measurement of their masses and volumes.
SC.8.P.8.4:	Classify and compare substances on the basis of characteristic physical properties that can be demonstrated or measured; for example, density, thermal or electrical conductivity, solubility, magnetic properties, melting and boiling points, and know that these properties are independent of the amount of the sample.
SC.8.P.8.5:	Recognize that there are a finite number of elements and that their atoms combine in a multitude of ways to produce compounds that make up all of the living and nonliving things that we encounter.
SC.8.P.8.6:	Recognize that elements are grouped in the periodic table according to similarities of their properties.
SC.8.P.8.7:	Explore the scientific theory of atoms (also known as atomic theory) by recognizing that atoms are the smallest unit of an element and are composed of sub-atomic particles (electrons surrounding a nucleus containing protons and neutrons).
SC.8.P.8.8:	Identify basic examples of and compare and classify the properties of compounds, including acids, bases, and salts.
SC.8.P.8.9:	Distinguish among mixtures (including solutions) and pure substances.
SC.8.P.9.1:	Explore the Law of Conservation of Mass by demonstrating and concluding that mass is conserved when substances undergo physical and chemical changes.
SC.8.P.9.2:	Differentiate between physical changes and chemical changes.
SC.8.P.9.3:	Investigate and describe how temperature influences chemical changes.
	Mathematicians who participate in effortful learning both individually and with others:

- Analyze the problem in a way that makes sense given the task.
- Ask questions that will help with solving the task.
- Build perseverance by modifying methods as needed while solving a challenging task.
- Stay engaged and maintain a positive mindset when working to solve tasks.
- Help and support each other when attempting a new method or approach.

MA.K12.MTR.1.1:

Clarifications:
Teachers who encourage students to participate actively in effortful learning both individually and with others:
- Cultivate a community of growth mindset learners.
- Foster perseverance in students by choosing tasks that are challenging.
- Develop students' ability to analyze and problem solve.
- Recognize students' effort when solving challenging problems.

Demonstrate understanding by representing problems in multiple ways.
Mathematicians who demonstrate understanding by representing problems in multiple ways:

- Build understanding through modeling and using manipulatives.
- Represent solutions to problems in multiple ways using objects, drawings, tables, graphs and equations.
- Progress from modeling problems with objects and drawings to using algorithms and equations.
- Express connections between concepts and representations.
- Choose a representation based on the given context or purpose.

MA.K12.MTR.2.1:

Clarifications:
Teachers who encourage students to demonstrate understanding by representing problems in multiple ways:
- Help students make connections between concepts and representations.
- Provide opportunities for students to use manipulatives when investigating concepts.
- Guide students from concrete to pictorial to abstract representations as understanding progresses.
- Show students that various representations can have different purposes and can be useful in different situations.

Complete tasks with mathematical fluency.
Mathematicians who complete tasks with mathematical fluency:

- Select efficient and appropriate methods for solving problems within the given context.
- Maintain flexibility and accuracy while performing procedures and mental calculations.
- Complete tasks accurately and with confidence.
- Adapt procedures to apply them to a new context.
- Use feedback to improve efficiency when performing calculations.

MA.K12.MTR.3.1:

Clarifications:
Teachers who encourage students to complete tasks with mathematical fluency:
- Provide students with the flexibility to solve problems by selecting a procedure that allows them to solve efficiently and accurately.
- Offer multiple opportunities for students to practice efficient and generalizable methods.
- Provide opportunities for students to reflect on the method they used and determine if a more efficient method could have been used.

Engage in discussions that reflect on the mathematical thinking of self and others.
Mathematicians who engage in discussions that reflect on the mathematical thinking of self and others:

- Communicate mathematical ideas, vocabulary and methods effectively.
- Analyze the mathematical thinking of others.
- Compare the efficiency of a method to those expressed by others.
- Recognize errors and suggest how to correctly solve the task.
- Justify results by explaining methods and processes.
- Construct possible arguments based on evidence.

MA.K12.MTR.4.1:

Clarifications:
Teachers who encourage students to engage in discussions that reflect on the mathematical thinking of self and others:
- Establish a culture in which students ask questions of the teacher and their peers, and error is an opportunity for learning.
- Create opportunities for students to discuss their thinking with peers.
- Select, sequence and present student work to advance and deepen understanding of correct and increasingly efficient methods.
- Develop students' ability to justify methods and compare their responses to the responses of their peers.

Use patterns and structure to help understand and connect mathematical concepts.
Mathematicians who use patterns and structure to help understand and connect mathematical concepts:

- Focus on relevant details within a problem.
- Create plans and procedures to logically order events, steps or ideas to solve problems.
- Decompose a complex problem into manageable parts.
- Relate previously learned concepts to new concepts.
- Look for similarities among problems.
- Connect solutions of problems to more complicated large-scale situations.

MA.K12.MTR.5.1:

Clarifications:
Teachers who encourage students to use patterns and structure to help understand and connect mathematical concepts:
- Help students recognize the patterns in the world around them and connect these patterns to mathematical concepts.
- Support students to develop generalizations based on the similarities found among problems.
- Provide opportunities for students to create plans and procedures to solve problems.
- Develop students' ability to construct relationships between their current understanding and more sophisticated ways of thinking.

Assess the reasonableness of solutions.
Mathematicians who assess the reasonableness of solutions:

MA.K12.MTR.6.1:	• Estimate to discover possible solutions. • Use benchmark quantities to determine if a solution makes sense. • Check calculations when solving problems. • Verify possible solutions by explaining the methods used. • Evaluate results based on the given context. **Clarifications:** Teachers who encourage students to assess the reasonableness of solutions: • Have students estimate or predict solutions prior to solving. • Prompt students to continually ask, "Does this solution make sense? How do you know?" • Reinforce that students check their work as they progress within and after a task. • Strengthen students' ability to verify solutions through justifications.
MA.K12.MTR.7.1:	Apply mathematics to real-world contexts. Mathematicians who apply mathematics to real-world contexts: • Connect mathematical concepts to everyday experiences. • Use models and methods to understand, represent and solve problems. • Perform investigations to gather data or determine if a method is appropriate. • Redesign models and methods to improve accuracy or efficiency. **Clarifications:** Teachers who encourage students to apply mathematics to real-world contexts: • Provide opportunities for students to create models, both concrete and abstract, and perform investigations. • Challenge students to question the accuracy of their models and methods. • Support students as they validate conclusions by comparing them to the given situation. • Indicate how various concepts can be applied to other disciplines.
ELA.K12.EE.1.1:	Cite evidence to explain and justify reasoning. **Clarifications:** K-1 Students include textual evidence in their oral communication with guidance and support from adults. The evidence can consist of details from the text without naming the text. During 1st grade, students learn how to incorporate the evidence in their writing. 2-3 Students include relevant textual evidence in their written and oral communication. Students should name the text when they refer to it. In 3rd grade, students should use a combination of direct and indirect citations. 4-5 Students continue with previous skills and reference comments made by speakers and peers. Students cite texts that they've directly quoted, paraphrased, or used for information. When writing, students will use the form of citation dictated by the instructor or the style guide referenced by the instructor. 6-8 Students continue with previous skills and use a style guide to create a proper citation. 9-12 Students continue with previous skills and should be aware of existing style guides and the ways in which they differ.
ELA.K12.EE.2.1:	Read and comprehend grade-level complex texts proficiently. **Clarifications:** See Text Complexity for grade-level complexity bands and a text complexity rubric.
ELA.K12.EE.3.1:	Make inferences to support comprehension. **Clarifications:** Students will make inferences before the words infer or inference are introduced. Kindergarten students will answer questions like "Why is the girl smiling?" or make predictions about what will happen based on the title page. Students will use the terms and apply them in 2nd grade and beyond.
ELA.K12.EE.4.1:	Use appropriate collaborative techniques and active listening skills when engaging in discussions in a variety of situations. **Clarifications:** In kindergarten, students learn to listen to one another respectfully. In grades 1-2, students build upon these skills by justifying what they are thinking. For example: "I think _____ because _____." The collaborative conversations are becoming academic conversations. In grades 3-12, students engage in academic conversations discussing claims and justifying their reasoning, refining and applying skills. Students build on ideas, propel the conversation, and support claims and counterclaims with evidence.
ELA.K12.EE.5.1:	Use the accepted rules governing a specific format to create quality work. **Clarifications:** Students will incorporate skills learned into work products to produce quality work. For students to incorporate these skills appropriately, they must receive instruction. A 3rd grade student creating a poster board display must have instruction in how to effectively present information to do quality work.
ELA.K12.EE.6.1:	Use appropriate voice and tone when speaking or writing. **Clarifications:** In kindergarten and 1st grade, students learn the difference between formal and informal language. For example, the way we talk to our friends differs from the way we speak to adults. In 2nd grade and beyond, students practice appropriate social and academic language to discuss texts.
ELD.K12.ELL.SC.1:	English language learners communicate information, ideas and concepts necessary for academic success in the content area of Science.
ELD.K12.ELL.SI.1:	English language learners communicate for social and instructional purposes within the school setting.

General Course Information and Notes

GENERAL NOTES

Laboratory investigations that include the use of scientific inquiry, research, measurement, problem solving, laboratory apparatus and technologies, experimental procedures, and safety procedures are an integral part of this course. The National Science Teachers Association (NSTA) recommends that at the middle school level, all students should have multiple opportunities every week to explore science laboratory investigations (labs). School laboratory investigations are defined by the National Research Council (NRC) as an experience in the laboratory, classroom, or the field that provides students with opportunities to interact directly with natural phenomena or with data collected by others using tools, materials, data collection techniques, and models (NRC, 2006, p. 3). Laboratory investigations in the middle school classroom should help all students develop a growing understanding of the complexity and ambiguity of empirical work, as well as the skills to calibrate and troubleshoot equipment used to make observations. Learners should understand measurement error; and have the skills to aggregate, interpret, and present the resulting data (NRC 2006, p. 77; NSTA, 2007).

Special Notes:

Instructional Practices
Teaching from a range of complex text is optimized when teachers in all subject areas implement the following strategies on a routine basis:

1. Ensuring wide reading from complex text that varies in length.
2. Making close reading and rereading of texts central to lessons.
3. Emphasizing text-specific complex questions, and cognitively complex tasks, reinforce focus on the text and cultivate independence.
4. Emphasizing students supporting answers based upon evidence from the text.
5. Providing extensive research and writing opportunities (claims and evidence).

Science and Engineering Practices (NRC *Framework for K-12 Science Education, 2010*)

- Asking questions (for science) and defining problems (for engineering).
- Developing and using models.
- Planning and carrying out investigations.
- Analyzing and interpreting data.
- Using mathematics, information and computer technology, and computational thinking.
- Constructing explanations (for science) and designing solutions (for engineering).
- Engaging in argument from evidence.
- Obtaining, evaluating, and communicating information.

Additional content that may be included in the Grade 8 NAEP Science assessment includes:

- Rocks and rock formations bear evidence of the minerals, materials, temperature/pressure conditions, and forces that created them. (SC.4.E.6.1 and SC.4.E.6.2)
- Earth as a whole has a magnetic field that is detectable at the surface with a compass, with north and south poles and lines of force. (SC.912.P.10.16)
- The Sun is the major source of energy for phenomena on Earth's surface. (SC.3.L.17.2; SC.3.E.5.2; SC.3.E.6.1; SC.4.P.10.4; SC.4.L.17.2)
- Water, which covers the majority of Earth's surface, circulates through the crust, oceans, and atmosphere in what is known as the water cycle. (SC.5.E.7.1; SC.5.E.7.2; SC.5.E.7.6)
- A tiny fraction of the light energy from the Sun is Earth's primary source of energy, heating Earth surfaces and providing the energy that results in wind, ocean currents, and storms. (SC.2.E.7.2; SC.3.E.6.1)
- Following fertilization, cell division produces a small cluster of cells that then differentiate by appearance and function to form the basic tissues of an embryo. (SC.912.L.16.13)
- Characteristics of organisms are influenced by heredity and environment. (SC.4.L.16.2 and SC.4.L.16.3)
- Nuclear reactions take place in the Sun. (SC.912.P.10.10; SC.912.P.10.11)

The NAEP frameworks for Science may be accessed at nagb.org/publications/frameworks/science-09.pdf

Florida's Benchmarks for Excellent Student Thinking (B.E.S.T.) Standards
This course includes Florida's B.E.S.T. ELA Expectations (EE) and Mathematical Thinking and Reasoning Standards (MTRs) for students. Florida educators should intentionally embed these standards within the content and their instruction as applicable. For guidance on the implementation of the EEs and MTRs, please visit cpalms.org/Standards/BEST_Standards.aspx and select the appropriate B.E.S.T. Standards package.

English Language Development ELD Standards Special Notes Section:
Teachers are required to provide listening, speaking, reading and writing instruction that allows English language learners (ELL) to communicate information, ideas and concepts for academic success in the content area of Science. For the given level of English language proficiency and with visual, graphic, or interactive support, students will interact with grade level words, expressions, sentences and discourse to process or produce language necessary for academic success The ELD standard should specify a relevant content area concept or topic of study chosen by curriculum developers and teachers which maximizes an ELL's need for communication and social skills. To access an ELL supporting document which delineates performance definitions and descriptors, please click on the following link: cpalms.org/uploads/docs/standards/eld/SC.pdf

Additional Instructional Resources:
A.V.E. for Success Collection: fasa.net/4DCGI/cms/review.html?Action=CMS_Document&DocID=139

GENERAL INFORMATION

Course Number: 2002100

Course Path: Section: Grades PreK to 12 Education Courses > **Grade Group:** Grades 6 to 8 Education Courses > **Subject:** Science > **SubSubject:** General Sciences >
Abbreviated Title: M/J COMP SCI 3
Course Length: Year (Y)

Course Attributes:

- Class Size Core Required

Course Level: 2

Course Status: Draft - Course Pending Approval

Grade Level(s): 6,7,8

Educator Certifications

Science (Secondary Grades 7-12)
Middle Grades Integrated Curriculum (Middle Grades 5-9)
Physics (Grades 6-12)
Earth/Space Science (Grades 6-12)
Middle Grades General Science (Middle Grades 5-9)
Chemistry (Grades 6-12)
Biology (Grades 6-12)

M/J Comprehensive Science 3, Advanced (#2002110) 2022 -

And Beyond

Course Standards

Name	Description
SC.8.E.5.1:	Recognize that there are enormous distances between objects in space and apply our knowledge of light and space travel to understand this distance.
SC.8.E.5.2:	Recognize that the universe contains many billions of galaxies and that each galaxy contains many billions of stars.
SC.8.E.5.3:	Distinguish the hierarchical relationships between planets and other astronomical bodies relative to solar system, galaxy, and universe, including distance, size, and composition.
SC.8.E.5.4:	Explore the Law of Universal Gravitation by explaining the role that gravity plays in the formation of planets, stars, and solar systems and in determining their motions.
SC.8.E.5.5:	Describe and classify specific physical properties of stars: apparent magnitude (brightness), temperature (color), size, and luminosity (absolute brightness).
SC.8.E.5.6:	Create models of solar properties including: rotation, structure of the Sun, convection, sunspots, solar flares, and prominences.
SC.8.E.5.7:	Compare and contrast the properties of objects in the Solar System including the Sun, planets, and moons to those of Earth, such as gravitational force, distance from the Sun, speed, movement, temperature, and atmospheric conditions.
SC.8.E.5.8:	Compare various historical models of the Solar System, including geocentric and heliocentric.
SC.8.E.5.9:	Explain the impact of objects in space on each other including: 1. the Sun on the Earth including seasons and gravitational attraction 2. the Moon on the Earth, including phases, tides, and eclipses, and the relative position of each body.
SC.8.E.5.10:	Assess how technology is essential to science for such purposes as access to outer space and other remote locations, sample collection, measurement, data collection and storage, computation, and communication of information.
SC.8.E.5.11:	Identify and compare characteristics of the electromagnetic spectrum such as wavelength, frequency, use, and hazards and recognize its application to an understanding of planetary images and satellite photographs.
SC.8.E.5.12:	Summarize the effects of space exploration on the economy and culture of Florida.
SC.8.L.18.1:	Describe and investigate the process of photosynthesis, such as the roles of light, carbon dioxide, water and chlorophyll; production of food; release of oxygen.
SC.8.L.18.2:	Describe and investigate how cellular respiration breaks down food to provide energy and releases carbon dioxide.
SC.8.L.18.3:	Construct a scientific model of the carbon cycle to show how matter and energy are continuously transferred within and between organisms and their physical environment.
SC.8.L.18.4:	Cite evidence that living systems follow the Laws of Conservation of Mass and Energy.
SC.8.N.1.1:	Define a problem from the eighth grade curriculum using appropriate reference materials to support scientific understanding, plan and carry out scientific investigations of various types, such as systematic observations or experiments, identify variables, collect and organize data, interpret data in charts, tables, and graphics, analyze information, make predictions, and defend conclusions.
SC.8.N.1.2:	Design and conduct a study using repeated trials and replication.
SC.8.N.1.3:	Use phrases such as "results support" or "fail to support" in science, understanding that science does not offer conclusive 'proof' of a knowledge claim.
SC.8.N.1.4:	Explain how hypotheses are valuable if they lead to further investigations, even if they turn out not to be supported by the data.
SC.8.N.1.5:	Analyze the methods used to develop a scientific explanation as seen in different fields of science.
SC.8.N.1.6:	Understand that scientific investigations involve the collection of relevant empirical evidence, the use of logical reasoning, and the application of imagination in devising hypotheses, predictions, explanations and models to make sense of the collected evidence.
SC.8.N.2.1:	Distinguish between scientific and pseudoscientific ideas.
SC.8.N.2.2:	Discuss what characterizes science and its methods.
SC.8.N.3.1:	Select models useful in relating the results of their own investigations.
SC.8.N.3.2:	Explain why theories may be modified but are rarely discarded.
SC.8.N.4.1:	Explain that science is one of the processes that can be used to inform decision making at the community, state, national, and international levels.
SC.8.N.4.2:	Explain how political, social, and economic concerns can affect science, and vice versa.
SC.8.P.8.1:	Explore the scientific theory of atoms (also known as atomic theory) by using models to explain the motion of particles in solids, liquids, and gases.
SC.8.P.8.2:	Differentiate between weight and mass recognizing that weight is the amount of gravitational pull on an object and is distinct from, though proportional to, mass.
SC.8.P.8.3:	Explore and describe the densities of various materials through measurement of their masses and volumes.
SC.8.P.8.4:	Classify and compare substances on the basis of characteristic physical properties that can be demonstrated or measured; for example, density, thermal or electrical conductivity, solubility, magnetic properties, melting and boiling points, and know that these properties are independent of the amount of the sample.
SC.8.P.8.5:	Recognize that there are a finite number of elements and that their atoms combine in a multitude of ways to produce compounds that make up all of the living and nonliving things that we encounter.
SC.8.P.8.6:	Recognize that elements are grouped in the periodic table according to similarities of their properties.
SC.8.P.8.7:	Explore the scientific theory of atoms (also known as atomic theory) by recognizing that atoms are the smallest unit of an element and are composed of sub-atomic particles (electrons surrounding a nucleus containing protons and neutrons).
SC.8.P.8.8:	Identify basic examples of and compare and classify the properties of compounds, including acids, bases, and salts.
SC.8.P.8.9:	Distinguish among mixtures (including solutions) and pure substances.
SC.8.P.9.1:	Explore the Law of Conservation of Mass by demonstrating and concluding that mass is conserved when substances undergo physical and chemical changes.

SC.8.P.9.2:	Differentiate between physical changes and chemical changes.
SC.8.P.9.3:	Investigate and describe how temperature influences chemical changes.
SC.912.E.5.4:	Explain the physical properties of the Sun and its dynamic nature and connect them to conditions and events on Earth.
SC.912.L.18.7:	Identify the reactants, products, and basic functions of photosynthesis.
SC.912.L.18.8:	Identify the reactants, products, and basic functions of aerobic and anaerobic cellular respiration.
SC.912.L.18.9:	Explain the interrelated nature of photosynthesis and cellular respiration.
SC.912.P.8.1:	Differentiate among the four states of matter.
SC.912.P.8.2:	Differentiate between physical and chemical properties and physical and chemical changes of matter.
SC.912.P.8.4:	Explore the scientific theory of atoms (also known as atomic theory) by describing the structure of atoms in terms of protons, neutrons and electrons, and differentiate among these particles in terms of their mass, electrical charges and locations within the atom.
SC.912.P.8.5:	Relate properties of atoms and their position in the periodic table to the arrangement of their electrons.
SC.912.P.8.7:	Interpret formula representations of molecules and compounds in terms of composition and structure.
SC.912.P.8.11:	Relate acidity and basicity to hydronium and hydroxyl ion concentration and pH.
MA.K12.MTR.1.1:	Mathematicians who participate in effortful learning both individually and with others: • Analyze the problem in a way that makes sense given the task. • Ask questions that will help with solving the task. • Build perseverance by modifying methods as needed while solving a challenging task. • Stay engaged and maintain a positive mindset when working to solve tasks. • Help and support each other when attempting a new method or approach. **Clarifications:** Teachers who encourage students to participate actively in effortful learning both individually and with others: • Cultivate a community of growth mindset learners. • Foster perseverance in students by choosing tasks that are challenging. • Develop students' ability to analyze and problem solve. • Recognize students' effort when solving challenging problems.
MA.K12.MTR.2.1:	Demonstrate understanding by representing problems in multiple ways. Mathematicians who demonstrate understanding by representing problems in multiple ways: • Build understanding through modeling and using manipulatives. • Represent solutions to problems in multiple ways using objects, drawings, tables, graphs and equations. • Progress from modeling problems with objects and drawings to using algorithms and equations. • Express connections between concepts and representations. • Choose a representation based on the given context or purpose. **Clarifications:** Teachers who encourage students to demonstrate understanding by representing problems in multiple ways: • Help students make connections between concepts and representations. • Provide opportunities for students to use manipulatives when investigating concepts. • Guide students from concrete to pictorial to abstract representations as understanding progresses. • Show students that various representations can have different purposes and can be useful in different situations.
MA.K12.MTR.3.1:	Complete tasks with mathematical fluency. Mathematicians who complete tasks with mathematical fluency: • Select efficient and appropriate methods for solving problems within the given context. • Maintain flexibility and accuracy while performing procedures and mental calculations. • Complete tasks accurately and with confidence. • Adapt procedures to apply them to a new context. • Use feedback to improve efficiency when performing calculations. **Clarifications:** Teachers who encourage students to complete tasks with mathematical fluency: • Provide students with the flexibility to solve problems by selecting a procedure that allows them to solve efficiently and accurately. • Offer multiple opportunities for students to practice efficient and generalizable methods. • Provide opportunities for students to reflect on the method they used and determine if a more efficient method could have been used.
MA.K12.MTR.4.1:	Engage in discussions that reflect on the mathematical thinking of self and others. Mathematicians who engage in discussions that reflect on the mathematical thinking of self and others: • Communicate mathematical ideas, vocabulary and methods effectively. • Analyze the mathematical thinking of others. • Compare the efficiency of a method to those expressed by others. • Recognize errors and suggest how to correctly solve the task. • Justify results by explaining methods and processes. • Construct possible arguments based on evidence. **Clarifications:** Teachers who encourage students to engage in discussions that reflect on the mathematical thinking of self and others: • Establish a culture in which students ask questions of the teacher and their peers, and error is an opportunity for learning. • Create opportunities for students to discuss their thinking with peers. • Select, sequence and present student work to advance and deepen understanding of correct and increasingly efficient methods. • Develop students' ability to justify methods and compare their responses to the responses of their peers.
	Use patterns and structure to help understand and connect mathematical concepts. Mathematicians who use patterns and structure to help understand and connect mathematical concepts:

MA.K12.MTR.5.1:	• Focus on relevant details within a problem. • Create plans and procedures to logically order events, steps or ideas to solve problems. • Decompose a complex problem into manageable parts. • Relate previously learned concepts to new concepts. • Look for similarities among problems. • Connect solutions of problems to more complicated large-scale situations. **Clarifications:** Teachers who encourage students to use patterns and structure to help understand and connect mathematical concepts: • Help students recognize the patterns in the world around them and connect these patterns to mathematical concepts. • Support students to develop generalizations based on the similarities found among problems. • Provide opportunities for students to create plans and procedures to solve problems. • Develop students' ability to construct relationships between their current understanding and more sophisticated ways of thinking.
MA.K12.MTR.6.1:	Assess the reasonableness of solutions. Mathematicians who assess the reasonableness of solutions: • Estimate to discover possible solutions. • Use benchmark quantities to determine if a solution makes sense. • Check calculations when solving problems. • Verify possible solutions by explaining the methods used. • Evaluate results based on the given context. **Clarifications:** Teachers who encourage students to assess the reasonableness of solutions: • Have students estimate or predict solutions prior to solving. • Prompt students to continually ask, "Does this solution make sense? How do you know?" • Reinforce that students check their work as they progress within and after a task. • Strengthen students' ability to verify solutions through justifications.
MA.K12.MTR.7.1:	Apply mathematics to real-world contexts. Mathematicians who apply mathematics to real-world contexts: • Connect mathematical concepts to everyday experiences. • Use models and methods to understand, represent and solve problems. • Perform investigations to gather data or determine if a method is appropriate. • Redesign models and methods to improve accuracy or efficiency. **Clarifications:** Teachers who encourage students to apply mathematics to real-world contexts: • Provide opportunities for students to create models, both concrete and abstract, and perform investigations. • Challenge students to question the accuracy of their models and methods. • Support students as they validate conclusions by comparing them to the given situation. • Indicate how various concepts can be applied to other disciplines.
ELA.K12.EE.1.1:	Cite evidence to explain and justify reasoning. **Clarifications:** K-1 Students include textual evidence in their oral communication with guidance and support from adults. The evidence can consist of details from the text without naming the text. During 1st grade, students learn how to incorporate the evidence in their writing. 2-3 Students include relevant textual evidence in their written and oral communication. Students should name the text when they refer to it. In 3rd grade, students should use a combination of direct and indirect citations. 4-5 Students continue with previous skills and reference comments made by speakers and peers. Students cite texts that they've directly quoted, paraphrased, or used for information. When writing, students will use the form of citation dictated by the instructor or the style guide referenced by the instructor. 6-8 Students continue with previous skills and use a style guide to create a proper citation. 9-12 Students continue with previous skills and should be aware of existing style guides and the ways in which they differ.
ELA.K12.EE.2.1:	Read and comprehend grade-level complex texts proficiently. **Clarifications:** See Text Complexity for grade-level complexity bands and a text complexity rubric.
ELA.K12.EE.3.1:	Make inferences to support comprehension. **Clarifications:** Students will make inferences before the words infer or inference are introduced. Kindergarten students will answer questions like "Why is the girl smiling?" or make predictions about what will happen based on the title page. Students will use the terms and apply them in 2nd grade and beyond.
ELA.K12.EE.4.1:	Use appropriate collaborative techniques and active listening skills when engaging in discussions in a variety of situations. **Clarifications:** In kindergarten, students learn to listen to one another respectfully. In grades 1-2, students build upon these skills by justifying what they are thinking. For example: "I think _____ because _____." The collaborative conversations are becoming academic conversations. In grades 3-12, students engage in academic conversations discussing claims and justifying their reasoning, refining and applying skills. Students build on ideas, propel the conversation, and support claims and counterclaims with evidence.
	Use the accepted rules governing a specific format to create quality work. **Clarifications:**

ELA.K12.EE.5.1:	Students will incorporate skills learned into work products to produce quality work. For students to incorporate these skills appropriately, they must receive instruction. A 3rd grade student creating a poster board display must have instruction in how to effectively present information to do quality work.
ELA.K12.EE.6.1:	Use appropriate voice and tone when speaking or writing. **Clarifications:** In kindergarten and 1st grade, students learn the difference between formal and informal language. For example, the way we talk to our friends differs from the way we speak to adults. In 2nd grade and beyond, students practice appropriate social and academic language to discuss texts.
ELD.K12.ELL.SC.1:	English language learners communicate information, ideas and concepts necessary for academic success in the content area of Science.
ELD.K12.ELL.SI.1:	English language learners communicate for social and instructional purposes within the school setting.

General Course Information and Notes

GENERAL NOTES

Laboratory investigations that include the use of scientific inquiry, research, measurement, problem solving, laboratory apparatus and technologies, experimental procedures, and safety procedures are an integral part of this course. The National Science Teachers Association (NSTA) recommends that at the middle school level, all students should have multiple opportunities every week to explore science laboratory investigations (labs). School laboratory investigations are defined by the National Research Council (NRC) as an experience in the laboratory, classroom, or the field that provides students with opportunities to interact directly with natural phenomena or with data collected by others using tools, materials, data collection techniques, and models (NRC, 2006, p. 3). Laboratory investigations in the middle school classroom should help all students develop a growing understanding of the complexity and ambiguity of empirical work, as well as the skills to calibrate and troubleshoot equipment used to make observations. Learners should understand measurement error; and have the skills to aggregate, interpret, and present the resulting data (NRC 2006, p. 77; NSTA, 2007).

Honors and Advanced Level Course Note: Advanced courses require a greater demand on students through increased academic rigor. Academic rigor is obtained through the application, analysis, evaluation, and creation of complex ideas that are often abstract and multi-faceted. Students are challenged to think and collaborate critically on the content they are learning. Honors level rigor will be achieved by increasing text complexity through text selection, focus on high-level qualitative measures, and complexity of task. Instruction will be structured to give students a deeper understanding of conceptual themes and organization within and across disciplines. Academic rigor is more than simply assigning to students a greater quantity of work.

Special Notes:

Instructional Practices
Teaching from a range of complex text is optimized when teachers in all subject areas implement the following strategies on a routine basis:

1. Ensuring wide reading from complex text that varies in length.
2. Making close reading and rereading of texts central to lessons.
3. Emphasizing text-specific complex questions, and cognitively complex tasks, reinforce focus on the text and cultivate independence.
4. Emphasizing students supporting answers based upon evidence from the text.
5. Providing extensive research and writing opportunities (claims and evidence).

Science and Engineering Practices (NRC *Framework for K-12 Science Education, 2010*)

- Asking questions (for science) and defining problems (for engineering).
- Developing and using models.
- Planning and carrying out investigations.
- Analyzing and interpreting data.
- Using mathematics, information and computer technology, and computational thinking.
- Constructing explanations (for science) and designing solutions (for engineering).
- Engaging in argument from evidence.
- Obtaining, evaluating, and communicating information.

Additional content that may be included in the Grade 8 NAEP Science assessment includes:

- Rocks and rock formations bear evidence of the minerals, materials, temperature/pressure conditions, and forces that created them. (SC.4.E.6.1 and SC.4.E.6.2)
- Earth as a whole has a magnetic field that is detectable at the surface with a compass, with north and south poles and lines of force. (SC.912.P.10.16)
- The Sun is the major source of energy for phenomena on Earth's surface. (SC.3.L.17.2; SC.3.E.5.2; SC.3.E.6.1; SC.4.P.10.4; SC.4.L.17.2)
- Water, which covers the majority of Earth's surface, circulates through the crust, oceans, and atmosphere in what is known as the water cycle. (SC.5.E.7.1; SC.5.E.7.2; SC.5.E.7.6)
- A tiny fraction of the light energy from the Sun is Earth's primary source of energy, heating Earth surfaces and providing the energy that results in wind, ocean currents, and storms.(SC.2.E.7.2; SC.3.E.6.1)
- Following fertilization, cell division produces a small cluster of cells that then differentiate by appearance and function to form the basic tissues of an embryo. (SC.912.L.16.13)
- Characteristics of organisms are influenced by heredity and environment. (SC.4.L.16.2 and SC.4.L.16.3)
- Nuclear reactions take place in the Sun. (SC.912.P.10.10; SC.912.P.10.11)

The NAEP frameworks for Science may be accessed at nagb.org/publications/frameworks/science-09.pdf

Florida's Benchmarks for Excellent Student Thinking (B.E.S.T.) Standards
This course includes Florida's B.E.S.T. ELA Expectations (EE) and Mathematical Thinking and Reasoning Standards (MTRs) for students. Florida educators should intentionally embed these standards within the content and their instruction as applicable. For guidance on the implementation of the EEs and MTRs, please visit cpalms.org/Standards/BEST_Standards.aspx and select the appropriate B.E.S.T. Standards package.

English Language Development ELD Standards Special Notes Section:
Teachers are required to provide listening, speaking, reading and writing instruction that allows English language learners (ELL) to communicate information, ideas and concepts for academic success in the content area of Science. For the given level of English language proficiency and with visual, graphic, or interactive support, students will interact with grade level words, expressions, sentences and discourse to process or produce language necessary for academic success The ELD standard should specify a relevant content area concept or topic of study chosen by curriculum developers and teachers which maximizes an ELL's need for communication and social skills. To access an ELL supporting document which delineates performance definitions and descriptors, please click on the following link: cpalms.org/uploads/docs/standards/eld/SC.pdf

Additional Instructional Resources:
A.V.E. for Success Collection is provided by the Florida Association of School Administrators: fasa.net/4DCGI/cms/review.html?Action=CMS_Document&DocID=139. Please be aware that these resources have not been reviewed by CPALMS and there may be a charge for the use of some of them in this collection.

GENERAL INFORMATION

Course Number: 2002110

Course Path: Section: Grades PreK to 12 Education Courses > **Grade Group:** Grades 6 to 8 Education Courses > **Subject:** Science > **SubSubject:** General Sciences >

Abbreviated Title: M/J COMP SCI 3 ADV

Course Length: Year (Y)

Course Attributes:

- Class Size Core Required

Course Level: 3

Course Status: Draft - Course Pending Approval

Grade Level(s): 6,7,8

Educator Certifications

Science (Secondary Grades 7-12)
Middle Grades Integrated Curriculum (Middle Grades 5-9)
Physics (Grades 6-12)
Earth/Space Science (Grades 6-12)
Middle Grades General Science (Middle Grades 5-9)
Chemistry (Grades 6-12)
Biology (Grades 6-12)

M/J STEM Environmental Science (#2002200) 2022 - And Beyond

Course Standards

Name	Description
SC.6.E.7.1:	Differentiate among radiation, conduction, and convection, the three mechanisms by which heat is transferred through Earth's system.
SC.6.E.7.2:	Investigate and apply how the cycling of water between the atmosphere and hydrosphere has an effect on weather patterns and climate.
SC.6.E.7.3:	Describe how global patterns such as the jet stream and ocean currents influence local weather in measurable terms such as temperature, air pressure, wind direction and speed, and humidity and precipitation.
SC.6.E.7.4:	Differentiate and show interactions among the geosphere, hydrosphere, cryosphere, atmosphere, and biosphere.
SC.6.E.7.5:	Explain how energy provided by the sun influences global patterns of atmospheric movement and the temperature differences between air, water, and land.
SC.6.E.7.6:	Differentiate between weather and climate.
SC.6.E.7.7:	Investigate how natural disasters have affected human life in Florida.
SC.6.E.7.8:	Describe ways human beings protect themselves from hazardous weather and sun exposure.
SC.6.E.7.9:	Describe how the composition and structure of the atmosphere protects life and insulates the planet.
SC.6.N.1.2:	Explain why scientific investigations should be replicable.
SC.6.N.1.3:	Explain the difference between an experiment and other types of scientific investigation, and explain the relative benefits and limitations of each.
SC.6.N.1.4:	Discuss, compare, and negotiate methods used, results obtained, and explanations among groups of students conducting the same investigation.
SC.6.N.1.5:	Recognize that science involves creativity, not just in designing experiments, but also in creating explanations that fit evidence.
SC.6.N.2.1:	Distinguish science from other activities involving thought.
SC.6.N.2.2:	Explain that scientific knowledge is durable because it is open to change as new evidence or interpretations are encountered.
SC.6.N.2.3:	Recognize that scientists who make contributions to scientific knowledge come from all kinds of backgrounds and possess varied talents, interests, and goals.
SC.6.N.3.1:	Recognize and explain that a scientific theory is a well-supported and widely accepted explanation of nature and is not simply a claim posed by an individual. Thus, the use of the term theory in science is very different than how it is used in everyday life.
SC.6.N.3.2:	Recognize and explain that a scientific law is a description of a specific relationship under given conditions in the natural world. Thus, scientific laws are different from societal laws.
SC.6.N.3.3:	Give several examples of scientific laws.
SC.6.N.3.4:	Identify the role of models in the context of the sixth grade science benchmarks.
SC.7.E.6.6:	Identify the impact that humans have had on Earth, such as deforestation, urbanization, desertification, erosion, air and water quality, changing the flow of water.
SC.7.L.15.3:	Explore the scientific theory of evolution by relating how the inability of a species to adapt within a changing environment may contribute to the extinction of that species.
SC.7.L.17.1:	Explain and illustrate the roles of and relationships among producers, consumers, and decomposers in the process of energy transfer in a food web.
SC.7.L.17.2:	Compare and contrast the relationships among organisms such as mutualism, predation, parasitism, competition, and commensalism.
SC.7.L.17.3:	Describe and investigate various limiting factors in the local ecosystem and their impact on native populations, including food, shelter, water, space, disease, parasitism, predation, and nesting sites.
SC.7.N.1.2:	Differentiate replication (by others) from repetition (multiple trials).
SC.7.N.1.3:	Distinguish between an experiment (which must involve the identification and control of variables) and other forms of scientific investigation and explain that not all scientific knowledge is derived from experimentation.
SC.7.N.1.4:	Identify test variables (independent variables) and outcome variables (dependent variables) in an experiment.
SC.7.N.1.5:	Describe the methods used in the pursuit of a scientific explanation as seen in different fields of science such as biology, geology, and physics.
SC.7.N.1.6:	Explain that empirical evidence is the cumulative body of observations of a natural phenomenon on which scientific explanations are based.
SC.7.N.1.7:	Explain that scientific knowledge is the result of a great deal of debate and confirmation within the science community.
SC.7.N.2.1:	Identify an instance from the history of science in which scientific knowledge has changed when new evidence or new interpretations are encountered.
SC.7.N.3.1:	Recognize and explain the difference between theories and laws and give several examples of scientific theories and the evidence that supports them.
SC.7.N.3.2:	Identify the benefits and limitations of the use of scientific models.
SC.8.N.1.2:	Design and conduct a study using repeated trials and replication.
SC.8.N.1.3:	Use phrases such as "results support" or "fail to support" in science, understanding that science does not offer conclusive 'proof' of a knowledge claim.
SC.8.N.1.4:	Explain how hypotheses are valuable if they lead to further investigations, even if they turn out not to be supported by the data.
SC.8.N.1.5:	Analyze the methods used to develop a scientific explanation as seen in different fields of science.
SC.8.N.1.6:	Understand that scientific investigations involve the collection of relevant empirical evidence, the use of logical reasoning, and the application of imagination in devising hypotheses, predictions, explanations and models to make sense of the collected evidence.
SC.8.N.2.1:	Distinguish between scientific and pseudoscientific ideas.
SC.8.N.2.2:	Discuss what characterizes science and its methods.
SC.8.N.3.1:	Select models useful in relating the results of their own investigations.
SC.8.N.3.2:	Explain why theories may be modified but are rarely discarded.
SC.8.N.4.1:	Explain that science is one of the processes that can be used to inform decision making at the community, state, national, and international levels.
SC.8.N.4.2:	Explain how political, social, and economic concerns can affect science, and vice versa.
	Mathematicians who participate in effortful learning both individually and with others: • Analyze the problem in a way that makes sense given the task. • Ask questions that will help with solving the task. • Build perseverance by modifying methods as needed while solving a challenging task. • Stay engaged and maintain a positive mindset when working to solve tasks.

MA.K12.MTR.1.1:	• Help and support each other when attempting a new method or approach. **Clarifications:** Teachers who encourage students to participate actively in effortful learning both individually and with others: • Cultivate a community of growth mindset learners. • Foster perseverance in students by choosing tasks that are challenging. • Develop students' ability to analyze and problem solve. • Recognize students' effort when solving challenging problems.
MA.K12.MTR.2.1:	Demonstrate understanding by representing problems in multiple ways. Mathematicians who demonstrate understanding by representing problems in multiple ways: • Build understanding through modeling and using manipulatives. • Represent solutions to problems in multiple ways using objects, drawings, tables, graphs and equations. • Progress from modeling problems with objects and drawings to using algorithms and equations. • Express connections between concepts and representations. • Choose a representation based on the given context or purpose. **Clarifications:** Teachers who encourage students to demonstrate understanding by representing problems in multiple ways: • Help students make connections between concepts and representations. • Provide opportunities for students to use manipulatives when investigating concepts. • Guide students from concrete to pictorial to abstract representations as understanding progresses. • Show students that various representations can have different purposes and can be useful in different situations.
MA.K12.MTR.3.1:	Complete tasks with mathematical fluency. Mathematicians who complete tasks with mathematical fluency: • Select efficient and appropriate methods for solving problems within the given context. • Maintain flexibility and accuracy while performing procedures and mental calculations. • Complete tasks accurately and with confidence. • Adapt procedures to apply them to a new context. • Use feedback to improve efficiency when performing calculations. **Clarifications:** Teachers who encourage students to complete tasks with mathematical fluency: • Provide students with the flexibility to solve problems by selecting a procedure that allows them to solve efficiently and accurately. • Offer multiple opportunities for students to practice efficient and generalizable methods. • Provide opportunities for students to reflect on the method they used and determine if a more efficient method could have been used.
MA.K12.MTR.4.1:	Engage in discussions that reflect on the mathematical thinking of self and others. Mathematicians who engage in discussions that reflect on the mathematical thinking of self and others: • Communicate mathematical ideas, vocabulary and methods effectively. • Analyze the mathematical thinking of others. • Compare the efficiency of a method to those expressed by others. • Recognize errors and suggest how to correctly solve the task. • Justify results by explaining methods and processes. • Construct possible arguments based on evidence. **Clarifications:** Teachers who encourage students to engage in discussions that reflect on the mathematical thinking of self and others: • Establish a culture in which students ask questions of the teacher and their peers, and error is an opportunity for learning. • Create opportunities for students to discuss their thinking with peers. • Select, sequence and present student work to advance and deepen understanding of correct and increasingly efficient methods. • Develop students' ability to justify methods and compare their responses to the responses of their peers.
MA.K12.MTR.5.1:	Use patterns and structure to help understand and connect mathematical concepts. Mathematicians who use patterns and structure to help understand and connect mathematical concepts: • Focus on relevant details within a problem. • Create plans and procedures to logically order events, steps or ideas to solve problems. • Decompose a complex problem into manageable parts. • Relate previously learned concepts to new concepts. • Look for similarities among problems. • Connect solutions of problems to more complicated large-scale situations. **Clarifications:** Teachers who encourage students to use patterns and structure to help understand and connect mathematical concepts: • Help students recognize the patterns in the world around them and connect these patterns to mathematical concepts. • Support students to develop generalizations based on the similarities found among problems. • Provide opportunities for students to create plans and procedures to solve problems. • Develop students' ability to construct relationships between their current understanding and more sophisticated ways of thinking.
	Assess the reasonableness of solutions. Mathematicians who assess the reasonableness of solutions: • Estimate to discover possible solutions. • Use benchmark quantities to determine if a solution makes sense. • Check calculations when solving problems.

MA.K12.MTR.6.1:	• Verify possible solutions by explaining the methods used. • Evaluate results based on the given context. **Clarifications:** Teachers who encourage students to assess the reasonableness of solutions: • Have students estimate or predict solutions prior to solving. • Prompt students to continually ask, "Does this solution make sense? How do you know?" • Reinforce that students check their work as they progress within and after a task. • Strengthen students' ability to verify solutions through justifications.
MA.K12.MTR.7.1:	Apply mathematics to real-world contexts. Mathematicians who apply mathematics to real-world contexts: • Connect mathematical concepts to everyday experiences. • Use models and methods to understand, represent and solve problems. • Perform investigations to gather data or determine if a method is appropriate. • Redesign models and methods to improve accuracy or efficiency. **Clarifications:** Teachers who encourage students to apply mathematics to real-world contexts: • Provide opportunities for students to create models, both concrete and abstract, and perform investigations. • Challenge students to question the accuracy of their models and methods. • Support students as they validate conclusions by comparing them to the given situation. • Indicate how various concepts can be applied to other disciplines.
ELA.K12.EE.1.1:	Cite evidence to explain and justify reasoning. **Clarifications:** K-1 Students include textual evidence in their oral communication with guidance and support from adults. The evidence can consist of details from the text without naming the text. During 1st grade, students learn how to incorporate the evidence in their writing. 2-3 Students include relevant textual evidence in their written and oral communication. Students should name the text when they refer to it. In 3rd grade, students should use a combination of direct and indirect citations. 4-5 Students continue with previous skills and reference comments made by speakers and peers. Students cite texts that they've directly quoted, paraphrased, or used for information. When writing, students will use the form of citation dictated by the instructor or the style guide referenced by the instructor. 6-8 Students continue with previous skills and use a style guide to create a proper citation. 9-12 Students continue with previous skills and should be aware of existing style guides and the ways in which they differ.
ELA.K12.EE.2.1:	Read and comprehend grade-level complex texts proficiently. **Clarifications:** See Text Complexity for grade-level complexity bands and a text complexity rubric.
ELA.K12.EE.3.1:	Make inferences to support comprehension. **Clarifications:** Students will make inferences before the words infer or inference are introduced. Kindergarten students will answer questions like "Why is the girl smiling?" or make predictions about what will happen based on the title page. Students will use the terms and apply them in 2nd grade and beyond.
ELA.K12.EE.4.1:	Use appropriate collaborative techniques and active listening skills when engaging in discussions in a variety of situations. **Clarifications:** In kindergarten, students learn to listen to one another respectfully. In grades 1-2, students build upon these skills by justifying what they are thinking. For example: "I think _____ because _____." The collaborative conversations are becoming academic conversations. In grades 3-12, students engage in academic conversations discussing claims and justifying their reasoning, refining and applying skills. Students build on ideas, propel the conversation, and support claims and counterclaims with evidence.
ELA.K12.EE.5.1:	Use the accepted rules governing a specific format to create quality work. **Clarifications:** Students will incorporate skills learned into work products to produce quality work. For students to incorporate these skills appropriately, they must receive instruction. A 3rd grade student creating a poster board display must have instruction in how to effectively present information to do quality work.
ELA.K12.EE.6.1:	Use appropriate voice and tone when speaking or writing. **Clarifications:** In kindergarten and 1st grade, students learn the difference between formal and informal language. For example, the way we talk to our friends differs from the way we speak to adults. In 2nd grade and beyond, students practice appropriate social and academic language to discuss texts.
ELD.K12.ELL.SC.1:	English language learners communicate information, ideas and concepts necessary for academic success in the content area of Science.
HE.7.C.1.3:	Analyze how environmental factors affect personal health. **Clarifications:** Food refrigeration, appropriate home heating and cooling, air/water quality, and garbage/trash collection.

General Course Information and Notes

GENERAL NOTES

This course is an integrated Science, Technology, Engineering and Mathematics (STEM) course for middle school students. M/J STEM Environmental Science includes an integration of standards from science, mathematics, and english language arts (ELA) through the application to STEM problem solving using environmental sciences knowledge and science and engineering practices. Environmental sciences through applications such as ecosystem management, human-environmental impact, ecology and agriculture, land and resource management, and civil and environmental engineering, are emphasized in this course. Laboratory investigations that include the use of scientific inquiry, research, measurement, problem solving, laboratory apparatus and technologies, experimental procedures, and safety procedures are an integral part of this course. The National Science Teachers Association (NSTA) recommends that at the middle school level, all students should have multiple opportunities every week to explore science laboratory investigations (labs). School laboratory investigations are defined by the National Research Council (NRC) as an experience in the laboratory, classroom, or the field that provides students with opportunities to interact directly with natural phenomena or with data collected by others using tools, materials, data collection techniques, and models (NRC, 2006, p. 3). Laboratory investigations in the middle school classroom should help all students develop a growing understanding of the complexity and ambiguity of empirical work, as well as the skills to calibrate and troubleshoot equipment used to make observations. Learners should understand measurement error; and have the skills to aggregate, interpret, and present the resulting data (NRC 2006, p. 77; NSTA, 2007).

Special Notes:

Instructional Practices

Teaching from a range of complex text is optimized when teachers in all subject areas implement the following strategies on a routine basis:

1. Ensuring wide reading from complex text that varies in length.
2. Making close reading and rereading of texts central to lessons.
3. Emphasizing text-specific complex questions, and cognitively complex tasks, reinforce focus on the text and cultivate independence.
4. Emphasizing students supporting answers based upon evidence from the text.
5. Providing extensive research and writing opportunities (claims and evidence).

Science and Engineering Practices (NRC *Framework for K-12 Science Education, 2010*)

- Asking questions (for science) and defining problems (for engineering).
- Developing and using models.
- Planning and carrying out investigations.
- Analyzing and interpreting data.
- Using mathematics, information and computer technology, and computational thinking.
- Constructing explanations (for science) and designing solutions (for engineering).
- Engaging in argument from evidence.
- Obtaining, evaluating, and communicating information.

ISTE Standards (iste.org/docs/pdfs/20-14_ISTE_Standards-S_PDF.pdf) should be incorporated in many contexts throughout the course.

Course Standards

Use grade appropriate Nature of Science and Mathematics Content benchmarks (i.e. if this course is offered to seventh grade students, then the SC.7.N benchmarks should be integrated into the course content, and SC.6.N and SC.8.N benchmarks should be omitted from the seventh grade course).

Florida's Benchmarks for Excellent Student Thinking (B.E.S.T.) Standards

This course includes Florida's B.E.S.T. ELA Expectations (EE) and Mathematical Thinking and Reasoning Standards (MTRs) for students. Florida educators should intentionally embed these standards within the content and their instruction as applicable. For guidance on the implementation of the EEs and MTRs, please visit cpalms.org/Standards/BEST_Standards.aspx and select the appropriate B.E.S.T. Standards package.

English Language Development ELD Standards Special Notes Section:

Teachers are required to provide listening, speaking, reading and writing instruction that allows English language learners (ELL) to communicate information, ideas and concepts for academic success in the content area of Science. For the given level of English language proficiency and with visual, graphic, or interactive support, students will interact with grade level words, expressions, sentences and discourse to process or produce language necessary for academic success The ELD standard should specify a relevant content area concept or topic of study chosen by curriculum developers and teachers which maximizes an ELL's need for communication and social skills. To access an ELL supporting document which delineates performance definitions and descriptors, please click on the following link: cpalms.org/uploads/docs/standards/eld/SC.pdf.

GENERAL INFORMATION

Course Number: 2002200

Course Path: Section: Grades PreK to 12 Education Courses > **Grade Group:** Grades 6 to 8 Education Courses > **Subject:** Science > **SubSubject:** General Sciences >

Abbreviated Title: M/J STEM ENV SCI

Course Length: Year (Y)

Course Attributes:

- Class Size Core Required

Course Type: Core Academic Course

Course Status: Draft - Course Pending Approval

Grade Level(s): 6,7,8

Educator Certifications

Middle Grades General Science (Middle Grades 5-9)
Earth/Space Science (Grades 6-12)
Chemistry (Grades 6-12)
Middle Grades Integrated Curriculum (Middle Grades 5-9)
Biology (Grades 6-12)

Experimental Science 1 Honors (#2002340) 2022 - And Beyond

Course Standards

Name	Description
SC.912.N.1.1:	Define a problem based on a specific body of knowledge, for example: biology, chemistry, physics, and earth/space science, and do the following: 1. **Pose questions about the natural world,** (Articulate the purpose of the investigation and identify the relevant scientific concepts). 2. **Conduct systematic observations,** (Write procedures that are clear and replicable. Identify observables and examine relationships between test (independent) variable and outcome (dependent) variable. Employ appropriate methods for accurate and consistent observations; conduct and record measurements at appropriate levels of precision. Follow safety guidelines). 3. **Examine books and other sources of information to see what is already known,** 4. **Review what is known in light of empirical evidence,** (Examine whether available empirical evidence can be interpreted in terms of existing knowledge and models, and if not, modify or develop new models). 5. **Plan investigations,** (Design and evaluate a scientific investigation). 6. **Use tools to gather, analyze, and interpret data (this includes the use of measurement in metric and other systems, and also the generation and interpretation of graphical representations of data, including data tables and graphs),** (Collect data or evidence in an organized way. Properly use instruments, equipment, and materials (e.g., scales, probeware, meter sticks, microscopes, computers) including set-up, calibration, technique, maintenance, and storage). 7. **Pose answers, explanations, or descriptions of events,** 8. **Generate explanations that explicate or describe natural phenomena (inferences),** 9. **Use appropriate evidence and reasoning to justify these explanations to others,** 10. **Communicate results of scientific investigations, and** 11. **Evaluate the merits of the explanations produced by others.**
SC.912.N.1.2:	Describe and explain what characterizes science and its methods.
SC.912.N.1.3:	Recognize that the strength or usefulness of a scientific claim is evaluated through scientific argumentation, which depends on critical and logical thinking, and the active consideration of alternative scientific explanations to explain the data presented.
SC.912.N.1.6:	Describe how scientific inferences are drawn from scientific observations and provide examples from the content being studied.
SC.912.N.2.4:	Explain that scientific knowledge is both durable and robust and open to change. Scientific knowledge can change because it is often examined and re-examined by new investigations and scientific argumentation. Because of these frequent examinations, scientific knowledge becomes stronger, leading to its durability.
SC.912.N.2.5:	Describe instances in which scientists' varied backgrounds, talents, interests, and goals influence the inferences and thus the explanations that they make about observations of natural phenomena and describe that competing interpretations (explanations) of scientists are a strength of science as they are a source of new, testable ideas that have the potential to add new evidence to support one or another of the explanations.
SC.912.N.3.1:	Explain that a scientific theory is the culmination of many scientific investigations drawing together all the current evidence concerning a substantial range of phenomena; thus, a scientific theory represents the most powerful explanation scientists have to offer.
SC.912.N.3.2:	Describe the role consensus plays in the historical development of a theory in any one of the disciplines of science.
SC.912.N.3.5:	Describe the function of models in science, and identify the wide range of models used in science.
SC.912.N.4.1:	Explain how scientific knowledge and reasoning provide an empirically-based perspective to inform society's decision making.
MA.K12.MTR.1.1:	Mathematicians who participate in effortful learning both individually and with others: • Analyze the problem in a way that makes sense given the task. • Ask questions that will help with solving the task. • Build perseverance by modifying methods as needed while solving a challenging task. • Stay engaged and maintain a positive mindset when working to solve tasks. • Help and support each other when attempting a new method or approach. **Clarifications:** Teachers who encourage students to participate actively in effortful learning both individually and with others: • Cultivate a community of growth mindset learners. • Foster perseverance in students by choosing tasks that are challenging. • Develop students' ability to analyze and problem solve. • Recognize students' effort when solving challenging problems.
MA.K12.MTR.2.1:	Demonstrate understanding by representing problems in multiple ways. Mathematicians who demonstrate understanding by representing problems in multiple ways: • Build understanding through modeling and using manipulatives. • Represent solutions to problems in multiple ways using objects, drawings, tables, graphs and equations. • Progress from modeling problems with objects and drawings to using algorithms and equations. • Express connections between concepts and representations. • Choose a representation based on the given context or purpose. **Clarifications:** Teachers who encourage students to demonstrate understanding by representing problems in multiple ways: • Help students make connections between concepts and representations. • Provide opportunities for students to use manipulatives when investigating concepts. • Guide students from concrete to pictorial to abstract representations as understanding progresses. • Show students that various representations can have different purposes and can be useful in different situations.
	Complete tasks with mathematical fluency.

Mathematicians who complete tasks with mathematical fluency:

- Select efficient and appropriate methods for solving problems within the given context.
- Maintain flexibility and accuracy while performing procedures and mental calculations.
- Complete tasks accurately and with confidence.
- Adapt procedures to apply them to a new context.
- Use feedback to improve efficiency when performing calculations.

MA.K12.MTR.3.1:

Clarifications:
Teachers who encourage students to complete tasks with mathematical fluency:

- Provide students with the flexibility to solve problems by selecting a procedure that allows them to solve efficiently and accurately.
- Offer multiple opportunities for students to practice efficient and generalizable methods.
- Provide opportunities for students to reflect on the method they used and determine if a more efficient method could have been used.

Engage in discussions that reflect on the mathematical thinking of self and others.
Mathematicians who engage in discussions that reflect on the mathematical thinking of self and others:

- Communicate mathematical ideas, vocabulary and methods effectively.
- Analyze the mathematical thinking of others.
- Compare the efficiency of a method to those expressed by others.
- Recognize errors and suggest how to correctly solve the task.
- Justify results by explaining methods and processes.
- Construct possible arguments based on evidence.

MA.K12.MTR.4.1:

Clarifications:
Teachers who encourage students to engage in discussions that reflect on the mathematical thinking of self and others:

- Establish a culture in which students ask questions of the teacher and their peers, and error is an opportunity for learning.
- Create opportunities for students to discuss their thinking with peers.
- Select, sequence and present student work to advance and deepen understanding of correct and increasingly efficient methods.
- Develop students' ability to justify methods and compare their responses to the responses of their peers.

Use patterns and structure to help understand and connect mathematical concepts.
Mathematicians who use patterns and structure to help understand and connect mathematical concepts:

- Focus on relevant details within a problem.
- Create plans and procedures to logically order events, steps or ideas to solve problems.
- Decompose a complex problem into manageable parts.
- Relate previously learned concepts to new concepts.
- Look for similarities among problems.
- Connect solutions of problems to more complicated large-scale situations.

MA.K12.MTR.5.1:

Clarifications:
Teachers who encourage students to use patterns and structure to help understand and connect mathematical concepts:

- Help students recognize the patterns in the world around them and connect these patterns to mathematical concepts.
- Support students to develop generalizations based on the similarities found among problems.
- Provide opportunities for students to create plans and procedures to solve problems.
- Develop students' ability to construct relationships between their current understanding and more sophisticated ways of thinking.

Assess the reasonableness of solutions.
Mathematicians who assess the reasonableness of solutions:

- Estimate to discover possible solutions.
- Use benchmark quantities to determine if a solution makes sense.
- Check calculations when solving problems.
- Verify possible solutions by explaining the methods used.
- Evaluate results based on the given context.

MA.K12.MTR.6.1:

Clarifications:
Teachers who encourage students to assess the reasonableness of solutions:

- Have students estimate or predict solutions prior to solving.
- Prompt students to continually ask, "Does this solution make sense? How do you know?"
- Reinforce that students check their work as they progress within and after a task.
- Strengthen students' ability to verify solutions through justifications.

Apply mathematics to real-world contexts.
Mathematicians who apply mathematics to real-world contexts:

- Connect mathematical concepts to everyday experiences.
- Use models and methods to understand, represent and solve problems.
- Perform investigations to gather data or determine if a method is appropriate. • Redesign models and methods to improve accuracy or efficiency.

MA.K12.MTR.7.1:

Clarifications:
Teachers who encourage students to apply mathematics to real-world contexts:

- Provide opportunities for students to create models, both concrete and abstract, and perform investigations.
- Challenge students to question the accuracy of their models and methods.
- Support students as they validate conclusions by comparing them to the given situation.
- Indicate how various concepts can be applied to other disciplines.

Cite evidence to explain and justify reasoning.

Clarifications:

ELA.K12.EE.1.1:	K-1 Students include textual evidence in their oral communication with guidance and support from adults. The evidence can consist of details from the text without naming the text. During 1st grade, students learn how to incorporate the evidence in their writing. 2-3 Students include relevant textual evidence in their written and oral communication. Students should name the text when they refer to it. In 3rd grade, students should use a combination of direct and indirect citations. 4-5 Students continue with previous skills and reference comments made by speakers and peers. Students cite texts that they've directly quoted, paraphrased, or used for information. When writing, students will use the form of citation dictated by the instructor or the style guide referenced by the instructor. 6-8 Students continue with previous skills and use a style guide to create a proper citation. 9-12 Students continue with previous skills and should be aware of existing style guides and the ways in which they differ.
ELA.K12.EE.2.1:	Read and comprehend grade-level complex texts proficiently. **Clarifications:** See Text Complexity for grade-level complexity bands and a text complexity rubric.
ELA.K12.EE.3.1:	Make inferences to support comprehension. **Clarifications:** Students will make inferences before the words infer or inference are introduced. Kindergarten students will answer questions like "Why is the girl smiling?" or make predictions about what will happen based on the title page. Students will use the terms and apply them in 2nd grade and beyond.
ELA.K12.EE.4.1:	Use appropriate collaborative techniques and active listening skills when engaging in discussions in a variety of situations. **Clarifications:** In kindergarten, students learn to listen to one another respectfully. In grades 1-2, students build upon these skills by justifying what they are thinking. For example: "I think _____ because _____." The collaborative conversations are becoming academic conversations. In grades 3-12, students engage in academic conversations discussing claims and justifying their reasoning, refining and applying skills. Students build on ideas, propel the conversation, and support claims and counterclaims with evidence.
ELA.K12.EE.5.1:	Use the accepted rules governing a specific format to create quality work. **Clarifications:** Students will incorporate skills learned into work products to produce quality work. For students to incorporate these skills appropriately, they must receive instruction. A 3rd grade student creating a poster board display must have instruction in how to effectively present information to do quality work.
ELA.K12.EE.6.1:	Use appropriate voice and tone when speaking or writing. **Clarifications:** In kindergarten and 1st grade, students learn the difference between formal and informal language. For example, the way we talk to our friends differs from the way we speak to adults. In 2nd grade and beyond, students practice appropriate social and academic language to discuss texts.
ELD.K12.ELL.SC.1:	English language learners communicate information, ideas and concepts necessary for academic success in the content area of Science.
ELD.K12.ELL.SI.1:	English language learners communicate for social and instructional purposes within the school setting.

General Course Information and Notes

GENERAL NOTES

In addition to the course related benchmarks, this course requires additional science content that must include benchmarks from at least one other Body of Knowledge. The additional benchmarks must include rigor appropriate for Level 3 courses. Laboratory investigations that include the use of scientific inquiry, research, measurement, problem solving, laboratory apparatus and technologies, experimental procedures, and safety procedures are an integral part of this course. The National Science Teachers Association (NSTA) recommends that at the high school level, all students should be in the science lab or field, collecting data every week. School laboratory investigations (labs) are defined by the National Research Council (NRC) as an experience in the laboratory, classroom, or the field that provides students with opportunities to interact directly with natural phenomena or with data collected by others using tools, materials, data collection techniques, and models (NRC, 2006, p. 3). Laboratory investigations in the high school classroom should help all students develop a growing understanding of the complexity and ambiguity of empirical work, as well as the skills to calibrate and troubleshoot equipment used to make observations. Learners should understand measurement error; and have the skills to aggregate, interpret, and present the resulting data (National Research Council, 2006, p.77; NSTA, 2007).

Special Notes:

Special Notes:
Instructional Practices
Teaching from a range of complex text is optimized when teachers in all subject areas implement the following strategies on a routine basis:

1. Ensuring wide reading from complex text that varies in length.
2. Making close reading and rereading of texts central to lessons.
3. Emphasizing text-specific complex questions, and cognitively complex tasks, reinforce focus on the text and cultivate independence.
4. Emphasizing students supporting answers based upon evidence from the text.
5. Providing extensive research and writing opportunities (claims and evidence).

Science and Engineering Practices (NRC *Framework for K-12 Science Education, 2010*)

- Asking questions (for science) and defining problems (for engineering).
- Developing and using models.
- Planning and carrying out investigations.

- Analyzing and interpreting data.
- Using mathematics, information and computer technology, and computational thinking.
- Constructing explanations (for science) and designing solutions (for engineering).
- Engaging in argument from evidence.
- Obtaining, evaluating, and communicating information.

Honors and Advanced Level Course Note: Advanced courses require a greater demand on students through increased academic rigor. Academic rigor is obtained through the application, analysis, evaluation, and creation of complex ideas that are often abstract and multi-faceted. Students are challenged to think and collaborate critically on the content they are learning. Honors level rigor will be achieved by increasing text complexity through text selection, focus on high-level qualitative measures, and complexity of task. Instruction will be structured to give students a deeper understanding of conceptual themes and organization within and across disciplines. Academic rigor is more than simply assigning to students a greater quantity of work.

Florida's Benchmarks for Excellent Student Thinking (B.E.S.T.) Standards
This course includes Florida's B.E.S.T. ELA Expectations (EE) and Mathematical Thinking and Reasoning Standards (MTRs) for students. Florida educators should intentionally embed these standards within the content and their instruction as applicable. For guidance on the implementation of the EEs and MTRs, please visit cpalms.org/Standards/BEST_Standards.aspx and select the appropriate B.E.S.T. Standards package.

English Language Development ELD Standards Special Notes Section:
Teachers are required to provide listening, speaking, reading and writing instruction that allows English language learners (ELL) to communicate information, ideas and concepts for academic success in the content area of Science. For the given level of English language proficiency and with visual, graphic, or interactive support, students will interact with grade level words, expressions, sentences and discourse to process or produce language necessary for academic success The ELD standard should specify a relevant content area concept or topic of study chosen by curriculum developers and teachers which maximizes an ELL's need for communication and social skills. To access an ELL supporting document which delineates performance definitions and descriptors, please click on the following link: cpalms.org/uploads/docs/standards/eld/SC.pdf

GENERAL INFORMATION

Course Number: 2002340

Course Path: Section: Grades PreK to 12 Education Courses > **Grade Group:** Grades 9 to 12 and Adult Education Courses > **Subject:** Science > **SubSubject:** General Sciences >

Abbreviated Title: EXP SCI 1 HON

Number of Credits: One (1) credit

Course Length: Year (Y)

Course Attributes:
- Honors

Course Type: Elective Course

Course Level: 3

Course Status: Draft - Course Pending Approval

Grade Level(s): 9,10,11,12

Educator Certifications

Biology (Grades 6-12)
Earth/Space Science (Grades 6-12)
Chemistry (Grades 6-12)
Physics (Grades 6-12)

Experimental Science 2 Honors (#2002350) 2022 - And Beyond

Course Standards

Name	Description
SC.912.N.1.1:	Define a problem based on a specific body of knowledge, for example: biology, chemistry, physics, and earth/space science, and do the following: 1. **Pose questions about the natural world,** (Articulate the purpose of the investigation and identify the relevant scientific concepts). 2. **Conduct systematic observations,** (Write procedures that are clear and replicable. Identify observables and examine relationships between test (independent) variable and outcome (dependent) variable. Employ appropriate methods for accurate and consistent observations; conduct and record measurements at appropriate levels of precision. Follow safety guidelines). 3. **Examine books and other sources of information to see what is already known,** 4. **Review what is known in light of empirical evidence,** (Examine whether available empirical evidence can be interpreted in terms of existing knowledge and models, and if not, modify or develop new models). 5. **Plan investigations,** (Design and evaluate a scientific investigation). 6. **Use tools to gather, analyze, and interpret data (this includes the use of measurement in metric and other systems, and also the generation and interpretation of graphical representations of data, including data tables and graphs),** (Collect data or evidence in an organized way. Properly use instruments, equipment, and materials (e.g., scales, probeware, meter sticks, microscopes, computers) including set-up, calibration, technique, maintenance, and storage). 7. **Pose answers, explanations, or descriptions of events,** 8. **Generate explanations that explicate or describe natural phenomena (inferences),** 9. **Use appropriate evidence and reasoning to justify these explanations to others,** 10. **Communicate results of scientific investigations, and** 11. **Evaluate the merits of the explanations produced by others.**
SC.912.N.1.2:	Describe and explain what characterizes science and its methods.
SC.912.N.1.3:	Recognize that the strength or usefulness of a scientific claim is evaluated through scientific argumentation, which depends on critical and logical thinking, and the active consideration of alternative scientific explanations to explain the data presented.
SC.912.N.1.6:	Describe how scientific inferences are drawn from scientific observations and provide examples from the content being studied.
SC.912.N.2.4:	Explain that scientific knowledge is both durable and robust and open to change. Scientific knowledge can change because it is often examined and re-examined by new investigations and scientific argumentation. Because of these frequent examinations, scientific knowledge becomes stronger, leading to its durability.
SC.912.N.2.5:	Describe instances in which scientists' varied backgrounds, talents, interests, and goals influence the inferences and thus the explanations that they make about observations of natural phenomena and describe that competing interpretations (explanations) of scientists are a strength of science as they are a source of new, testable ideas that have the potential to add new evidence to support one or another of the explanations.
SC.912.N.3.1:	Explain that a scientific theory is the culmination of many scientific investigations drawing together all the current evidence concerning a substantial range of phenomena; thus, a scientific theory represents the most powerful explanation scientists have to offer.
SC.912.N.3.2:	Describe the role consensus plays in the historical development of a theory in any one of the disciplines of science.
SC.912.N.3.5:	Describe the function of models in science, and identify the wide range of models used in science.
SC.912.N.4.1:	Explain how scientific knowledge and reasoning provide an empirically-based perspective to inform society's decision making.
MA.K12.MTR.1.1:	Mathematicians who participate in effortful learning both individually and with others: • Analyze the problem in a way that makes sense given the task. • Ask questions that will help with solving the task. • Build perseverance by modifying methods as needed while solving a challenging task. • Stay engaged and maintain a positive mindset when working to solve tasks. • Help and support each other when attempting a new method or approach. **Clarifications:** Teachers who encourage students to participate actively in effortful learning both individually and with others: • Cultivate a community of growth mindset learners. • Foster perseverance in students by choosing tasks that are challenging. • Develop students' ability to analyze and problem solve. • Recognize students' effort when solving challenging problems.
MA.K12.MTR.2.1:	Demonstrate understanding by representing problems in multiple ways. Mathematicians who demonstrate understanding by representing problems in multiple ways: • Build understanding through modeling and using manipulatives. • Represent solutions to problems in multiple ways using objects, drawings, tables, graphs and equations. • Progress from modeling problems with objects and drawings to using algorithms and equations. • Express connections between concepts and representations. • Choose a representation based on the given context or purpose. **Clarifications:** Teachers who encourage students to demonstrate understanding by representing problems in multiple ways: • Help students make connections between concepts and representations. • Provide opportunities for students to use manipulatives when investigating concepts. • Guide students from concrete to pictorial to abstract representations as understanding progresses. • Show students that various representations can have different purposes and can be useful in different situations.
	Complete tasks with mathematical fluency.

MA.K12.MTR.3.1:	Mathematicians who complete tasks with mathematical fluency: • Select efficient and appropriate methods for solving problems within the given context. • Maintain flexibility and accuracy while performing procedures and mental calculations. • Complete tasks accurately and with confidence. • Adapt procedures to apply them to a new context. • Use feedback to improve efficiency when performing calculations. **Clarifications:** Teachers who encourage students to complete tasks with mathematical fluency: • Provide students with the flexibility to solve problems by selecting a procedure that allows them to solve efficiently and accurately. • Offer multiple opportunities for students to practice efficient and generalizable methods. • Provide opportunities for students to reflect on the method they used and determine if a more efficient method could have been used.
MA.K12.MTR.4.1:	Engage in discussions that reflect on the mathematical thinking of self and others. Mathematicians who engage in discussions that reflect on the mathematical thinking of self and others: • Communicate mathematical ideas, vocabulary and methods effectively. • Analyze the mathematical thinking of others. • Compare the efficiency of a method to those expressed by others. • Recognize errors and suggest how to correctly solve the task. • Justify results by explaining methods and processes. • Construct possible arguments based on evidence. **Clarifications:** Teachers who encourage students to engage in discussions that reflect on the mathematical thinking of self and others: • Establish a culture in which students ask questions of the teacher and their peers, and error is an opportunity for learning. • Create opportunities for students to discuss their thinking with peers. • Select, sequence and present student work to advance and deepen understanding of correct and increasingly efficient methods. • Develop students' ability to justify methods and compare their responses to the responses of their peers.
MA.K12.MTR.5.1:	Use patterns and structure to help understand and connect mathematical concepts. Mathematicians who use patterns and structure to help understand and connect mathematical concepts: • Focus on relevant details within a problem. • Create plans and procedures to logically order events, steps or ideas to solve problems. • Decompose a complex problem into manageable parts. • Relate previously learned concepts to new concepts. • Look for similarities among problems. • Connect solutions of problems to more complicated large-scale situations. **Clarifications:** Teachers who encourage students to use patterns and structure to help understand and connect mathematical concepts: • Help students recognize the patterns in the world around them and connect these patterns to mathematical concepts. • Support students to develop generalizations based on the similarities found among problems. • Provide opportunities for students to create plans and procedures to solve problems. • Develop students' ability to construct relationships between their current understanding and more sophisticated ways of thinking.
MA.K12.MTR.6.1:	Assess the reasonableness of solutions. Mathematicians who assess the reasonableness of solutions: • Estimate to discover possible solutions. • Use benchmark quantities to determine if a solution makes sense. • Check calculations when solving problems. • Verify possible solutions by explaining the methods used. • Evaluate results based on the given context. **Clarifications:** Teachers who encourage students to assess the reasonableness of solutions: • Have students estimate or predict solutions prior to solving. • Prompt students to continually ask, "Does this solution make sense? How do you know?" • Reinforce that students check their work as they progress within and after a task. • Strengthen students' ability to verify solutions through justifications.
MA.K12.MTR.7.1:	Apply mathematics to real-world contexts. Mathematicians who apply mathematics to real-world contexts: • Connect mathematical concepts to everyday experiences. • Use models and methods to understand, represent and solve problems. • Perform investigations to gather data or determine if a method is appropriate. • Redesign models and methods to improve accuracy or efficiency. **Clarifications:** Teachers who encourage students to apply mathematics to real-world contexts: • Provide opportunities for students to create models, both concrete and abstract, and perform investigations. • Challenge students to question the accuracy of their models and methods. • Support students as they validate conclusions by comparing them to the given situation. • Indicate how various concepts can be applied to other disciplines.
	Cite evidence to explain and justify reasoning. **Clarifications:**

ELA.K12.EE.1.1:	K-1 Students include textual evidence in their oral communication with guidance and support from adults. The evidence can consist of details from the text without naming the text. During 1st grade, students learn how to incorporate the evidence in their writing. 2-3 Students include relevant textual evidence in their written and oral communication. Students should name the text when they refer to it. In 3rd grade, students should use a combination of direct and indirect citations. 4-5 Students continue with previous skills and reference comments made by speakers and peers. Students cite texts that they've directly quoted, paraphrased, or used for information. When writing, students will use the form of citation dictated by the instructor or the style guide referenced by the instructor. 6-8 Students continue with previous skills and use a style guide to create a proper citation. 9-12 Students continue with previous skills and should be aware of existing style guides and the ways in which they differ.
ELA.K12.EE.2.1:	Read and comprehend grade-level complex texts proficiently. **Clarifications:** See Text Complexity for grade-level complexity bands and a text complexity rubric.
ELA.K12.EE.3.1:	Make inferences to support comprehension. **Clarifications:** Students will make inferences before the words infer or inference are introduced. Kindergarten students will answer questions like "Why is the girl smiling?" or make predictions about what will happen based on the title page. Students will use the terms and apply them in 2nd grade and beyond.
ELA.K12.EE.4.1:	Use appropriate collaborative techniques and active listening skills when engaging in discussions in a variety of situations. **Clarifications:** In kindergarten, students learn to listen to one another respectfully. In grades 1-2, students build upon these skills by justifying what they are thinking. For example: "I think _____ because _____." The collaborative conversations are becoming academic conversations. In grades 3-12, students engage in academic conversations discussing claims and justifying their reasoning, refining and applying skills. Students build on ideas, propel the conversation, and support claims and counterclaims with evidence.
ELA.K12.EE.5.1:	Use the accepted rules governing a specific format to create quality work. **Clarifications:** Students will incorporate skills learned into work products to produce quality work. For students to incorporate these skills appropriately, they must receive instruction. A 3rd grade student creating a poster board display must have instruction in how to effectively present information to do quality work.
ELA.K12.EE.6.1:	Use appropriate voice and tone when speaking or writing. **Clarifications:** In kindergarten and 1st grade, students learn the difference between formal and informal language. For example, the way we talk to our friends differs from the way we speak to adults. In 2nd grade and beyond, students practice appropriate social and academic language to discuss texts.
ELD.K12.ELL.SC.1:	English language learners communicate information, ideas and concepts necessary for academic success in the content area of Science.
ELD.K12.ELL.SI.1:	English language learners communicate for social and instructional purposes within the school setting.

General Course Information and Notes

GENERAL NOTES

In addition to the course related benchmarks, this course requires additional science content that must include benchmarks from at least one other Body of Knowledge. The additional benchmarks must include rigor appropriate for Level 3 courses and should not duplicate additional content addressed in Experimental Science 1. Laboratory investigations that include the use of scientific inquiry, research, measurement, problem solving, laboratory apparatus and technologies, experimental procedures, and safety procedures are an integral part of this course. The National Science Teachers Association (NSTA) recommends that at the high school level, all students should be in the science lab or field, collecting data every week. School laboratory investigations (labs) are defined by the National Research Council (NRC) as an experience in the laboratory, classroom, or the field that provides students with opportunities to interact directly with natural phenomena or with data collected by others using tools, materials, data collection techniques, and models (NRC, 2006, p. 3). Laboratory investigations in the high school classroom should help all students develop a growing understanding of the complexity and ambiguity of empirical work, as well as the skills to calibrate and troubleshoot equipment used to make observations. Learners should understand measurement error; and have the skills to aggregate, interpret, and present the resulting data (National Research Council, 2006, p.77; NSTA, 2007).

Special Notes:
Instructional Practices
Teaching from a range of complex text is optimized when teachers in all subject areas implement the following strategies on a routine basis:

1. Ensuring wide reading from complex text that varies in length.
2. Making close reading and rereading of texts central to lessons.
3. Emphasizing text-specific complex questions, and cognitively complex tasks, reinforce focus on the text and cultivate independence.
4. Emphasizing students supporting answers based upon evidence from the text.
5. Providing extensive research and writing opportunities (claims and evidence).

Science and Engineering Practices (NRC *Framework for K-12 Science Education, 2010*)

- Asking questions (for science) and defining problems (for engineering).
- Developing and using models.
- Planning and carrying out investigations.
- Analyzing and interpreting data.
- Using mathematics, information and computer technology, and computational thinking.

- Constructing explanations (for science) and designing solutions (for engineering).
- Engaging in argument from evidence.
- Obtaining, evaluating, and communicating information.

Honors and Advanced Level Course Note: Advanced courses require a greater demand on students through increased academic rigor. Academic rigor is obtained through the application, analysis, evaluation, and creation of complex ideas that are often abstract and multi-faceted. Students are challenged to think and collaborate critically on the content they are learning. Honors level rigor will be achieved by increasing text complexity through text selection, focus on high-level qualitative measures, and complexity of task. Instruction will be structured to give students a deeper understanding of conceptual themes and organization within and across disciplines. Academic rigor is more than simply assigning to students a greater quantity of work.

Florida's Benchmarks for Excellent Student Thinking (B.E.S.T.) Standards
This course includes Florida's B.E.S.T. ELA Expectations (EE) and Mathematical Thinking and Reasoning Standards (MTRs) for students. Florida educators should intentionally embed these standards within the content and their instruction as applicable. For guidance on the implementation of the EEs and MTRs, please visit cpalms.org/Standards/BEST_Standards.aspx and select the appropriate B.E.S.T. Standards package.

English Language Development ELD Standards Special Notes Section:
Teachers are required to provide listening, speaking, reading and writing instruction that allows English language learners (ELL) to communicate information, ideas and concepts for academic success in the content area of Science. For the given level of English language proficiency and with visual, graphic, or interactive support, students will interact with grade level words, expressions, sentences and discourse to process or produce language necessary for academic success The ELD standard should specify a relevant content area concept or topic of study chosen by curriculum developers and teachers which maximizes an ELL's need for communication and social skills. To access an ELL supporting document which delineates performance definitions and descriptors, please click on the following link: cpalms.org/uploads/docs/standards/eld/SC.pdf

GENERAL INFORMATION

Course Number: 2002350

Course Path: Section: Grades PreK to 12 Education Courses > **Grade Group:** Grades 9 to 12 and Adult Education Courses > **Subject:** Science > **SubSubject:** General Sciences >

Abbreviated Title: EXP SCI 2 HON

Number of Credits: One (1) credit

Course Length: Year (Y)

Course Attributes:
- Honors

Course Type: Elective Course

Course Level: 3

Course Status: Draft - Course Pending Approval

Grade Level(s): 9,10,11,12

Educator Certifications

Biology (Grades 6-12)
Earth/Space Science (Grades 6-12)
Chemistry (Grades 6-12)
Physics (Grades 6-12)

Experimental Science 3 Honors (#2002360) 2022 - And Beyond

Course Standards

Name	Description
SC.912.N.1.1:	Define a problem based on a specific body of knowledge, for example: biology, chemistry, physics, and earth/space science, and do the following: 1. **Pose questions about the natural world,** (Articulate the purpose of the investigation and identify the relevant scientific concepts). 2. **Conduct systematic observations,** (Write procedures that are clear and replicable. Identify observables and examine relationships between test (independent) variable and outcome (dependent) variable. Employ appropriate methods for accurate and consistent observations; conduct and record measurements at appropriate levels of precision. Follow safety guidelines). 3. **Examine books and other sources of information to see what is already known,** 4. **Review what is known in light of empirical evidence,** (Examine whether available empirical evidence can be interpreted in terms of existing knowledge and models, and if not, modify or develop new models). 5. **Plan investigations,** (Design and evaluate a scientific investigation). 6. **Use tools to gather, analyze, and interpret data (this includes the use of measurement in metric and other systems, and also the generation and interpretation of graphical representations of data, including data tables and graphs),** (Collect data or evidence in an organized way. Properly use instruments, equipment, and materials (e.g., scales, probeware, meter sticks, microscopes, computers) including set-up, calibration, technique, maintenance, and storage). 7. **Pose answers, explanations, or descriptions of events,** 8. **Generate explanations that explicate or describe natural phenomena (inferences),** 9. **Use appropriate evidence and reasoning to justify these explanations to others,** 10. **Communicate results of scientific investigations, and** 11. **Evaluate the merits of the explanations produced by others.**
SC.912.N.1.2:	Describe and explain what characterizes science and its methods.
SC.912.N.1.3:	Recognize that the strength or usefulness of a scientific claim is evaluated through scientific argumentation, which depends on critical and logical thinking, and the active consideration of alternative scientific explanations to explain the data presented.
SC.912.N.1.6:	Describe how scientific inferences are drawn from scientific observations and provide examples from the content being studied.
SC.912.N.2.4:	Explain that scientific knowledge is both durable and robust and open to change. Scientific knowledge can change because it is often examined and re-examined by new investigations and scientific argumentation. Because of these frequent examinations, scientific knowledge becomes stronger, leading to its durability.
SC.912.N.2.5:	Describe instances in which scientists' varied backgrounds, talents, interests, and goals influence the inferences and thus the explanations that they make about observations of natural phenomena and describe that competing interpretations (explanations) of scientists are a strength of science as they are a source of new, testable ideas that have the potential to add new evidence to support one or another of the explanations.
SC.912.N.3.1:	Explain that a scientific theory is the culmination of many scientific investigations drawing together all the current evidence concerning a substantial range of phenomena; thus, a scientific theory represents the most powerful explanation scientists have to offer.
SC.912.N.3.2:	Describe the role consensus plays in the historical development of a theory in any one of the disciplines of science.
SC.912.N.3.5:	Describe the function of models in science, and identify the wide range of models used in science.
SC.912.N.4.1:	Explain how scientific knowledge and reasoning provide an empirically-based perspective to inform society's decision making.
MA.K12.MTR.1.1:	Mathematicians who participate in effortful learning both individually and with others: • Analyze the problem in a way that makes sense given the task. • Ask questions that will help with solving the task. • Build perseverance by modifying methods as needed while solving a challenging task. • Stay engaged and maintain a positive mindset when working to solve tasks. • Help and support each other when attempting a new method or approach. **Clarifications:** Teachers who encourage students to participate actively in effortful learning both individually and with others: • Cultivate a community of growth mindset learners. • Foster perseverance in students by choosing tasks that are challenging. • Develop students' ability to analyze and problem solve. • Recognize students' effort when solving challenging problems.
MA.K12.MTR.2.1:	Demonstrate understanding by representing problems in multiple ways. Mathematicians who demonstrate understanding by representing problems in multiple ways: • Build understanding through modeling and using manipulatives. • Represent solutions to problems in multiple ways using objects, drawings, tables, graphs and equations. • Progress from modeling problems with objects and drawings to using algorithms and equations. • Express connections between concepts and representations. • Choose a representation based on the given context or purpose. **Clarifications:** Teachers who encourage students to demonstrate understanding by representing problems in multiple ways: • Help students make connections between concepts and representations. • Provide opportunities for students to use manipulatives when investigating concepts. • Guide students from concrete to pictorial to abstract representations as understanding progresses. • Show students that various representations can have different purposes and can be useful in different situations.
	Complete tasks with mathematical fluency.

Mathematicians who complete tasks with mathematical fluency:

- Select efficient and appropriate methods for solving problems within the given context.
- Maintain flexibility and accuracy while performing procedures and mental calculations.
- Complete tasks accurately and with confidence.
- Adapt procedures to apply them to a new context.
- Use feedback to improve efficiency when performing calculations.

MA.K12.MTR.3.1:

Clarifications:
Teachers who encourage students to complete tasks with mathematical fluency:

- Provide students with the flexibility to solve problems by selecting a procedure that allows them to solve efficiently and accurately.
- Offer multiple opportunities for students to practice efficient and generalizable methods.
- Provide opportunities for students to reflect on the method they used and determine if a more efficient method could have been used.

Engage in discussions that reflect on the mathematical thinking of self and others.
Mathematicians who engage in discussions that reflect on the mathematical thinking of self and others:

- Communicate mathematical ideas, vocabulary and methods effectively.
- Analyze the mathematical thinking of others.
- Compare the efficiency of a method to those expressed by others.
- Recognize errors and suggest how to correctly solve the task.
- Justify results by explaining methods and processes.
- Construct possible arguments based on evidence.

MA.K12.MTR.4.1:

Clarifications:
Teachers who encourage students to engage in discussions that reflect on the mathematical thinking of self and others:

- Establish a culture in which students ask questions of the teacher and their peers, and error is an opportunity for learning.
- Create opportunities for students to discuss their thinking with peers.
- Select, sequence and present student work to advance and deepen understanding of correct and increasingly efficient methods.
- Develop students' ability to justify methods and compare their responses to the responses of their peers.

Use patterns and structure to help understand and connect mathematical concepts.
Mathematicians who use patterns and structure to help understand and connect mathematical concepts:

- Focus on relevant details within a problem.
- Create plans and procedures to logically order events, steps or ideas to solve problems.
- Decompose a complex problem into manageable parts.
- Relate previously learned concepts to new concepts.
- Look for similarities among problems.
- Connect solutions of problems to more complicated large-scale situations.

MA.K12.MTR.5.1:

Clarifications:
Teachers who encourage students to use patterns and structure to help understand and connect mathematical concepts:

- Help students recognize the patterns in the world around them and connect these patterns to mathematical concepts.
- Support students to develop generalizations based on the similarities found among problems.
- Provide opportunities for students to create plans and procedures to solve problems.
- Develop students' ability to construct relationships between their current understanding and more sophisticated ways of thinking.

Assess the reasonableness of solutions.
Mathematicians who assess the reasonableness of solutions:

- Estimate to discover possible solutions.
- Use benchmark quantities to determine if a solution makes sense.
- Check calculations when solving problems.
- Verify possible solutions by explaining the methods used.
- Evaluate results based on the given context.

MA.K12.MTR.6.1:

Clarifications:
Teachers who encourage students to assess the reasonableness of solutions:

- Have students estimate or predict solutions prior to solving.
- Prompt students to continually ask, "Does this solution make sense? How do you know?"
- Reinforce that students check their work as they progress within and after a task.
- Strengthen students' ability to verify solutions through justifications.

Apply mathematics to real-world contexts.
Mathematicians who apply mathematics to real-world contexts:

- Connect mathematical concepts to everyday experiences.
- Use models and methods to understand, represent and solve problems.
- Perform investigations to gather data or determine if a method is appropriate. • Redesign models and methods to improve accuracy or efficiency.

MA.K12.MTR.7.1:

Clarifications:
Teachers who encourage students to apply mathematics to real-world contexts:

- Provide opportunities for students to create models, both concrete and abstract, and perform investigations.
- Challenge students to question the accuracy of their models and methods.
- Support students as they validate conclusions by comparing them to the given situation.
- Indicate how various concepts can be applied to other disciplines.

Cite evidence to explain and justify reasoning.

Clarifications:

ELA.K12.EE.1.1:	K-1 Students include textual evidence in their oral communication with guidance and support from adults. The evidence can consist of details from the text without naming the text. During 1st grade, students learn how to incorporate the evidence in their writing. 2-3 Students include relevant textual evidence in their written and oral communication. Students should name the text when they refer to it. In 3rd grade, students should use a combination of direct and indirect citations. 4-5 Students continue with previous skills and reference comments made by speakers and peers. Students cite texts that they've directly quoted, paraphrased, or used for information. When writing, students will use the form of citation dictated by the instructor or the style guide referenced by the instructor. 6-8 Students continue with previous skills and use a style guide to create a proper citation. 9-12 Students continue with previous skills and should be aware of existing style guides and the ways in which they differ.
ELA.K12.EE.2.1:	Read and comprehend grade-level complex texts proficiently. **Clarifications:** See Text Complexity for grade-level complexity bands and a text complexity rubric.
ELA.K12.EE.3.1:	Make inferences to support comprehension. **Clarifications:** Students will make inferences before the words infer or inference are introduced. Kindergarten students will answer questions like "Why is the girl smiling?" or make predictions about what will happen based on the title page. Students will use the terms and apply them in 2nd grade and beyond.
ELA.K12.EE.4.1:	Use appropriate collaborative techniques and active listening skills when engaging in discussions in a variety of situations. **Clarifications:** In kindergarten, students learn to listen to one another respectfully. In grades 1-2, students build upon these skills by justifying what they are thinking. For example: "I think _____ because _____." The collaborative conversations are becoming academic conversations. In grades 3-12, students engage in academic conversations discussing claims and justifying their reasoning, refining and applying skills. Students build on ideas, propel the conversation, and support claims and counterclaims with evidence.
ELA.K12.EE.5.1:	Use the accepted rules governing a specific format to create quality work. **Clarifications:** Students will incorporate skills learned into work products to produce quality work. For students to incorporate these skills appropriately, they must receive instruction. A 3rd grade student creating a poster board display must have instruction in how to effectively present information to do quality work.
ELA.K12.EE.6.1:	Use appropriate voice and tone when speaking or writing. **Clarifications:** In kindergarten and 1st grade, students learn the difference between formal and informal language. For example, the way we talk to our friends differs from the way we speak to adults. In 2nd grade and beyond, students practice appropriate social and academic language to discuss texts.
ELD.K12.ELL.SC.1:	English language learners communicate information, ideas and concepts necessary for academic success in the content area of Science.
ELD.K12.ELL.SI.1:	English language learners communicate for social and instructional purposes within the school setting.

General Course Information and Notes

GENERAL NOTES

In addition to the course related benchmarks, this course requires additional science content that must include benchmarks from at least one other Body of Knowledge. The additional benchmarks must include rigor appropriate for Level 3 courses and should not duplicate additional content addressed in Experimental Science 1 and 2. Laboratory investigations that include the use of scientific inquiry, research, measurement, problem solving, laboratory apparatus and technologies, experimental procedures, and safety procedures are an integral part of this course. The National Science Teachers Association (NSTA) recommends that at the high school level, all students should be in the science lab or field, collecting data every week. School laboratory investigations (labs) are defined by the National Research Council (NRC) as an experience in the laboratory, classroom, or the field that provides students with opportunities to interact directly with natural phenomena or with data collected by others using tools, materials, data collection techniques, and models (NRC, 2006, p. 3). Laboratory investigations in the high school classroom should help all students develop a growing understanding of the complexity and ambiguity of empirical work, as well as the skills to calibrate and troubleshoot equipment used to make observations. Learners should understand measurement error; and have the skills to aggregate, interpret, and present the resulting data (National Research Council, 2006, p.77; NSTA, 2007).

Special Notes:

Instructional Practices
Teaching from a range of complex text is optimized when teachers in all subject areas implement the following strategies on a routine basis:

1. Ensuring wide reading from complex text that varies in length.
2. Making close reading and rereading of texts central to lessons.
3. Emphasizing text-specific complex questions, and cognitively complex tasks, reinforce focus on the text and cultivate independence.
4. Emphasizing students supporting answers based upon evidence from the text.
5. Providing extensive research and writing opportunities (claims and evidence).

Science and Engineering Practices (NRC *Framework for K-12 Science Education, 2010*)

- Asking questions (for science) and defining problems (for engineering).
- Developing and using models.
- Planning and carrying out investigations.

- Analyzing and interpreting data.
- Using mathematics, information and computer technology, and computational thinking.
- Constructing explanations (for science) and designing solutions (for engineering).
- Engaging in argument from evidence.
- Obtaining, evaluating, and communicating information.

Honors and Advanced Level Course Note: Advanced courses require a greater demand on students through increased academic rigor. Academic rigor is obtained through the application, analysis, evaluation, and creation of complex ideas that are often abstract and multi-faceted. Students are challenged to think and collaborate critically on the content they are learning. Honors level rigor will be achieved by increasing text complexity through text selection, focus on high-level qualitative measures, and complexity of task. Instruction will be structured to give students a deeper understanding of conceptual themes and organization within and across disciplines. Academic rigor is more than simply assigning to students a greater quantity of work.

Florida's Benchmarks for Excellent Student Thinking (B.E.S.T.) Standards
This course includes Florida's B.E.S.T. ELA Expectations (EE) and Mathematical Thinking and Reasoning Standards (MTRs) for students. Florida educators should intentionally embed these standards within the content and their instruction as applicable. For guidance on the implementation of the EEs and MTRs, please visit cpalms.org/Standards/BEST_Standards.aspx and select the appropriate B.E.S.T. Standards package.

English Language Development ELD Standards Special Notes Section:
Teachers are required to provide listening, speaking, reading and writing instruction that allows English language learners (ELL) to communicate information, ideas and concepts for academic success in the content area of Science. For the given level of English language proficiency and with visual, graphic, or interactive support, students will interact with grade level words, expressions, sentences and discourse to process or produce language necessary for academic success The ELD standard should specify a relevant content area concept or topic of study chosen by curriculum developers and teachers which maximizes an ELL's need for communication and social skills. To access an ELL supporting document which delineates performance definitions and descriptors, please click on the following link: cpalms.org/uploads/docs/standards/eld/SC.pdf

GENERAL INFORMATION

Course Number: 2002360

Course Path: Section: Grades PreK to 12 Education Courses > **Grade Group:** Grades 9 to 12 and Adult Education Courses > **Subject:** Science > **SubSubject:** General Sciences >

Abbreviated Title: EXP SCI 3 HON

Number of Credits: One (1) credit

Course Length: Year (Y)

Course Attributes:
- Honors

Course Type: Elective Course

Course Level: 3

Course Status: Draft - Course Pending Approval

Grade Level(s): 9,10,11,12

Educator Certifications

Biology (Grades 6-12)
Earth/Space Science (Grades 6-12)
Chemistry (Grades 6-12)
Physics (Grades 6-12)

Experimental Science 4 Honors (#2002370) 2022 - And Beyond

Course Standards

Name	Description
SC.912.N.1.1:	Define a problem based on a specific body of knowledge, for example: biology, chemistry, physics, and earth/space science, and do the following: 1. **Pose questions about the natural world,** (Articulate the purpose of the investigation and identify the relevant scientific concepts). 2. **Conduct systematic observations,** (Write procedures that are clear and replicable. Identify observables and examine relationships between test (independent) variable and outcome (dependent) variable. Employ appropriate methods for accurate and consistent observations; conduct and record measurements at appropriate levels of precision. Follow safety guidelines). 3. **Examine books and other sources of information to see what is already known,** 4. **Review what is known in light of empirical evidence,** (Examine whether available empirical evidence can be interpreted in terms of existing knowledge and models, and if not, modify or develop new models). 5. **Plan investigations,** (Design and evaluate a scientific investigation). 6. **Use tools to gather, analyze, and interpret data (this includes the use of measurement in metric and other systems, and also the generation and interpretation of graphical representations of data, including data tables and graphs),** (Collect data or evidence in an organized way. Properly use instruments, equipment, and materials (e.g., scales, probeware, meter sticks, microscopes, computers) including set-up, calibration, technique, maintenance, and storage). 7. **Pose answers, explanations, or descriptions of events,** 8. **Generate explanations that explicate or describe natural phenomena (inferences),** 9. **Use appropriate evidence and reasoning to justify these explanations to others,** 10. **Communicate results of scientific investigations, and** 11. **Evaluate the merits of the explanations produced by others.**
SC.912.N.1.2:	Describe and explain what characterizes science and its methods.
SC.912.N.1.3:	Recognize that the strength or usefulness of a scientific claim is evaluated through scientific argumentation, which depends on critical and logical thinking, and the active consideration of alternative scientific explanations to explain the data presented.
SC.912.N.1.6:	Describe how scientific inferences are drawn from scientific observations and provide examples from the content being studied.
SC.912.N.2.4:	Explain that scientific knowledge is both durable and robust and open to change. Scientific knowledge can change because it is often examined and re-examined by new investigations and scientific argumentation. Because of these frequent examinations, scientific knowledge becomes stronger, leading to its durability.
SC.912.N.2.5:	Describe instances in which scientists' varied backgrounds, talents, interests, and goals influence the inferences and thus the explanations that they make about observations of natural phenomena and describe that competing interpretations (explanations) of scientists are a strength of science as they are a source of new, testable ideas that have the potential to add new evidence to support one or another of the explanations.
SC.912.N.3.1:	Explain that a scientific theory is the culmination of many scientific investigations drawing together all the current evidence concerning a substantial range of phenomena; thus, a scientific theory represents the most powerful explanation scientists have to offer.
SC.912.N.3.2:	Describe the role consensus plays in the historical development of a theory in any one of the disciplines of science.
SC.912.N.3.5:	Describe the function of models in science, and identify the wide range of models used in science.
SC.912.N.4.1:	Explain how scientific knowledge and reasoning provide an empirically-based perspective to inform society's decision making.
MA.K12.MTR.1.1:	Mathematicians who participate in effortful learning both individually and with others: • Analyze the problem in a way that makes sense given the task. • Ask questions that will help with solving the task. • Build perseverance by modifying methods as needed while solving a challenging task. • Stay engaged and maintain a positive mindset when working to solve tasks. • Help and support each other when attempting a new method or approach. **Clarifications:** Teachers who encourage students to participate actively in effortful learning both individually and with others: • Cultivate a community of growth mindset learners. • Foster perseverance in students by choosing tasks that are challenging. • Develop students' ability to analyze and problem solve. • Recognize students' effort when solving challenging problems.
MA.K12.MTR.2.1:	Demonstrate understanding by representing problems in multiple ways. Mathematicians who demonstrate understanding by representing problems in multiple ways: • Build understanding through modeling and using manipulatives. • Represent solutions to problems in multiple ways using objects, drawings, tables, graphs and equations. • Progress from modeling problems with objects and drawings to using algorithms and equations. • Express connections between concepts and representations. • Choose a representation based on the given context or purpose. **Clarifications:** Teachers who encourage students to demonstrate understanding by representing problems in multiple ways: • Help students make connections between concepts and representations. • Provide opportunities for students to use manipulatives when investigating concepts. • Guide students from concrete to pictorial to abstract representations as understanding progresses. • Show students that various representations can have different purposes and can be useful in different situations.
	Complete tasks with mathematical fluency.

MA.K12.MTR.3.1:	Mathematicians who complete tasks with mathematical fluency: • Select efficient and appropriate methods for solving problems within the given context. • Maintain flexibility and accuracy while performing procedures and mental calculations. • Complete tasks accurately and with confidence. • Adapt procedures to apply them to a new context. • Use feedback to improve efficiency when performing calculations. **Clarifications:** Teachers who encourage students to complete tasks with mathematical fluency: • Provide students with the flexibility to solve problems by selecting a procedure that allows them to solve efficiently and accurately. • Offer multiple opportunities for students to practice efficient and generalizable methods. • Provide opportunities for students to reflect on the method they used and determine if a more efficient method could have been used.
MA.K12.MTR.4.1:	Engage in discussions that reflect on the mathematical thinking of self and others. Mathematicians who engage in discussions that reflect on the mathematical thinking of self and others: • Communicate mathematical ideas, vocabulary and methods effectively. • Analyze the mathematical thinking of others. • Compare the efficiency of a method to those expressed by others. • Recognize errors and suggest how to correctly solve the task. • Justify results by explaining methods and processes. • Construct possible arguments based on evidence. **Clarifications:** Teachers who encourage students to engage in discussions that reflect on the mathematical thinking of self and others: • Establish a culture in which students ask questions of the teacher and their peers, and error is an opportunity for learning. • Create opportunities for students to discuss their thinking with peers. • Select, sequence and present student work to advance and deepen understanding of correct and increasingly efficient methods. • Develop students' ability to justify methods and compare their responses to the responses of their peers.
MA.K12.MTR.5.1:	Use patterns and structure to help understand and connect mathematical concepts. Mathematicians who use patterns and structure to help understand and connect mathematical concepts: • Focus on relevant details within a problem. • Create plans and procedures to logically order events, steps or ideas to solve problems. • Decompose a complex problem into manageable parts. • Relate previously learned concepts to new concepts. • Look for similarities among problems. • Connect solutions of problems to more complicated large-scale situations. **Clarifications:** Teachers who encourage students to use patterns and structure to help understand and connect mathematical concepts: • Help students recognize the patterns in the world around them and connect these patterns to mathematical concepts. • Support students to develop generalizations based on the similarities found among problems. • Provide opportunities for students to create plans and procedures to solve problems. • Develop students' ability to construct relationships between their current understanding and more sophisticated ways of thinking.
MA.K12.MTR.6.1:	Assess the reasonableness of solutions. Mathematicians who assess the reasonableness of solutions: • Estimate to discover possible solutions. • Use benchmark quantities to determine if a solution makes sense. • Check calculations when solving problems. • Verify possible solutions by explaining the methods used. • Evaluate results based on the given context. **Clarifications:** Teachers who encourage students to assess the reasonableness of solutions: • Have students estimate or predict solutions prior to solving. • Prompt students to continually ask, "Does this solution make sense? How do you know?" • Reinforce that students check their work as they progress within and after a task. • Strengthen students' ability to verify solutions through justifications.
MA.K12.MTR.7.1:	Apply mathematics to real-world contexts. Mathematicians who apply mathematics to real-world contexts: • Connect mathematical concepts to everyday experiences. • Use models and methods to understand, represent and solve problems. • Perform investigations to gather data or determine if a method is appropriate. • Redesign models and methods to improve accuracy or efficiency. **Clarifications:** Teachers who encourage students to apply mathematics to real-world contexts: • Provide opportunities for students to create models, both concrete and abstract, and perform investigations. • Challenge students to question the accuracy of their models and methods. • Support students as they validate conclusions by comparing them to the given situation. • Indicate how various concepts can be applied to other disciplines.
	Cite evidence to explain and justify reasoning. **Clarifications:**

ELA.K12.EE.1.1:	K-1 Students include textual evidence in their oral communication with guidance and support from adults. The evidence can consist of details from the text without naming the text. During 1st grade, students learn how to incorporate the evidence in their writing. 2-3 Students include relevant textual evidence in their written and oral communication. Students should name the text when they refer to it. In 3rd grade, students should use a combination of direct and indirect citations. 4-5 Students continue with previous skills and reference comments made by speakers and peers. Students cite texts that they've directly quoted, paraphrased, or used for information. When writing, students will use the form of citation dictated by the instructor or the style guide referenced by the instructor. 6-8 Students continue with previous skills and use a style guide to create a proper citation. 9-12 Students continue with previous skills and should be aware of existing style guides and the ways in which they differ.
ELA.K12.EE.2.1:	Read and comprehend grade-level complex texts proficiently. **Clarifications:** See Text Complexity for grade-level complexity bands and a text complexity rubric.
ELA.K12.EE.3.1:	Make inferences to support comprehension. **Clarifications:** Students will make inferences before the words infer or inference are introduced. Kindergarten students will answer questions like "Why is the girl smiling?" or make predictions about what will happen based on the title page. Students will use the terms and apply them in 2nd grade and beyond.
ELA.K12.EE.4.1:	Use appropriate collaborative techniques and active listening skills when engaging in discussions in a variety of situations. **Clarifications:** In kindergarten, students learn to listen to one another respectfully. In grades 1-2, students build upon these skills by justifying what they are thinking. For example: "I think _____ because _____." The collaborative conversations are becoming academic conversations. In grades 3-12, students engage in academic conversations discussing claims and justifying their reasoning, refining and applying skills. Students build on ideas, propel the conversation, and support claims and counterclaims with evidence.
ELA.K12.EE.5.1:	Use the accepted rules governing a specific format to create quality work. **Clarifications:** Students will incorporate skills learned into work products to produce quality work. For students to incorporate these skills appropriately, they must receive instruction. A 3rd grade student creating a poster board display must have instruction in how to effectively present information to do quality work.
ELA.K12.EE.6.1:	Use appropriate voice and tone when speaking or writing. **Clarifications:** In kindergarten and 1st grade, students learn the difference between formal and informal language. For example, the way we talk to our friends differs from the way we speak to adults. In 2nd grade and beyond, students practice appropriate social and academic language to discuss texts.
ELD.K12.ELL.SC.1:	English language learners communicate information, ideas and concepts necessary for academic success in the content area of Science.
ELD.K12.ELL.SI.1:	English language learners communicate for social and instructional purposes within the school setting.

General Course Information and Notes

GENERAL NOTES

In addition to the course related benchmarks, this course requires additional science content that must include benchmarks from at least one other Body of Knowledge. The additional benchmarks must include rigor appropriate for Level 3 courses and should not duplicate additional content addressed in Experimental Science 1, 2 and 3. Laboratory investigations that include the use of scientific inquiry, research, measurement, problem solving, laboratory apparatus and technologies, experimental procedures, and safety procedures are an integral part of this course. The National Science Teachers Association (NSTA) recommends that at the high school level, all students should be in the science lab or field, collecting data every week. School laboratory investigations (labs) are defined by the National Research Council (NRC) as an experience in the laboratory, classroom, or the field that provides students with opportunities to interact directly with natural phenomena or with data collected by others using tools, materials, data collection techniques, and models (NRC, 2006, p. 3). Laboratory investigations in the high school classroom should help all students develop a growing understanding of the complexity and ambiguity of empirical work, as well as the skills to calibrate and troubleshoot equipment used to make observations. Learners should understand measurement error; and have the skills to aggregate, interpret, and present the resulting data (National Research Council, 2006, p.77; NSTA, 2007).

Special Notes:

Instructional Practices
Teaching from a range of complex text is optimized when teachers in all subject areas implement the following strategies on a routine basis:

1. Ensuring wide reading from complex text that varies in length.
2. Making close reading and rereading of texts central to lessons.
3. Emphasizing text-specific complex questions, and cognitively complex tasks, reinforce focus on the text and cultivate independence.
4. Emphasizing students supporting answers based upon evidence from the text.
5. Providing extensive research and writing opportunities (claims and evidence).

Science and Engineering Practices (NRC *Framework for K-12 Science Education, 2010*)

- Asking questions (for science) and defining problems (for engineering).
- Developing and using models.
- Planning and carrying out investigations.

- Analyzing and interpreting data.
- Using mathematics, information and computer technology, and computational thinking.
- Constructing explanations (for science) and designing solutions (for engineering).
- Engaging in argument from evidence.
- Obtaining, evaluating, and communicating information.

Honors and Advanced Level Course Note: Advanced courses require a greater demand on students through increased academic rigor. Academic rigor is obtained through the application, analysis, evaluation, and creation of complex ideas that are often abstract and multi-faceted. Students are challenged to think and collaborate critically on the content they are learning. Honors level rigor will be achieved by increasing text complexity through text selection, focus on high-level qualitative measures, and complexity of task. Instruction will be structured to give students a deeper understanding of conceptual themes and organization within and across disciplines. Academic rigor is more than simply assigning to students a greater quantity of work.

Florida's Benchmarks for Excellent Student Thinking (B.E.S.T.) Standards
This course includes Florida's B.E.S.T. ELA Expectations (EE) and Mathematical Thinking and Reasoning Standards (MTRs) for students. Florida educators should intentionally embed these standards within the content and their instruction as applicable. For guidance on the implementation of the EEs and MTRs, please visit cpalms.org/Standards/BEST_Standards.aspx and select the appropriate B.E.S.T. Standards package.

English Language Development ELD Standards Special Notes Section:
Teachers are required to provide listening, speaking, reading and writing instruction that allows English language learners (ELL) to communicate information, ideas and concepts for academic success in the content area of Science. For the given level of English language proficiency and with visual, graphic, or interactive support, students will interact with grade level words, expressions, sentences and discourse to process or produce language necessary for academic success The ELD standard should specify a relevant content area concept or topic of study chosen by curriculum developers and teachers which maximizes an ELL's need for communication and social skills. To access an ELL supporting document which delineates performance definitions and descriptors, please click on the following link: cpalms.org/uploads/docs/standards/eld/SC.pdf

GENERAL INFORMATION

Course Number: 2002370

Course Path: Section: Grades PreK to 12 Education Courses > **Grade Group:** Grades 9 to 12 and Adult Education Courses > **Subject:** Science > **SubSubject:** General Sciences >

Abbreviated Title: EXP SCI 4 HON

Number of Credits: One (1) credit

Course Length: Year (Y)

Course Attributes:
- Honors

Course Type: Elective Course

Course Level: 3

Course Status: Draft - Course Pending Approval

Grade Level(s): 9,10,11,12

Educator Certifications

Biology (Grades 6-12)
Earth/Space Science (Grades 6-12)
Chemistry (Grades 6-12)
Physics (Grades 6-12)

Integrated Science 1 (#2002400) 2022 - And Beyond

Course Standards

Name	Description
SC.912.E.5.1:	Cite evidence used to develop and verify the scientific theory of the Big Bang (also known as the Big Bang Theory) of the origin of the universe.
SC.912.E.5.2:	Identify patterns in the organization and distribution of matter in the universe and the forces that determine them.
SC.912.E.5.4:	Explain the physical properties of the Sun and its dynamic nature and connect them to conditions and events on Earth.
SC.912.E.5.7:	Relate the history of and explain the justification for future space exploration and continuing technology development.
SC.912.E.5.8:	Connect the concepts of radiation and the electromagnetic spectrum to the use of historical and newly-developed observational tools.
SC.912.E.6.1:	Describe and differentiate the layers of Earth and the interactions among them.
SC.912.E.6.2:	Connect surface features to surface processes that are responsible for their formation.
SC.912.E.6.3:	Analyze the scientific theory of plate tectonics and identify related major processes and features as a result of moving plates.
SC.912.E.7.1:	Analyze the movement of matter and energy through the different biogeochemical cycles, including water and carbon.
SC.912.E.7.3:	Differentiate and describe the various interactions among Earth systems, including: atmosphere, hydrosphere, cryosphere, geosphere, and biosphere.
SC.912.L.14.1:	Describe the scientific theory of cells (cell theory) and relate the history of its discovery to the process of science.
SC.912.L.14.2:	Relate structure to function for the components of plant and animal cells. Explain the role of cell membranes as a highly selective barrier (passive and active transport).
SC.912.L.14.3:	Compare and contrast the general structures of plant and animal cells. Compare and contrast the general structures of prokaryotic and eukaryotic cells.
SC.912.L.14.4:	Compare and contrast structure and function of various types of microscopes.
SC.912.L.14.7:	Relate the structure of each of the major plant organs and tissues to physiological processes.
SC.912.L.15.1:	Explain how the scientific theory of evolution is supported by the fossil record, comparative anatomy, comparative embryology, biogeography, molecular biology, and observed evolutionary change.
SC.912.L.15.4:	Describe how and why organisms are hierarchically classified and based on evolutionary relationships.
SC.912.L.15.5:	Explain the reasons for changes in how organisms are classified.
SC.912.L.15.6:	Discuss distinguishing characteristics of the domains and kingdoms of living organisms.
SC.912.L.15.8:	Describe the scientific explanations of the origin of life on Earth.
SC.912.L.16.1:	Use Mendel's laws of segregation and independent assortment to analyze patterns of inheritance.
SC.912.L.16.14:	Describe the cell cycle, including the process of mitosis. Explain the role of mitosis in the formation of new cells and its importance in maintaining chromosome number during asexual reproduction.
SC.912.L.16.16:	Describe the process of meiosis, including independent assortment and crossing over. Explain how reduction division results in the formation of haploid gametes or spores.
SC.912.L.16.17:	Compare and contrast mitosis and meiosis and relate to the processes of sexual and asexual reproduction and their consequences for genetic variation.
SC.912.L.17.2:	Explain the general distribution of life in aquatic systems as a function of chemistry, geography, light, depth, salinity, and temperature.
SC.912.L.17.3:	Discuss how various oceanic and freshwater processes, such as currents, tides, and waves, affect the abundance of aquatic organisms.
SC.912.L.17.4:	Describe changes in ecosystems resulting from seasonal variations, climate change and succession.
SC.912.L.17.9:	Use a food web to identify and distinguish producers, consumers, and decomposers. Explain the pathway of energy transfer through trophic levels and the reduction of available energy at successive trophic levels.
SC.912.L.17.11:	Evaluate the costs and benefits of renewable and nonrenewable resources, such as water, energy, fossil fuels, wildlife, and forests.
SC.912.L.18.1:	Describe the basic molecular structures and primary functions of the four major categories of biological macromolecules.
SC.912.L.18.7:	Identify the reactants, products, and basic functions of photosynthesis.
SC.912.L.18.8:	Identify the reactants, products, and basic functions of aerobic and anaerobic cellular respiration.
SC.912.L.18.9:	Explain the interrelated nature of photosynthesis and cellular respiration.
SC.912.L.18.12:	Discuss the special properties of water that contribute to Earth's suitability as an environment for life: cohesive behavior, ability to moderate temperature, expansion upon freezing, and versatility as a solvent.
SC.912.N.1.1:	Define a problem based on a specific body of knowledge, for example: biology, chemistry, physics, and earth/space science, and do the following: 1. **Pose questions about the natural world,** (Articulate the purpose of the investigation and identify the relevant scientific concepts). 2. **Conduct systematic observations,** (Write procedures that are clear and replicable. Identify observables and examine relationships between test (independent) variable and outcome (dependent) variable. Employ appropriate methods for accurate and consistent observations; conduct and record measurements at appropriate levels of precision. Follow safety guidelines). 3. **Examine books and other sources of information to see what is already known,** 4. **Review what is known in light of empirical evidence,** (Examine whether available empirical evidence can be interpreted in terms of existing knowledge and models, and if not, modify or develop new models). 5. **Plan investigations,** (Design and evaluate a scientific investigation). 6. **Use tools to gather, analyze, and interpret data (this includes the use of measurement in metric and other systems, and also the generation and interpretation of graphical representations of data, including data tables and graphs),** (Collect data or evidence in an organized way. Properly use instruments, equipment, and materials (e.g., scales, probeware, meter sticks, microscopes, computers) including set-up, calibration, technique, maintenance, and storage). 7. **Pose answers, explanations, or descriptions of events,** 8. **Generate explanations that explicate or describe natural phenomena (inferences),** 9. **Use appropriate evidence and reasoning to justify these explanations to others,** 10. **Communicate results of scientific investigations, and** 11. **Evaluate the merits of the explanations produced by others.**
SC.912.N.1.2:	Describe and explain what characterizes science and its methods.

SC.912.N.1.3:	Recognize that the strength or usefulness of a scientific claim is evaluated through scientific argumentation, which depends on critical and logical thinking, and the active consideration of alternative scientific explanations to explain the data presented.
SC.912.N.1.4:	Identify sources of information and assess their reliability according to the strict standards of scientific investigation.
SC.912.N.1.6:	Describe how scientific inferences are drawn from scientific observations and provide examples from the content being studied.
SC.912.N.1.7:	Recognize the role of creativity in constructing scientific questions, methods and explanations.
SC.912.N.2.1:	Identify what is science, what clearly is not science, and what superficially resembles science (but fails to meet the criteria for science).
SC.912.N.3.1:	Explain that a scientific theory is the culmination of many scientific investigations drawing together all the current evidence concerning a substantial range of phenomena; thus, a scientific theory represents the most powerful explanation scientists have to offer.
SC.912.N.3.3:	Explain that scientific laws are descriptions of specific relationships under given conditions in nature, but do not offer explanations for those relationships.
SC.912.N.3.4:	Recognize that theories do not become laws, nor do laws become theories; theories are well supported explanations and laws are well supported descriptions.
SC.912.N.3.5:	Describe the function of models in science, and identify the wide range of models used in science.
SC.912.P.8.1:	Differentiate among the four states of matter.
SC.912.P.8.2:	Differentiate between physical and chemical properties and physical and chemical changes of matter.
SC.912.P.8.3:	Explore the scientific theory of atoms (also known as atomic theory) by describing changes in the atomic model over time and why those changes were necessitated by experimental evidence.
SC.912.P.8.4:	Explore the scientific theory of atoms (also known as atomic theory) by describing the structure of atoms in terms of protons, neutrons and electrons, and differentiate among these particles in terms of their mass, electrical charges and locations within the atom.
SC.912.P.8.5:	Relate properties of atoms and their position in the periodic table to the arrangement of their electrons.
SC.912.P.8.7:	Interpret formula representations of molecules and compounds in terms of composition and structure.
SC.912.P.10.1:	Differentiate among the various forms of energy and recognize that they can be transformed from one form to others.
SC.912.P.10.4:	Describe heat as the energy transferred by convection, conduction, and radiation, and explain the connection of heat to change in temperature or states of matter.
SC.912.P.10.7:	Distinguish between endothermic and exothermic chemical processes.
SC.912.P.10.20:	Describe the measurable properties of waves and explain the relationships among them and how these properties change when the wave moves from one medium to another.
SC.912.P.12.3:	Interpret and apply Newton's three laws of motion.
MA.K12.MTR.1.1:	Mathematicians who participate in effortful learning both individually and with others: • Analyze the problem in a way that makes sense given the task. • Ask questions that will help with solving the task. • Build perseverance by modifying methods as needed while solving a challenging task. • Stay engaged and maintain a positive mindset when working to solve tasks. • Help and support each other when attempting a new method or approach. **Clarifications:** Teachers who encourage students to participate actively in effortful learning both individually and with others: • Cultivate a community of growth mindset learners. • Foster perseverance in students by choosing tasks that are challenging. • Develop students' ability to analyze and problem solve. • Recognize students' effort when solving challenging problems.
MA.K12.MTR.2.1:	Demonstrate understanding by representing problems in multiple ways. Mathematicians who demonstrate understanding by representing problems in multiple ways: • Build understanding through modeling and using manipulatives. • Represent solutions to problems in multiple ways using objects, drawings, tables, graphs and equations. • Progress from modeling problems with objects and drawings to using algorithms and equations. • Express connections between concepts and representations. • Choose a representation based on the given context or purpose. **Clarifications:** Teachers who encourage students to demonstrate understanding by representing problems in multiple ways: • Help students make connections between concepts and representations. • Provide opportunities for students to use manipulatives when investigating concepts. • Guide students from concrete to pictorial to abstract representations as understanding progresses. • Show students that various representations can have different purposes and can be useful in different situations.
MA.K12.MTR.3.1:	Complete tasks with mathematical fluency. Mathematicians who complete tasks with mathematical fluency: • Select efficient and appropriate methods for solving problems within the given context. • Maintain flexibility and accuracy while performing procedures and mental calculations. • Complete tasks accurately and with confidence. • Adapt procedures to apply them to a new context. • Use feedback to improve efficiency when performing calculations. **Clarifications:** Teachers who encourage students to complete tasks with mathematical fluency: • Provide students with the flexibility to solve problems by selecting a procedure that allows them to solve efficiently and accurately. • Offer multiple opportunities for students to practice efficient and generalizable methods. • Provide opportunities for students to reflect on the method they used and determine if a more efficient method could have been used.
	Engage in discussions that reflect on the mathematical thinking of self and others. Mathematicians who engage in discussions that reflect on the mathematical thinking of self and others: • Communicate mathematical ideas, vocabulary and methods effectively.

MA.K12.MTR.4.1:	• Analyze the mathematical thinking of others. • Compare the efficiency of a method to those expressed by others. • Recognize errors and suggest how to correctly solve the task. • Justify results by explaining methods and processes. • Construct possible arguments based on evidence. **Clarifications:** Teachers who encourage students to engage in discussions that reflect on the mathematical thinking of self and others: • Establish a culture in which students ask questions of the teacher and their peers, and error is an opportunity for learning. • Create opportunities for students to discuss their thinking with peers. • Select, sequence and present student work to advance and deepen understanding of correct and increasingly efficient methods. • Develop students' ability to justify methods and compare their responses to the responses of their peers.
MA.K12.MTR.5.1:	Use patterns and structure to help understand and connect mathematical concepts. Mathematicians who use patterns and structure to help understand and connect mathematical concepts: • Focus on relevant details within a problem. • Create plans and procedures to logically order events, steps or ideas to solve problems. • Decompose a complex problem into manageable parts. • Relate previously learned concepts to new concepts. • Look for similarities among problems. • Connect solutions of problems to more complicated large-scale situations. **Clarifications:** Teachers who encourage students to use patterns and structure to help understand and connect mathematical concepts: • Help students recognize the patterns in the world around them and connect these patterns to mathematical concepts. • Support students to develop generalizations based on the similarities found among problems. • Provide opportunities for students to create plans and procedures to solve problems. • Develop students' ability to construct relationships between their current understanding and more sophisticated ways of thinking.
MA.K12.MTR.6.1:	Assess the reasonableness of solutions. Mathematicians who assess the reasonableness of solutions: • Estimate to discover possible solutions. • Use benchmark quantities to determine if a solution makes sense. • Check calculations when solving problems. • Verify possible solutions by explaining the methods used. • Evaluate results based on the given context. **Clarifications:** Teachers who encourage students to assess the reasonableness of solutions: • Have students estimate or predict solutions prior to solving. • Prompt students to continually ask, "Does this solution make sense? How do you know?" • Reinforce that students check their work as they progress within and after a task. • Strengthen students' ability to verify solutions through justifications.
MA.K12.MTR.7.1:	Apply mathematics to real-world contexts. Mathematicians who apply mathematics to real-world contexts: • Connect mathematical concepts to everyday experiences. • Use models and methods to understand, represent and solve problems. • Perform investigations to gather data or determine if a method is appropriate. • Redesign models and methods to improve accuracy or efficiency. **Clarifications:** Teachers who encourage students to apply mathematics to real-world contexts: • Provide opportunities for students to create models, both concrete and abstract, and perform investigations. • Challenge students to question the accuracy of their models and methods. • Support students as they validate conclusions by comparing them to the given situation. • Indicate how various concepts can be applied to other disciplines.
ELA.K12.EE.1.1:	Cite evidence to explain and justify reasoning. **Clarifications:** K-1 Students include textual evidence in their oral communication with guidance and support from adults. The evidence can consist of details from the text without naming the text. During 1st grade, students learn how to incorporate the evidence in their writing. 2-3 Students include relevant textual evidence in their written and oral communication. Students should name the text when they refer to it. In 3rd grade, students should use a combination of direct and indirect citations. 4-5 Students continue with previous skills and reference comments made by speakers and peers. Students cite texts that they've directly quoted, paraphrased, or used for information. When writing, students will use the form of citation dictated by the instructor or the style guide referenced by the instructor. 6-8 Students continue with previous skills and use a style guide to create a proper citation. 9-12 Students continue with previous skills and should be aware of existing style guides and the ways in which they differ.
ELA.K12.EE.2.1:	Read and comprehend grade-level complex texts proficiently. **Clarifications:** See Text Complexity for grade-level complexity bands and a text complexity rubric.
	Make inferences to support comprehension.

ELA.K12.EE.3.1:	**Clarifications:** Students will make inferences before the words infer or inference are introduced. Kindergarten students will answer questions like "Why is the girl smiling?" or make predictions about what will happen based on the title page. Students will use the terms and apply them in 2nd grade and beyond.
ELA.K12.EE.4.1:	Use appropriate collaborative techniques and active listening skills when engaging in discussions in a variety of situations. **Clarifications:** In kindergarten, students learn to listen to one another respectfully. In grades 1-2, students build upon these skills by justifying what they are thinking. For example: "I think _____ because _____." The collaborative conversations are becoming academic conversations. In grades 3-12, students engage in academic conversations discussing claims and justifying their reasoning, refining and applying skills. Students build on ideas, propel the conversation, and support claims and counterclaims with evidence.
ELA.K12.EE.5.1:	Use the accepted rules governing a specific format to create quality work. **Clarifications:** Students will incorporate skills learned into work products to produce quality work. For students to incorporate these skills appropriately, they must receive instruction. A 3rd grade student creating a poster board display must have instruction in how to effectively present information to do quality work.
ELA.K12.EE.6.1:	Use appropriate voice and tone when speaking or writing. **Clarifications:** In kindergarten and 1st grade, students learn the difference between formal and informal language. For example, the way we talk to our friends differs from the way we speak to adults. In 2nd grade and beyond, students practice appropriate social and academic language to discuss texts.
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ELD.K12.ELL.SI.1:	English language learners communicate for social and instructional purposes within the school setting.

General Course Information and Notes

GENERAL NOTES

Laboratory investigations that include the use of scientific inquiry, research, measurement, problem solving, laboratory apparatus and technologies, experimental procedures, and safety procedures are an integral part of this course. The National Science Teachers Association (NSTA) recommends that at the high school level, all students should be in the science lab or field, collecting data every week. School laboratory investigations (labs) are defined by the National Research Council (NRC) as an experience in the laboratory, classroom, or the field that provides students with opportunities to interact directly with natural phenomena or with data collected by others using tools, materials, data collection techniques, and models (NRC, 2006, p. 3). Laboratory investigations in the high school classroom should help all students develop a growing understanding of the complexity and ambiguity of empirical work, as well as the skills to calibrate and troubleshoot equipment used to make observations. Learners should understand measurement error; and have the skills to aggregate, interpret, and present the resulting data (National Research Council, 2006, p.77; NSTA, 2007).

Special Notes:

Instructional Practices
Teaching from a range of complex text is optimized when teachers in all subject areas implement the following strategies on a routine basis:

1. Ensuring wide reading from complex text that varies in length.
2. Making close reading and rereading of texts central to lessons.
3. Emphasizing text-specific complex questions, and cognitively complex tasks, reinforce focus on the text and cultivate independence.
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Science and Engineering Practices (NRC *Framework for K-12 Science Education, 2010*)

- Asking questions (for science) and defining problems (for engineering).
- Developing and using models.
- Planning and carrying out investigations.
- Analyzing and interpreting data.
- Using mathematics, information and computer technology, and computational thinking.
- Constructing explanations (for science) and designing solutions (for engineering).
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- Obtaining, evaluating, and communicating information.

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This course includes Florida's B.E.S.T. ELA Expectations (EE) and Mathematical Thinking and Reasoning Standards (MTRs) for students. Florida educators should intentionally embed these standards within the content and their instruction as applicable. For guidance on the implementation of the EEs and MTRs, please visit cpalms.org/Standards/BEST_Standards.aspx and select the appropriate B.E.S.T. Standards package.

English Language Development ELD Standards Special Notes Section:
Teachers are required to provide listening, speaking, reading and writing instruction that allows English language learners (ELL) to communicate information, ideas and concepts for academic success in the content area of Science. For the given level of English language proficiency and with visual, graphic, or interactive support, students will interact with grade level words, expressions, sentences and discourse to process or produce language necessary for academic success The ELD standard should specify a relevant

content area concept or topic of study chosen by curriculum developers and teachers which maximizes an ELL's need for communication and social skills. To access an ELL supporting document which delineates performance definitions and descriptors, please click on the following link: cpalms.org/uploads/docs/standards/eld/SC.pdf

GENERAL INFORMATION

Course Number: 2002400

Course Path: Section: Grades PreK to 12 Education Courses > **Grade Group:** Grades 9 to 12 and Adult Education Courses > **Subject:** Science > **SubSubject:** Integrated Sciences >

Abbreviated Title: INTEG SCI 1

Number of Credits: One (1) credit

Course Length: Year (Y)

Course Attributes:

- Class Size Core Required

Course Type: Core Academic Course

Course Level: 2

Course Status: Draft - Course Pending Approval

Grade Level(s): 9,10,11,12

Graduation Requirement: Equally Rigorous Science

Educator Certifications

Earth/Space Science (Grades 6-12)
Physics (Grades 6-12)
Science (Secondary Grades 7-12)
Biology (Grades 6-12)
Middle Grades General Science (Middle Grades 5-9)
Chemistry (Grades 6-12)

Integrated Science 1 Honors (#2002410) 2022 - And Beyond

Course Standards

Name	Description
SC.912.E.5.1:	Cite evidence used to develop and verify the scientific theory of the Big Bang (also known as the Big Bang Theory) of the origin of the universe.
SC.912.E.5.2:	Identify patterns in the organization and distribution of matter in the universe and the forces that determine them.
SC.912.E.5.4:	Explain the physical properties of the Sun and its dynamic nature and connect them to conditions and events on Earth.
SC.912.E.5.7:	Relate the history of and explain the justification for future space exploration and continuing technology development.
SC.912.E.5.8:	Connect the concepts of radiation and the electromagnetic spectrum to the use of historical and newly-developed observational tools.
SC.912.E.6.1:	Describe and differentiate the layers of Earth and the interactions among them.
SC.912.E.6.2:	Connect surface features to surface processes that are responsible for their formation.
SC.912.E.6.3:	Analyze the scientific theory of plate tectonics and identify related major processes and features as a result of moving plates.
SC.912.E.6.6:	Analyze past, present, and potential future consequences to the environment resulting from various energy production technologies.
SC.912.E.7.1:	Analyze the movement of matter and energy through the different biogeochemical cycles, including water and carbon.
SC.912.E.7.3:	Differentiate and describe the various interactions among Earth systems, including: atmosphere, hydrosphere, cryosphere, geosphere, and biosphere.
SC.912.L.14.1:	Describe the scientific theory of cells (cell theory) and relate the history of its discovery to the process of science.
SC.912.L.14.2:	Relate structure to function for the components of plant and animal cells. Explain the role of cell membranes as a highly selective barrier (passive and active transport).
SC.912.L.14.4:	Compare and contrast structure and function of various types of microscopes.
SC.912.L.14.7:	Relate the structure of each of the major plant organs and tissues to physiological processes.
SC.912.L.15.1:	Explain how the scientific theory of evolution is supported by the fossil record, comparative anatomy, comparative embryology, biogeography, molecular biology, and observed evolutionary change.
SC.912.L.15.4:	Describe how and why organisms are hierarchically classified and based on evolutionary relationships.
SC.912.L.15.5:	Explain the reasons for changes in how organisms are classified.
SC.912.L.15.6:	Discuss distinguishing characteristics of the domains and kingdoms of living organisms.
SC.912.L.15.8:	Describe the scientific explanations of the origin of life on Earth.
SC.912.L.16.1:	Use Mendel's laws of segregation and independent assortment to analyze patterns of inheritance.
SC.912.L.16.14:	Describe the cell cycle, including the process of mitosis. Explain the role of mitosis in the formation of new cells and its importance in maintaining chromosome number during asexual reproduction.
SC.912.L.16.16:	Describe the process of meiosis, including independent assortment and crossing over. Explain how reduction division results in the formation of haploid gametes or spores.
SC.912.L.16.17:	Compare and contrast mitosis and meiosis and relate to the processes of sexual and asexual reproduction and their consequences for genetic variation.
SC.912.L.17.2:	Explain the general distribution of life in aquatic systems as a function of chemistry, geography, light, depth, salinity, and temperature.
SC.912.L.17.3:	Discuss how various oceanic and freshwater processes, such as currents, tides, and waves, affect the abundance of aquatic organisms.
SC.912.L.17.4:	Describe changes in ecosystems resulting from seasonal variations, climate change and succession.
SC.912.L.17.9:	Use a food web to identify and distinguish producers, consumers, and decomposers. Explain the pathway of energy transfer through trophic levels and the reduction of available energy at successive trophic levels.
SC.912.L.17.10:	Diagram and explain the biogeochemical cycles of an ecosystem, including water, carbon, and nitrogen cycle.
SC.912.L.17.11:	Evaluate the costs and benefits of renewable and nonrenewable resources, such as water, energy, fossil fuels, wildlife, and forests.
SC.912.L.17.15:	Discuss the effects of technology on environmental quality.
SC.912.L.17.19:	Describe how different natural resources are produced and how their rates of use and renewal limit availability.
SC.912.L.18.1:	Describe the basic molecular structures and primary functions of the four major categories of biological macromolecules.
SC.912.L.18.2:	Describe the important structural characteristics of monosaccharides, disaccharides, and polysaccharides and explain the functions of carbohydrates in living things.
SC.912.L.18.3:	Describe the structures of fatty acids, triglycerides, phospholipids, and steroids. Explain the functions of lipids in living organisms. Identify some reactions that fatty acids undergo. Relate the structure and function of cell membranes.
SC.912.L.18.4:	Describe the structures of proteins and amino acids. Explain the functions of proteins in living organisms. Identify some reactions that amino acids undergo. Relate the structure and function of enzymes.
SC.912.L.18.7:	Identify the reactants, products, and basic functions of photosynthesis.
SC.912.L.18.8:	Identify the reactants, products, and basic functions of aerobic and anaerobic cellular respiration.
SC.912.L.18.9:	Explain the interrelated nature of photosynthesis and cellular respiration.
SC.912.L.18.12:	Discuss the special properties of water that contribute to Earth's suitability as an environment for life: cohesive behavior, ability to moderate temperature, expansion upon freezing, and versatility as a solvent.
SC.912.N.1.1:	Define a problem based on a specific body of knowledge, for example: biology, chemistry, physics, and earth/space science, and do the following: 1. **Pose questions about the natural world,** (Articulate the purpose of the investigation and identify the relevant scientific concepts). 2. **Conduct systematic observations,** (Write procedures that are clear and replicable. Identify observables and examine relationships between test (independent) variable and outcome (dependent) variable. Employ appropriate methods for accurate and consistent observations; conduct and record measurements at appropriate levels of precision. Follow safety guidelines). 3. **Examine books and other sources of information to see what is already known,** 4. **Review what is known in light of empirical evidence,** (Examine whether available empirical evidence can be interpreted in terms of existing knowledge and models, and if not, modify or develop new models). 5. **Plan investigations,** (Design and evaluate a scientific investigation). 6. **Use tools to gather, analyze, and interpret data (this includes the use of measurement in metric and other systems, and also the generation and interpretation of graphical representations of data, including data tables and graphs),** (Collect data or evidence in an organized way. Properly use instruments, equipment, and materials (e.g., scales, probeware, meter sticks, microscopes, computers) including set-

	up, calibration, technique, maintenance, and storage). 7. **Pose answers, explanations, or descriptions of events,** 8. **Generate explanations that explicate or describe natural phenomena (inferences),** 9. **Use appropriate evidence and reasoning to justify these explanations to others,** 10. **Communicate results of scientific investigations, and** 11. **Evaluate the merits of the explanations produced by others.**
SC.912.N.1.2:	Describe and explain what characterizes science and its methods.
SC.912.N.1.3:	Recognize that the strength or usefulness of a scientific claim is evaluated through scientific argumentation, which depends on critical and logical thinking, and the active consideration of alternative scientific explanations to explain the data presented.
SC.912.N.1.4:	Identify sources of information and assess their reliability according to the strict standards of scientific investigation.
SC.912.N.1.5:	Describe and provide examples of how similar investigations conducted in many parts of the world result in the same outcome.
SC.912.N.1.6:	Describe how scientific inferences are drawn from scientific observations and provide examples from the content being studied.
SC.912.N.1.7:	Recognize the role of creativity in constructing scientific questions, methods and explanations.
SC.912.N.2.1:	Identify what is science, what clearly is not science, and what superficially resembles science (but fails to meet the criteria for science).
SC.912.N.2.3:	Identify examples of pseudoscience (such as astrology, phrenology) in society.
SC.912.N.2.4:	Explain that scientific knowledge is both durable and robust and open to change. Scientific knowledge can change because it is often examined and re-examined by new investigations and scientific argumentation. Because of these frequent examinations, scientific knowledge becomes stronger, leading to its durability.
SC.912.N.2.5:	Describe instances in which scientists' varied backgrounds, talents, interests, and goals influence the inferences and thus the explanations that they make about observations of natural phenomena and describe that competing interpretations (explanations) of scientists are a strength of science as they are a source of new, testable ideas that have the potential to add new evidence to support one or another of the explanations.
SC.912.N.3.3:	Explain that scientific laws are descriptions of specific relationships under given conditions in nature, but do not offer explanations for those relationships.
SC.912.N.3.4:	Recognize that theories do not become laws, nor do laws become theories; theories are well supported explanations and laws are well supported descriptions.
SC.912.N.3.5:	Describe the function of models in science, and identify the wide range of models used in science.
SC.912.N.4.1:	Explain how scientific knowledge and reasoning provide an empirically-based perspective to inform society's decision making.
SC.912.N.4.2:	Weigh the merits of alternative strategies for solving a specific societal problem by comparing a number of different costs and benefits, such as human, economic, and environmental.
SC.912.P.8.1:	Differentiate among the four states of matter.
SC.912.P.8.2:	Differentiate between physical and chemical properties and physical and chemical changes of matter.
SC.912.P.8.3:	Explore the scientific theory of atoms (also known as atomic theory) by describing changes in the atomic model over time and why those changes were necessitated by experimental evidence.
SC.912.P.8.4:	Explore the scientific theory of atoms (also known as atomic theory) by describing the structure of atoms in terms of protons, neutrons and electrons, and differentiate among these particles in terms of their mass, electrical charges and locations within the atom.
SC.912.P.8.5:	Relate properties of atoms and their position in the periodic table to the arrangement of their electrons.
SC.912.P.8.7:	Interpret formula representations of molecules and compounds in terms of composition and structure.
SC.912.P.10.1:	Differentiate among the various forms of energy and recognize that they can be transformed from one form to others.
SC.912.P.10.4:	Describe heat as the energy transferred by convection, conduction, and radiation, and explain the connection of heat to change in temperature or states of matter.
SC.912.P.10.7:	Distinguish between endothermic and exothermic chemical processes.
SC.912.P.10.8:	Explain entropy's role in determining the efficiency of processes that convert energy to work.
SC.912.P.10.19:	Explain that all objects emit and absorb electromagnetic radiation and distinguish between objects that are blackbody radiators and those that are not.
SC.912.P.10.20:	Describe the measurable properties of waves and explain the relationships among them and how these properties change when the wave moves from one medium to another.
SC.912.P.12.3:	Interpret and apply Newton's three laws of motion.
SC.912.P.12.7:	Recognize that nothing travels faster than the speed of light in vacuum which is the same for all observers no matter how they or the light source are moving.
SC.912.P.12.8:	Recognize that Newton's Laws are a limiting case of Einstein's Special Theory of Relativity at speeds that are much smaller than the speed of light.
SC.912.P.12.9:	Recognize that time, length, and energy depend on the frame of reference.
MA.K12.MTR.1.1:	Mathematicians who participate in effortful learning both individually and with others: • Analyze the problem in a way that makes sense given the task. • Ask questions that will help with solving the task. • Build perseverance by modifying methods as needed while solving a challenging task. • Stay engaged and maintain a positive mindset when working to solve tasks. • Help and support each other when attempting a new method or approach. **Clarifications:** Teachers who encourage students to participate actively in effortful learning both individually and with others: • Cultivate a community of growth mindset learners. • Foster perseverance in students by choosing tasks that are challenging. • Develop students' ability to analyze and problem solve. • Recognize students' effort when solving challenging problems.
MA.K12.MTR.2.1:	Demonstrate understanding by representing problems in multiple ways. Mathematicians who demonstrate understanding by representing problems in multiple ways: • Build understanding through modeling and using manipulatives. • Represent solutions to problems in multiple ways using objects, drawings, tables, graphs and equations. • Progress from modeling problems with objects and drawings to using algorithms and equations. • Express connections between concepts and representations. • Choose a representation based on the given context or purpose.

Clarifications:
Teachers who encourage students to demonstrate understanding by representing problems in multiple ways:

- Help students make connections between concepts and representations.
- Provide opportunities for students to use manipulatives when investigating concepts.
- Guide students from concrete to pictorial to abstract representations as understanding progresses.
- Show students that various representations can have different purposes and can be useful in different situations.

MA.K12.MTR.3.1:

Complete tasks with mathematical fluency.
Mathematicians who complete tasks with mathematical fluency:

- Select efficient and appropriate methods for solving problems within the given context.
- Maintain flexibility and accuracy while performing procedures and mental calculations.
- Complete tasks accurately and with confidence.
- Adapt procedures to apply them to a new context.
- Use feedback to improve efficiency when performing calculations.

Clarifications:
Teachers who encourage students to complete tasks with mathematical fluency:

- Provide students with the flexibility to solve problems by selecting a procedure that allows them to solve efficiently and accurately.
- Offer multiple opportunities for students to practice efficient and generalizable methods.
- Provide opportunities for students to reflect on the method they used and determine if a more efficient method could have been used.

MA.K12.MTR.4.1:

Engage in discussions that reflect on the mathematical thinking of self and others.
Mathematicians who engage in discussions that reflect on the mathematical thinking of self and others:

- Communicate mathematical ideas, vocabulary and methods effectively.
- Analyze the mathematical thinking of others.
- Compare the efficiency of a method to those expressed by others.
- Recognize errors and suggest how to correctly solve the task.
- Justify results by explaining methods and processes.
- Construct possible arguments based on evidence.

Clarifications:
Teachers who encourage students to engage in discussions that reflect on the mathematical thinking of self and others:

- Establish a culture in which students ask questions of the teacher and their peers, and error is an opportunity for learning.
- Create opportunities for students to discuss their thinking with peers.
- Select, sequence and present student work to advance and deepen understanding of correct and increasingly efficient methods.
- Develop students' ability to justify methods and compare their responses to the responses of their peers.

MA.K12.MTR.5.1:

Use patterns and structure to help understand and connect mathematical concepts.
Mathematicians who use patterns and structure to help understand and connect mathematical concepts:

- Focus on relevant details within a problem.
- Create plans and procedures to logically order events, steps or ideas to solve problems.
- Decompose a complex problem into manageable parts.
- Relate previously learned concepts to new concepts.
- Look for similarities among problems.
- Connect solutions of problems to more complicated large-scale situations.

Clarifications:
Teachers who encourage students to use patterns and structure to help understand and connect mathematical concepts:

- Help students recognize the patterns in the world around them and connect these patterns to mathematical concepts.
- Support students to develop generalizations based on the similarities found among problems.
- Provide opportunities for students to create plans and procedures to solve problems.
- Develop students' ability to construct relationships between their current understanding and more sophisticated ways of thinking.

MA.K12.MTR.6.1:

Assess the reasonableness of solutions.
Mathematicians who assess the reasonableness of solutions:

- Estimate to discover possible solutions.
- Use benchmark quantities to determine if a solution makes sense.
- Check calculations when solving problems.
- Verify possible solutions by explaining the methods used.
- Evaluate results based on the given context.

Clarifications:
Teachers who encourage students to assess the reasonableness of solutions:

- Have students estimate or predict solutions prior to solving.
- Prompt students to continually ask, "Does this solution make sense? How do you know?"
- Reinforce that students check their work as they progress within and after a task.
- Strengthen students' ability to verify solutions through justifications.

MA.K12.MTR.7.1:

Apply mathematics to real-world contexts.
Mathematicians who apply mathematics to real-world contexts:

- Connect mathematical concepts to everyday experiences.
- Use models and methods to understand, represent and solve problems.
- Perform investigations to gather data or determine if a method is appropriate. • Redesign models and methods to improve accuracy or efficiency.

Clarifications:
Teachers who encourage students to apply mathematics to real-world contexts:

	• Provide opportunities for students to create models, both concrete and abstract, and perform investigations. • Challenge students to question the accuracy of their models and methods. • Support students as they validate conclusions by comparing them to the given situation. • Indicate how various concepts can be applied to other disciplines.
ELA.K12.EE.1.1:	Cite evidence to explain and justify reasoning. **Clarifications:** K-1 Students include textual evidence in their oral communication with guidance and support from adults. The evidence can consist of details from the text without naming the text. During 1st grade, students learn how to incorporate the evidence in their writing. 2-3 Students include relevant textual evidence in their written and oral communication. Students should name the text when they refer to it. In 3rd grade, students should use a combination of direct and indirect citations. 4-5 Students continue with previous skills and reference comments made by speakers and peers. Students cite texts that they've directly quoted, paraphrased, or used for information. When writing, students will use the form of citation dictated by the instructor or the style guide referenced by the instructor. 6-8 Students continue with previous skills and use a style guide to create a proper citation. 9-12 Students continue with previous skills and should be aware of existing style guides and the ways in which they differ.
ELA.K12.EE.2.1:	Read and comprehend grade-level complex texts proficiently. **Clarifications:** See Text Complexity for grade-level complexity bands and a text complexity rubric.
ELA.K12.EE.3.1:	Make inferences to support comprehension. **Clarifications:** Students will make inferences before the words infer or inference are introduced. Kindergarten students will answer questions like "Why is the girl smiling?" or make predictions about what will happen based on the title page. Students will use the terms and apply them in 2nd grade and beyond.
ELA.K12.EE.4.1:	Use appropriate collaborative techniques and active listening skills when engaging in discussions in a variety of situations. **Clarifications:** In kindergarten, students learn to listen to one another respectfully. In grades 1-2, students build upon these skills by justifying what they are thinking. For example: "I think _____ because _____." The collaborative conversations are becoming academic conversations. In grades 3-12, students engage in academic conversations discussing claims and justifying their reasoning, refining and applying skills. Students build on ideas, propel the conversation, and support claims and counterclaims with evidence.
ELA.K12.EE.5.1:	Use the accepted rules governing a specific format to create quality work. **Clarifications:** Students will incorporate skills learned into work products to produce quality work. For students to incorporate these skills appropriately, they must receive instruction. A 3rd grade student creating a poster board display must have instruction in how to effectively present information to do quality work.
ELA.K12.EE.6.1:	Use appropriate voice and tone when speaking or writing. **Clarifications:** In kindergarten and 1st grade, students learn the difference between formal and informal language. For example, the way we talk to our friends differs from the way we speak to adults. In 2nd grade and beyond, students practice appropriate social and academic language to discuss texts.
ELD.K12.ELL.SC.1:	English language learners communicate information, ideas and concepts necessary for academic success in the content area of Science.
ELD.K12.ELL.SI.1:	English language learners communicate for social and instructional purposes within the school setting.

General Course Information and Notes

GENERAL NOTES

While the content focus of this course is consistent with the Integrated Science 1 course, students will explore these concepts in greater depth. In general, the academic pace and rigor will be greatly increased for honors level course work. Laboratory investigations that include the use of scientific inquiry, research, measurement, problem solving, laboratory apparatus and technologies, experimental procedures, and safety procedures are an integral part of this course. The National Science Teachers Association (NSTA) recommends that at the high school level, all students should be in the science lab or field, collecting data every week. School laboratory investigations (labs) are defined by the National Research Council (NRC) as an experience in the laboratory, classroom, or the field that provides students with opportunities to interact directly with natural phenomena or with data collected by others using tools, materials, data collection techniques, and models (NRC, 2006, p. 3). Laboratory investigations in the high school classroom should help all students develop a growing understanding of the complexity and ambiguity of empirical work, as well as the skills to calibrate and troubleshoot equipment used to make observations. Learners should understand measurement error; and have the skills to aggregate, interpret, and present the resulting data (National Research Council, 2006, p.77; NSTA, 2007).

Special Notes:

Instructional Practices
Teaching from a range of complex text is optimized when teachers in all subject areas implement the following strategies on a routine basis:

1. Ensuring wide reading from complex text that varies in length.
2. Making close reading and rereading of texts central to lessons.
3. Emphasizing text-specific complex questions, and cognitively complex tasks, reinforce focus on the text and cultivate independence.
4. Emphasizing students supporting answers based upon evidence from the text.

5. Providing extensive research and writing opportunities (claims and evidence).

Science and Engineering Practices (NRC *Framework for K-12 Science Education, 2010*)

- Asking questions (for science) and defining problems (for engineering).
- Developing and using models.
- Planning and carrying out investigations.
- Analyzing and interpreting data.
- Using mathematics, information and computer technology, and computational thinking.
- Constructing explanations (for science) and designing solutions (for engineering).
- Engaging in argument from evidence.
- Obtaining, evaluating, and communicating information.

Honors and Advanced Level Course Note: Advanced courses require a greater demand on students through increased academic rigor. Academic rigor is obtained through the application, analysis, evaluation, and creation of complex ideas that are often abstract and multi-faceted. Students are challenged to think and collaborate critically on the content they are learning. Honors level rigor will be achieved by increasing text complexity through text selection, focus on high-level qualitative measures, and complexity of task. Instruction will be structured to give students a deeper understanding of conceptual themes and organization within and across disciplines. Academic rigor is more than simply assigning to students a greater quantity of work.

Florida's Benchmarks for Excellent Student Thinking (B.E.S.T.) Standards
This course includes Florida's B.E.S.T. ELA Expectations (EE) and Mathematical Thinking and Reasoning Standards (MTRs) for students. Florida educators should intentionally embed these standards within the content and their instruction as applicable. For guidance on the implementation of the EEs and MTRs, please visit cpalms.org/Standards/BEST_Standards.aspx and select the appropriate B.E.S.T. Standards package.

English Language Development ELD Standards Special Notes Section:
Teachers are required to provide listening, speaking, reading and writing instruction that allows English language learners (ELL) to communicate information, ideas and concepts for academic success in the content area of Science. For the given level of English language proficiency and with visual, graphic, or interactive support, students will interact with grade level words, expressions, sentences and discourse to process or produce language necessary for academic success The ELD standard should specify a relevant content area concept or topic of study chosen by curriculum developers and teachers which maximizes an ELL's need for communication and social skills. To access an ELL supporting document which delineates performance definitions and descriptors, please click on the following link: cpalms.org/uploads/docs/standards/eld/SC.pdf

Additional Instructional Resources:
A.V.E. for Success Collection is provided by the Florida Association of School Administrators: fasa.net/4DCGI/cms/review.html?Action=CMS_Document&DocID=139. Please be aware that these resources have not been reviewed by CPALMS and there may be a charge for the use of some of them in this collection.

GENERAL INFORMATION

Course Number: 2002410

Course Path: Section: Grades PreK to 12 Education Courses > **Grade Group:** Grades 9 to 12 and Adult Education Courses > **Subject:** Science > **SubSubject:** Integrated Sciences >

Abbreviated Title: INTEG SCI 1 HON

Number of Credits: One (1) credit

Course Length: Year (Y)

Course Attributes:

- Honors
- Class Size Core Required

Course Type: Core Academic Course

Course Level: 3

Course Status: Draft - Course Pending Approval

Grade Level(s): 9,10,11,12

Graduation Requirement: Equally Rigorous Science

Educator Certifications

Earth/Space Science (Grades 6-12)
Physics (Grades 6-12)
Science (Secondary Grades 7-12)
Biology (Grades 6-12)
Middle Grades General Science (Middle Grades 5-9)
Chemistry (Grades 6-12)

Integrated Science 2 (#2002420) 2022 - And Beyond

Course Standards

Name	Description
SC.912.E.5.3:	Describe and predict how the initial mass of a star determines its evolution.
SC.912.E.5.5:	Explain the formation of planetary systems based on our knowledge of our Solar System and apply this knowledge to newly discovered planetary systems.
SC.912.E.5.6:	Develop logical connections through physical principles, including Kepler's and Newton's Laws about the relationships and the effects of Earth, Moon, and Sun on each other.
SC.912.E.7.4:	Summarize the conditions that contribute to the climate of a geographic area, including the relationships to lakes and oceans.
SC.912.E.7.7:	Identify, analyze, and relate the internal (Earth system) and external (astronomical) conditions that contribute to global climate change.
SC.912.L.14.6:	Explain the significance of genetic factors, environmental factors, and pathogenic agents to health from the perspectives of both individual and public health.
SC.912.L.14.26:	Identify the major parts of the brain on diagrams or models.
SC.912.L.14.36:	Describe the factors affecting blood flow through the cardiovascular system.
SC.912.L.14.52:	Explain the basic functions of the human immune system, including specific and nonspecific immune response, vaccines, and antibiotics.
SC.912.L.15.8:	Describe the scientific explanations of the origin of life on Earth.
SC.912.L.15.15:	Describe how mutation and genetic recombination increase genetic variation.
SC.912.L.16.1:	Use Mendel's laws of segregation and independent assortment to analyze patterns of inheritance.
SC.912.L.16.2:	Discuss observed inheritance patterns caused by various modes of inheritance, including dominant, recessive, codominant, sex-linked, polygenic, and multiple alleles.
SC.912.L.16.3:	Describe the basic process of DNA replication and how it relates to the transmission and conservation of the genetic information.
SC.912.L.16.4:	Explain how mutations in the DNA sequence may or may not result in phenotypic change. Explain how mutations in gametes may result in phenotypic changes in offspring.
SC.912.L.16.5:	Explain the basic processes of transcription and translation, and how they result in the expression of genes.
SC.912.L.16.9:	Explain how and why the genetic code is universal and is common to almost all organisms.
SC.912.L.16.10:	Evaluate the impact of biotechnology on the individual, society and the environment, including medical and ethical issues.
SC.912.L.16.13:	Describe the basic anatomy and physiology of the human reproductive system. Describe the process of human development from fertilization to birth and major changes that occur in each trimester of pregnancy.
SC.912.L.16.16:	Describe the process of meiosis, including independent assortment and crossing over. Explain how reduction division results in the formation of haploid gametes or spores.
SC.912.L.16.17:	Compare and contrast mitosis and meiosis and relate to the processes of sexual and asexual reproduction and their consequences for genetic variation.
SC.912.L.17.9:	Use a food web to identify and distinguish producers, consumers, and decomposers. Explain the pathway of energy transfer through trophic levels and the reduction of available energy at successive trophic levels.
SC.912.L.18.1:	Describe the basic molecular structures and primary functions of the four major categories of biological macromolecules.
SC.912.L.18.7:	Identify the reactants, products, and basic functions of photosynthesis.
SC.912.L.18.8:	Identify the reactants, products, and basic functions of aerobic and anaerobic cellular respiration.
SC.912.L.18.9:	Explain the interrelated nature of photosynthesis and cellular respiration.
SC.912.L.18.10:	Connect the role of adenosine triphosphate (ATP) to energy transfers within a cell.
SC.912.L.18.11:	Explain the role of enzymes as catalysts that lower the activation energy of biochemical reactions. Identify factors, such as pH and temperature, and their effect on enzyme activity.
SC.912.N.1.1:	Define a problem based on a specific body of knowledge, for example: biology, chemistry, physics, and earth/space science, and do the following: 1. **Pose questions about the natural world,** (Articulate the purpose of the investigation and identify the relevant scientific concepts). 2. **Conduct systematic observations,** (Write procedures that are clear and replicable. Identify observables and examine relationships between test (independent) variable and outcome (dependent) variable. Employ appropriate methods for accurate and consistent observations; conduct and record measurements at appropriate levels of precision. Follow safety guidelines). 3. **Examine books and other sources of information to see what is already known,** 4. **Review what is known in light of empirical evidence,** (Examine whether available empirical evidence can be interpreted in terms of existing knowledge and models, and if not, modify or develop new models). 5. **Plan investigations,** (Design and evaluate a scientific investigation). 6. **Use tools to gather, analyze, and interpret data (this includes the use of measurement in metric and other systems, and also the generation and interpretation of graphical representations of data, including data tables and graphs),** (Collect data or evidence in an organized way. Properly use instruments, equipment, and materials (e.g., scales, probeware, meter sticks, microscopes, computers) including set-up, calibration, technique, maintenance, and storage). 7. **Pose answers, explanations, or descriptions of events,** 8. **Generate explanations that explicate or describe natural phenomena (inferences),** 9. **Use appropriate evidence and reasoning to justify these explanations to others,** 10. **Communicate results of scientific investigations, and** 11. **Evaluate the merits of the explanations produced by others.**
SC.912.N.1.4:	Identify sources of information and assess their reliability according to the strict standards of scientific investigation.
SC.912.N.1.6:	Describe how scientific inferences are drawn from scientific observations and provide examples from the content being studied.
SC.912.N.1.7:	Recognize the role of creativity in constructing scientific questions, methods and explanations.
SC.912.N.2.4:	Explain that scientific knowledge is both durable and robust and open to change. Scientific knowledge can change because it is often examined and re-examined by new investigations and scientific argumentation. Because of these frequent examinations, scientific knowledge becomes stronger,

	leading to its durability.
SC.912.N.2.5:	Describe instances in which scientists' varied backgrounds, talents, interests, and goals influence the inferences and thus the explanations that they make about observations of natural phenomena and describe that competing interpretations (explanations) of scientists are a strength of science as they are a source of new, testable ideas that have the potential to add new evidence to support one or another of the explanations.
SC.912.N.3.1:	Explain that a scientific theory is the culmination of many scientific investigations drawing together all the current evidence concerning a substantial range of phenomena; thus, a scientific theory represents the most powerful explanation scientists have to offer.
SC.912.N.3.2:	Describe the role consensus plays in the historical development of a theory in any one of the disciplines of science.
SC.912.P.8.6:	Distinguish between bonding forces holding compounds together and other attractive forces, including hydrogen bonding and van der Waals forces.
SC.912.P.8.8:	Characterize types of chemical reactions, for example: redox, acid-base, synthesis, and single and double replacement reactions.
SC.912.P.8.9:	Apply the mole concept and the law of conservation of mass to calculate quantities of chemicals participating in reactions.
SC.912.P.8.11:	Relate acidity and basicity to hydronium and hydroxyl ion concentration and pH.
SC.912.P.8.12:	Describe the properties of the carbon atom that make the diversity of carbon compounds possible.
SC.912.P.8.13:	Identify selected functional groups and relate how they contribute to properties of carbon compounds.
SC.912.P.10.5:	Relate temperature to the average molecular kinetic energy.
SC.912.P.10.10:	Compare the magnitude and range of the four fundamental forces (gravitational, electromagnetic, weak nuclear, strong nuclear).
SC.912.P.10.12:	Differentiate between chemical and nuclear reactions.
SC.912.P.10.14:	Differentiate among conductors, semiconductors, and insulators.
SC.912.P.10.15:	Investigate and explain the relationships among current, voltage, resistance, and power.
SC.912.P.12.1:	Distinguish between scalar and vector quantities and assess which should be used to describe an event.
SC.912.P.12.2:	Analyze the motion of an object in terms of its position, velocity, and acceleration (with respect to a frame of reference) as functions of time.
SC.912.P.12.4:	Describe how the gravitational force between two objects depends on their masses and the distance between them.
MA.K12.MTR.1.1:	Mathematicians who participate in effortful learning both individually and with others: • Analyze the problem in a way that makes sense given the task. • Ask questions that will help with solving the task. • Build perseverance by modifying methods as needed while solving a challenging task. • Stay engaged and maintain a positive mindset when working to solve tasks. • Help and support each other when attempting a new method or approach. **Clarifications:** Teachers who encourage students to participate actively in effortful learning both individually and with others: • Cultivate a community of growth mindset learners. • Foster perseverance in students by choosing tasks that are challenging. • Develop students' ability to analyze and problem solve. • Recognize students' effort when solving challenging problems.
MA.K12.MTR.2.1:	Demonstrate understanding by representing problems in multiple ways. Mathematicians who demonstrate understanding by representing problems in multiple ways: • Build understanding through modeling and using manipulatives. • Represent solutions to problems in multiple ways using objects, drawings, tables, graphs and equations. • Progress from modeling problems with objects and drawings to using algorithms and equations. • Express connections between concepts and representations. • Choose a representation based on the given context or purpose. **Clarifications:** Teachers who encourage students to demonstrate understanding by representing problems in multiple ways: • Help students make connections between concepts and representations. • Provide opportunities for students to use manipulatives when investigating concepts. • Guide students from concrete to pictorial to abstract representations as understanding progresses. • Show students that various representations can have different purposes and can be useful in different situations.
MA.K12.MTR.3.1:	Complete tasks with mathematical fluency. Mathematicians who complete tasks with mathematical fluency: • Select efficient and appropriate methods for solving problems within the given context. • Maintain flexibility and accuracy while performing procedures and mental calculations. • Complete tasks accurately and with confidence. • Adapt procedures to apply them to a new context. • Use feedback to improve efficiency when performing calculations. **Clarifications:** Teachers who encourage students to complete tasks with mathematical fluency: • Provide students with the flexibility to solve problems by selecting a procedure that allows them to solve efficiently and accurately. • Offer multiple opportunities for students to practice efficient and generalizable methods. • Provide opportunities for students to reflect on the method they used and determine if a more efficient method could have been used.
MA.K12.MTR.4.1:	Engage in discussions that reflect on the mathematical thinking of self and others. Mathematicians who engage in discussions that reflect on the mathematical thinking of self and others: • Communicate mathematical ideas, vocabulary and methods effectively. • Analyze the mathematical thinking of others. • Compare the efficiency of a method to those expressed by others. • Recognize errors and suggest how to correctly solve the task. • Justify results by explaining methods and processes. • Construct possible arguments based on evidence. **Clarifications:**

	Teachers who encourage students to engage in discussions that reflect on the mathematical thinking of self and others: • Establish a culture in which students ask questions of the teacher and their peers, and error is an opportunity for learning. • Create opportunities for students to discuss their thinking with peers. • Select, sequence and present student work to advance and deepen understanding of correct and increasingly efficient methods. • Develop students' ability to justify methods and compare their responses to the responses of their peers.
MA.K12.MTR.5.1:	Use patterns and structure to help understand and connect mathematical concepts. Mathematicians who use patterns and structure to help understand and connect mathematical concepts: • Focus on relevant details within a problem. • Create plans and procedures to logically order events, steps or ideas to solve problems. • Decompose a complex problem into manageable parts. • Relate previously learned concepts to new concepts. • Look for similarities among problems. • Connect solutions of problems to more complicated large-scale situations. **Clarifications:** Teachers who encourage students to use patterns and structure to help understand and connect mathematical concepts: • Help students recognize the patterns in the world around them and connect these patterns to mathematical concepts. • Support students to develop generalizations based on the similarities found among problems. • Provide opportunities for students to create plans and procedures to solve problems. • Develop students' ability to construct relationships between their current understanding and more sophisticated ways of thinking.
MA.K12.MTR.6.1:	Assess the reasonableness of solutions. Mathematicians who assess the reasonableness of solutions: • Estimate to discover possible solutions. • Use benchmark quantities to determine if a solution makes sense. • Check calculations when solving problems. • Verify possible solutions by explaining the methods used. • Evaluate results based on the given context. **Clarifications:** Teachers who encourage students to assess the reasonableness of solutions: • Have students estimate or predict solutions prior to solving. • Prompt students to continually ask, "Does this solution make sense? How do you know?" • Reinforce that students check their work as they progress within and after a task. • Strengthen students' ability to verify solutions through justifications.
MA.K12.MTR.7.1:	Apply mathematics to real-world contexts. Mathematicians who apply mathematics to real-world contexts: • Connect mathematical concepts to everyday experiences. • Use models and methods to understand, represent and solve problems. • Perform investigations to gather data or determine if a method is appropriate. • Redesign models and methods to improve accuracy or efficiency. **Clarifications:** Teachers who encourage students to apply mathematics to real-world contexts: • Provide opportunities for students to create models, both concrete and abstract, and perform investigations. • Challenge students to question the accuracy of their models and methods. • Support students as they validate conclusions by comparing them to the given situation. • Indicate how various concepts can be applied to other disciplines.
ELA.K12.EE.1.1:	Cite evidence to explain and justify reasoning. **Clarifications:** K-1 Students include textual evidence in their oral communication with guidance and support from adults. The evidence can consist of details from the text without naming the text. During 1st grade, students learn how to incorporate the evidence in their writing. 2-3 Students include relevant textual evidence in their written and oral communication. Students should name the text when they refer to it. In 3rd grade, students should use a combination of direct and indirect citations. 4-5 Students continue with previous skills and reference comments made by speakers and peers. Students cite texts that they've directly quoted, paraphrased, or used for information. When writing, students will use the form of citation dictated by the instructor or the style guide referenced by the instructor. 6-8 Students continue with previous skills and use a style guide to create a proper citation. 9-12 Students continue with previous skills and should be aware of existing style guides and the ways in which they differ.
ELA.K12.EE.2.1:	Read and comprehend grade-level complex texts proficiently. **Clarifications:** See Text Complexity for grade-level complexity bands and a text complexity rubric.
ELA.K12.EE.3.1:	Make inferences to support comprehension. **Clarifications:** Students will make inferences before the words infer or inference are introduced. Kindergarten students will answer questions like "Why is the girl smiling?" or make predictions about what will happen based on the title page. Students will use the terms and apply them in 2nd grade and beyond.
	Use appropriate collaborative techniques and active listening skills when engaging in discussions in a variety of situations. **Clarifications:**

ELA.K12.EE.4.1:	In kindergarten, students learn to listen to one another respectfully. In grades 1-2, students build upon these skills by justifying what they are thinking. For example: "I think _____ because _____." The collaborative conversations are becoming academic conversations. In grades 3-12, students engage in academic conversations discussing claims and justifying their reasoning, refining and applying skills. Students build on ideas, propel the conversation, and support claims and counterclaims with evidence.
ELA.K12.EE.5.1:	Use the accepted rules governing a specific format to create quality work. **Clarifications:** Students will incorporate skills learned into work products to produce quality work. For students to incorporate these skills appropriately, they must receive instruction. A 3rd grade student creating a poster board display must have instruction in how to effectively present information to do quality work.
ELA.K12.EE.6.1:	Use appropriate voice and tone when speaking or writing. **Clarifications:** In kindergarten and 1st grade, students learn the difference between formal and informal language. For example, the way we talk to our friends differs from the way we speak to adults. In 2nd grade and beyond, students practice appropriate social and academic language to discuss texts.
HE.912.C.1.3:	Evaluate how environment and personal health are interrelated. **Clarifications:** Food options within a community; prenatal-care services; availability of recreational facilities; air quality; weather-safety awareness; and weather, air, and water conditions.
HE.912.C.1.5:	Analyze strategies for prevention, detection, and treatment of communicable and chronic diseases. **Clarifications:** Health prevention, detection, and treatment of: breast and testicular cancer, suicide, obesity, and industrial-related chronic disease.
HE.912.C.1.7:	Analyze how heredity and family history can impact personal health. **Clarifications:** Drug use, family obesity, heart disease, mental health, and non-communicable illness or disease.
ELD.K12.ELL.SC.1:	English language learners communicate information, ideas and concepts necessary for academic success in the content area of Science.
ELD.K12.ELL.SI.1:	English language learners communicate for social and instructional purposes within the school setting.

General Course Information and Notes

GENERAL NOTES

Laboratory investigations that include the use of scientific inquiry, research, measurement, problem solving, laboratory apparatus and technologies, experimental procedures, and safety procedures are an integral part of this course. The National Science Teachers Association (NSTA) recommends that at the high school level, all students should be in the science lab or field, collecting data every week. School laboratory investigations (labs) are defined by the National Research Council (NRC) as an experience in the laboratory, classroom, or the field that provides students with opportunities to interact directly with natural phenomena or with data collected by others using tools, materials, data collection techniques, and models (NRC, 2006, p. 3). Laboratory investigations in the high school classroom should help all students develop a growing understanding of the complexity and ambiguity of empirical work, as well as the skills to calibrate and troubleshoot equipment used to make observations. Learners should understand measurement error; and have the skills to aggregate, interpret, and present the resulting data (National Research Council, 2006, p.77; NSTA, 2007).

Special Notes:

Instructional Practices
Teaching from a range of complex text is optimized when teachers in all subject areas implement the following strategies on a routine basis:

1. Ensuring wide reading from complex text that varies in length.
2. Making close reading and rereading of texts central to lessons.
3. Emphasizing text-specific complex questions, and cognitively complex tasks, reinforce focus on the text and cultivate independence.
4. Emphasizing students supporting answers based upon evidence from the text.
5. Providing extensive research and writing opportunities (claims and evidence).

Science and Engineering Practices (NRC *Framework for K-12 Science Education, 2010*)

- Asking questions (for science) and defining problems (for engineering).
- Developing and using models.
- Planning and carrying out investigations.
- Analyzing and interpreting data.
- Using mathematics, information and computer technology, and computational thinking.
- Constructing explanations (for science) and designing solutions (for engineering).
- Engaging in argument from evidence.
- Obtaining, evaluating, and communicating information.

Florida's Benchmarks for Excellent Student Thinking (B.E.S.T.) Standards
This course includes Florida's B.E.S.T. ELA Expectations (EE) and Mathematical Thinking and Reasoning Standards (MTRs) for students. Florida educators should intentionally embed these standards within the content and their instruction as applicable. For guidance on the implementation of the EEs and MTRs, please visit

cpalms.org/Standards/BEST_Standards.aspx and select the appropriate B.E.S.T. Standards package.

English Language Development ELD Standards Special Notes Section:
Teachers are required to provide listening, speaking, reading and writing instruction that allows English language learners (ELL) to communicate information, ideas and concepts for academic success in the content area of Science. For the given level of English language proficiency and with visual, graphic, or interactive support, students will interact with grade level words, expressions, sentences and discourse to process or produce language necessary for academic success The ELD standard should specify a relevant content area concept or topic of study chosen by curriculum developers and teachers which maximizes an ELL's need for communication and social skills. To access an ELL supporting document which delineates performance definitions and descriptors, please click on the following link: cpalms.org/uploads/docs/standards/eld/SC.pdf

GENERAL INFORMATION

Course Number: 2002420

Course Path: Section: Grades PreK to 12 Education Courses > **Grade Group:** Grades 9 to 12 and Adult Education Courses > **Subject:** Science > **SubSubject:** Integrated Sciences >

Abbreviated Title: INTEG SCI 2

Number of Credits: One (1) credit

Course Length: Year (Y)

Course Attributes:

- Class Size Core Required

Course Type: Core Academic Course

Course Level: 2

Course Status: Draft - Course Pending Approval

Grade Level(s): 9,10,11,12

Graduation Requirement: Equally Rigorous Science

Educator Certifications

Earth/Space Science (Grades 6-12)
Physics (Grades 6-12)
Science (Secondary Grades 7-12)
Biology (Grades 6-12)
Chemistry (Grades 6-12)

Integrated Science 2 Honors (#2002430) 2022 - And Beyond

Course Standards

Name	Description
SC.912.E.5.3:	Describe and predict how the initial mass of a star determines its evolution.
SC.912.E.5.5:	Explain the formation of planetary systems based on our knowledge of our Solar System and apply this knowledge to newly discovered planetary systems.
SC.912.E.5.6:	Develop logical connections through physical principles, including Kepler's and Newton's Laws about the relationships and the effects of Earth, Moon, and Sun on each other.
SC.912.E.7.2:	Analyze the causes of the various kinds of surface and deep water motion within the oceans and their impacts on the transfer of energy between the poles and the equator.
SC.912.E.7.4:	Summarize the conditions that contribute to the climate of a geographic area, including the relationships to lakes and oceans.
SC.912.E.7.7:	Identify, analyze, and relate the internal (Earth system) and external (astronomical) conditions that contribute to global climate change.
SC.912.L.14.5:	Explain the evidence supporting the scientific theory of the origin of eukaryotic cells (endosymbiosis).
SC.912.L.14.6:	Explain the significance of genetic factors, environmental factors, and pathogenic agents to health from the perspectives of both individual and public health.
SC.912.L.14.7:	Relate the structure of each of the major plant organs and tissues to physiological processes.
SC.912.L.14.26:	Identify the major parts of the brain on diagrams or models.
SC.912.L.14.27:	Identify the functions of the major parts of the brain, including the meninges, medulla, pons, midbrain, hypothalamus, thalamus, cerebellum and cerebrum.
SC.912.L.14.52:	Explain the basic functions of the human immune system, including specific and nonspecific immune response, vaccines, and antibiotics.
SC.912.L.15.15:	Describe how mutation and genetic recombination increase genetic variation.
SC.912.L.16.1:	Use Mendel's laws of segregation and independent assortment to analyze patterns of inheritance.
SC.912.L.16.2:	Discuss observed inheritance patterns caused by various modes of inheritance, including dominant, recessive, codominant, sex-linked, polygenic, and multiple alleles.
SC.912.L.16.3:	Describe the basic process of DNA replication and how it relates to the transmission and conservation of the genetic information.
SC.912.L.16.4:	Explain how mutations in the DNA sequence may or may not result in phenotypic change. Explain how mutations in gametes may result in phenotypic changes in offspring.
SC.912.L.16.5:	Explain the basic processes of transcription and translation, and how they result in the expression of genes.
SC.912.L.16.7:	Describe how viruses and bacteria transfer genetic material between cells and the role of this process in biotechnology.
SC.912.L.16.9:	Explain how and why the genetic code is universal and is common to almost all organisms.
SC.912.L.16.10:	Evaluate the impact of biotechnology on the individual, society and the environment, including medical and ethical issues.
SC.912.L.16.12:	Describe how basic DNA technology (restriction digestion by endonucleases, gel electrophoresis, polymerase chain reaction, ligation, and transformation) is used to construct recombinant DNA molecules (DNA cloning).
SC.912.L.16.13:	Describe the basic anatomy and physiology of the human reproductive system. Describe the process of human development from fertilization to birth and major changes that occur in each trimester of pregnancy.
SC.912.L.16.14:	Describe the cell cycle, including the process of mitosis. Explain the role of mitosis in the formation of new cells and its importance in maintaining chromosome number during asexual reproduction.
SC.912.L.16.16:	Describe the process of meiosis, including independent assortment and crossing over. Explain how reduction division results in the formation of haploid gametes or spores.
SC.912.L.16.17:	Compare and contrast mitosis and meiosis and relate to the processes of sexual and asexual reproduction and their consequences for genetic variation.
SC.912.L.17.9:	Use a food web to identify and distinguish producers, consumers, and decomposers. Explain the pathway of energy transfer through trophic levels and the reduction of available energy at successive trophic levels.
SC.912.L.17.10:	Diagram and explain the biogeochemical cycles of an ecosystem, including water, carbon, and nitrogen cycle.
SC.912.L.18.1:	Describe the basic molecular structures and primary functions of the four major categories of biological macromolecules.
SC.912.L.18.7:	Identify the reactants, products, and basic functions of photosynthesis.
SC.912.L.18.8:	Identify the reactants, products, and basic functions of aerobic and anaerobic cellular respiration.
SC.912.L.18.9:	Explain the interrelated nature of photosynthesis and cellular respiration.
SC.912.L.18.10:	Connect the role of adenosine triphosphate (ATP) to energy transfers within a cell.
SC.912.L.18.11:	Explain the role of enzymes as catalysts that lower the activation energy of biochemical reactions. Identify factors, such as pH and temperature, and their effect on enzyme activity.
SC.912.N.1.1:	Define a problem based on a specific body of knowledge, for example: biology, chemistry, physics, and earth/space science, and do the following: 1. **Pose questions about the natural world,** (Articulate the purpose of the investigation and identify the relevant scientific concepts). 2. **Conduct systematic observations,** (Write procedures that are clear and replicable. Identify observables and examine relationships between test (independent) variable and outcome (dependent) variable. Employ appropriate methods for accurate and consistent observations; conduct and record measurements at appropriate levels of precision. Follow safety guidelines). 3. **Examine books and other sources of information to see what is already known,** 4. **Review what is known in light of empirical evidence,** (Examine whether available empirical evidence can be interpreted in terms of existing knowledge and models, and if not, modify or develop new models). 5. **Plan investigations,** (Design and evaluate a scientific investigation). 6. **Use tools to gather, analyze, and interpret data (this includes the use of measurement in metric and other systems, and also the generation and interpretation of graphical representations of data, including data tables and graphs),** (Collect data or evidence in an organized way. Properly use instruments, equipment, and materials (e.g., scales, probeware, meter sticks, microscopes, computers) including set-up, calibration, technique, maintenance, and storage). 7. **Pose answers, explanations, or descriptions of events,**

	8. **Generate explanations that explicate or describe natural phenomena (inferences),** 9. **Use appropriate evidence and reasoning to justify these explanations to others,** 10. **Communicate results of scientific investigations, and** 11. **Evaluate the merits of the explanations produced by others.**
SC.912.N.1.5:	Describe and provide examples of how similar investigations conducted in many parts of the world result in the same outcome.
SC.912.N.1.7:	Recognize the role of creativity in constructing scientific questions, methods and explanations.
SC.912.N.2.1:	Identify what is science, what clearly is not science, and what superficially resembles science (but fails to meet the criteria for science).
SC.912.N.2.3:	Identify examples of pseudoscience (such as astrology, phrenology) in society.
SC.912.N.2.4:	Explain that scientific knowledge is both durable and robust and open to change. Scientific knowledge can change because it is often examined and re-examined by new investigations and scientific argumentation. Because of these frequent examinations, scientific knowledge becomes stronger, leading to its durability.
SC.912.N.3.1:	Explain that a scientific theory is the culmination of many scientific investigations drawing together all the current evidence concerning a substantial range of phenomena; thus, a scientific theory represents the most powerful explanation scientists have to offer.
SC.912.P.8.6:	Distinguish between bonding forces holding compounds together and other attractive forces, including hydrogen bonding and van der Waals forces.
SC.912.P.8.8:	Characterize types of chemical reactions, for example: redox, acid-base, synthesis, and single and double replacement reactions.
SC.912.P.8.9:	Apply the mole concept and the law of conservation of mass to calculate quantities of chemicals participating in reactions.
SC.912.P.8.11:	Relate acidity and basicity to hydronium and hydroxyl ion concentration and pH.
SC.912.P.8.12:	Describe the properties of the carbon atom that make the diversity of carbon compounds possible.
SC.912.P.8.13:	Identify selected functional groups and relate how they contribute to properties of carbon compounds.
SC.912.P.10.5:	Relate temperature to the average molecular kinetic energy.
SC.912.P.10.6:	Create and interpret potential energy diagrams, for example: chemical reactions, orbits around a central body, motion of a pendulum.
SC.912.P.10.9:	Describe the quantization of energy at the atomic level.
SC.912.P.10.10:	Compare the magnitude and range of the four fundamental forces (gravitational, electromagnetic, weak nuclear, strong nuclear).
SC.912.P.10.12:	Differentiate between chemical and nuclear reactions.
SC.912.P.10.14:	Differentiate among conductors, semiconductors, and insulators.
SC.912.P.10.15:	Investigate and explain the relationships among current, voltage, resistance, and power.
SC.912.P.10.20:	Describe the measurable properties of waves and explain the relationships among them and how these properties change when the wave moves from one medium to another.
SC.912.P.10.21:	Qualitatively describe the shift in frequency in sound or electromagnetic waves due to the relative motion of a source or a receiver.
SC.912.P.10.22:	Construct ray diagrams and use thin lens and mirror equations to locate the images formed by lenses and mirrors.
SC.912.P.12.1:	Distinguish between scalar and vector quantities and assess which should be used to describe an event.
SC.912.P.12.2:	Analyze the motion of an object in terms of its position, velocity, and acceleration (with respect to a frame of reference) as functions of time.
SC.912.P.12.4:	Describe how the gravitational force between two objects depends on their masses and the distance between them.
SC.912.P.12.11:	Describe phase transitions in terms of kinetic molecular theory.
SC.912.P.12.12:	Explain how various factors, such as concentration, temperature, and presence of a catalyst affect the rate of a chemical reaction.
MA.K12.MTR.1.1:	Mathematicians who participate in effortful learning both individually and with others: • Analyze the problem in a way that makes sense given the task. • Ask questions that will help with solving the task. • Build perseverance by modifying methods as needed while solving a challenging task. • Stay engaged and maintain a positive mindset when working to solve tasks. • Help and support each other when attempting a new method or approach. **Clarifications:** Teachers who encourage students to participate actively in effortful learning both individually and with others: • Cultivate a community of growth mindset learners. • Foster perseverance in students by choosing tasks that are challenging. • Develop students' ability to analyze and problem solve. • Recognize students' effort when solving challenging problems.
MA.K12.MTR.2.1:	Demonstrate understanding by representing problems in multiple ways. Mathematicians who demonstrate understanding by representing problems in multiple ways: • Build understanding through modeling and using manipulatives. • Represent solutions to problems in multiple ways using objects, drawings, tables, graphs and equations. • Progress from modeling problems with objects and drawings to using algorithms and equations. • Express connections between concepts and representations. • Choose a representation based on the given context or purpose. **Clarifications:** Teachers who encourage students to demonstrate understanding by representing problems in multiple ways: • Help students make connections between concepts and representations. • Provide opportunities for students to use manipulatives when investigating concepts. • Guide students from concrete to pictorial to abstract representations as understanding progresses. • Show students that various representations can have different purposes and can be useful in different situations.
MA.K12.MTR.3.1:	Complete tasks with mathematical fluency. Mathematicians who complete tasks with mathematical fluency: • Select efficient and appropriate methods for solving problems within the given context. • Maintain flexibility and accuracy while performing procedures and mental calculations. • Complete tasks accurately and with confidence. • Adapt procedures to apply them to a new context. • Use feedback to improve efficiency when performing calculations. **Clarifications:**

Teachers who encourage students to complete tasks with mathematical fluency:

- Provide students with the flexibility to solve problems by selecting a procedure that allows them to solve efficiently and accurately.
- Offer multiple opportunities for students to practice efficient and generalizable methods.
- Provide opportunities for students to reflect on the method they used and determine if a more efficient method could have been used.

MA.K12.MTR.4.1:

Engage in discussions that reflect on the mathematical thinking of self and others.
Mathematicians who engage in discussions that reflect on the mathematical thinking of self and others:

- Communicate mathematical ideas, vocabulary and methods effectively.
- Analyze the mathematical thinking of others.
- Compare the efficiency of a method to those expressed by others.
- Recognize errors and suggest how to correctly solve the task.
- Justify results by explaining methods and processes.
- Construct possible arguments based on evidence.

Clarifications:
Teachers who encourage students to engage in discussions that reflect on the mathematical thinking of self and others:

- Establish a culture in which students ask questions of the teacher and their peers, and error is an opportunity for learning.
- Create opportunities for students to discuss their thinking with peers.
- Select, sequence and present student work to advance and deepen understanding of correct and increasingly efficient methods.
- Develop students' ability to justify methods and compare their responses to the responses of their peers.

MA.K12.MTR.5.1:

Use patterns and structure to help understand and connect mathematical concepts.
Mathematicians who use patterns and structure to help understand and connect mathematical concepts:

- Focus on relevant details within a problem.
- Create plans and procedures to logically order events, steps or ideas to solve problems.
- Decompose a complex problem into manageable parts.
- Relate previously learned concepts to new concepts.
- Look for similarities among problems.
- Connect solutions of problems to more complicated large-scale situations.

Clarifications:
Teachers who encourage students to use patterns and structure to help understand and connect mathematical concepts:

- Help students recognize the patterns in the world around them and connect these patterns to mathematical concepts.
- Support students to develop generalizations based on the similarities found among problems.
- Provide opportunities for students to create plans and procedures to solve problems.
- Develop students' ability to construct relationships between their current understanding and more sophisticated ways of thinking.

MA.K12.MTR.6.1:

Assess the reasonableness of solutions.
Mathematicians who assess the reasonableness of solutions:

- Estimate to discover possible solutions.
- Use benchmark quantities to determine if a solution makes sense.
- Check calculations when solving problems.
- Verify possible solutions by explaining the methods used.
- Evaluate results based on the given context.

Clarifications:
Teachers who encourage students to assess the reasonableness of solutions:

- Have students estimate or predict solutions prior to solving.
- Prompt students to continually ask, "Does this solution make sense? How do you know?"
- Reinforce that students check their work as they progress within and after a task.
- Strengthen students' ability to verify solutions through justifications.

MA.K12.MTR.7.1:

Apply mathematics to real-world contexts.
Mathematicians who apply mathematics to real-world contexts:

- Connect mathematical concepts to everyday experiences.
- Use models and methods to understand, represent and solve problems.
- Perform investigations to gather data or determine if a method is appropriate. • Redesign models and methods to improve accuracy or efficiency.

Clarifications:
Teachers who encourage students to apply mathematics to real-world contexts:

- Provide opportunities for students to create models, both concrete and abstract, and perform investigations.
- Challenge students to question the accuracy of their models and methods.
- Support students as they validate conclusions by comparing them to the given situation.
- Indicate how various concepts can be applied to other disciplines.

ELA.K12.EE.1.1:

Cite evidence to explain and justify reasoning.

Clarifications:
K-1 Students include textual evidence in their oral communication with guidance and support from adults. The evidence can consist of details from the text without naming the text. During 1st grade, students learn how to incorporate the evidence in their writing.
2-3 Students include relevant textual evidence in their written and oral communication. Students should name the text when they refer to it. In 3rd grade, students should use a combination of direct and indirect citations.

4-5 Students continue with previous skills and reference comments made by speakers and peers. Students cite texts that they've directly quoted, paraphrased, or used for information. When writing, students will use the form of citation dictated by the instructor or the style guide referenced by the instructor.

	6-8 Students continue with previous skills and use a style guide to create a proper citation. 9-12 Students continue with previous skills and should be aware of existing style guides and the ways in which they differ.
ELA.K12.EE.2.1:	Read and comprehend grade-level complex texts proficiently. **Clarifications:** See Text Complexity for grade-level complexity bands and a text complexity rubric.
ELA.K12.EE.3.1:	Make inferences to support comprehension. **Clarifications:** Students will make inferences before the words infer or inference are introduced. Kindergarten students will answer questions like "Why is the girl smiling?" or make predictions about what will happen based on the title page. Students will use the terms and apply them in 2nd grade and beyond.
ELA.K12.EE.4.1:	Use appropriate collaborative techniques and active listening skills when engaging in discussions in a variety of situations. **Clarifications:** In kindergarten, students learn to listen to one another respectfully. In grades 1-2, students build upon these skills by justifying what they are thinking. For example: "I think _____ because _____." The collaborative conversations are becoming academic conversations. In grades 3-12, students engage in academic conversations discussing claims and justifying their reasoning, refining and applying skills. Students build on ideas, propel the conversation, and support claims and counterclaims with evidence.
ELA.K12.EE.5.1:	Use the accepted rules governing a specific format to create quality work. **Clarifications:** Students will incorporate skills learned into work products to produce quality work. For students to incorporate these skills appropriately, they must receive instruction. A 3rd grade student creating a poster board display must have instruction in how to effectively present information to do quality work.
ELA.K12.EE.6.1:	Use appropriate voice and tone when speaking or writing. **Clarifications:** In kindergarten and 1st grade, students learn the difference between formal and informal language. For example, the way we talk to our friends differs from the way we speak to adults. In 2nd grade and beyond, students practice appropriate social and academic language to discuss texts.
HE.912.C.1.3:	Evaluate how environment and personal health are interrelated. **Clarifications:** Food options within a community; prenatal-care services; availability of recreational facilities; air quality; weather-safety awareness; and weather, air, and water conditions.
HE.912.C.1.5:	Analyze strategies for prevention, detection, and treatment of communicable and chronic diseases. **Clarifications:** Health prevention, detection, and treatment of: breast and testicular cancer, suicide, obesity, and industrial-related chronic disease.
HE.912.C.1.7:	Analyze how heredity and family history can impact personal health. **Clarifications:** Drug use, family obesity, heart disease, mental health, and non-communicable illness or disease.
ELD.K12.ELL.SC.1:	English language learners communicate information, ideas and concepts necessary for academic success in the content area of Science.
ELD.K12.ELL.SI.1:	English language learners communicate for social and instructional purposes within the school setting.

General Course Information and Notes

GENERAL NOTES

While the content focus of this course is consistent with the Integrated Science 2 course, students will explore these concepts in greater depth. In general, the academic pace and rigor will be greatly increased for honors level course work. Laboratory investigations that include the use of scientific inquiry, research, measurement, problem solving, laboratory apparatus and technologies, experimental procedures, and safety procedures are an integral part of this course. The National Science Teachers Association (NSTA) recommends that at the high school level, all students should be in the science lab or field, collecting data every week. School laboratory investigations (labs) are defined by the National Research Council (NRC) as an experience in the laboratory, classroom, or the field that provides students with opportunities to interact directly with natural phenomena or with data collected by others using tools, materials, data collection techniques, and models (NRC, 2006, p. 3). Laboratory investigations in the high school classroom should help all students develop a growing understanding of the complexity and ambiguity of empirical work, as well as the skills to calibrate and troubleshoot equipment used to make observations. Learners should understand measurement error; and have the skills to aggregate, interpret, and present the resulting data (National Research Council, 2006, p.77; NSTA, 2007).

Special Notes:

Instructional Practices
Teaching from a range of complex text is optimized when teachers in all subject areas implement the following strategies on a routine basis:

1. Ensuring wide reading from complex text that varies in length.
2. Making close reading and rereading of texts central to lessons.
3. Emphasizing text-specific complex questions, and cognitively complex tasks, reinforce focus on the text and cultivate independence.
4. Emphasizing students supporting answers based upon evidence from the text.
5. Providing extensive research and writing opportunities (claims and evidence).

Science and Engineering Practices (NRC *Framework for K-12 Science Education, 2010*)

- Asking questions (for science) and defining problems (for engineering).
- Developing and using models.
- Planning and carrying out investigations.
- Analyzing and interpreting data.
- Using mathematics, information and computer technology, and computational thinking.
- Constructing explanations (for science) and designing solutions (for engineering).
- Engaging in argument from evidence.
- Obtaining, evaluating, and communicating information.

Honors and Advanced Level Course Note: Advanced courses require a greater demand on students through increased academic rigor. Academic rigor is obtained through the application, analysis, evaluation, and creation of complex ideas that are often abstract and multi-faceted. Students are challenged to think and collaborate critically on the content they are learning. Honors level rigor will be achieved by increasing text complexity through text selection, focus on high-level qualitative measures, and complexity of task. Instruction will be structured to give students a deeper understanding of conceptual themes and organization within and across disciplines. Academic rigor is more than simply assigning to students a greater quantity of work.

Florida's Benchmarks for Excellent Student Thinking (B.E.S.T.) Standards
This course includes Florida's B.E.S.T. ELA Expectations (EE) and Mathematical Thinking and Reasoning Standards (MTRs) for students. Florida educators should intentionally embed these standards within the content and their instruction as applicable. For guidance on the implementation of the EEs and MTRs, please visit cpalms.org/Standards/BEST_Standards.aspx and select the appropriate B.E.S.T. Standards package.

English Language Development ELD Standards Special Notes Section:
Teachers are required to provide listening, speaking, reading and writing instruction that allows English language learners (ELL) to communicate information, ideas and concepts for academic success in the content area of Science. For the given level of English language proficiency and with visual, graphic, or interactive support, students will interact with grade level words, expressions, sentences and discourse to process or produce language necessary for academic success The ELD standard should specify a relevant content area concept or topic of study chosen by curriculum developers and teachers which maximizes an ELL's need for communication and social skills. To access an ELL supporting document which delineates performance definitions and descriptors, please click on the following link: cpalms.org/uploads/docs/standards/eld/SC.pdf

GENERAL INFORMATION

Course Number: 2002430

Course Path: Section: Grades PreK to 12 Education Courses > **Grade Group:** Grades 9 to 12 and Adult Education Courses > **Subject:** Science > **SubSubject:** Integrated Sciences > **Abbreviated Title:** INTEG SCI 2 HON

Number of Credits: One (1) credit

Course Length: Year (Y)

Course Attributes:
- Honors
- Class Size Core Required

Course Type: Core Academic Course

Course Level: 3

Course Status: Draft - Course Pending Approval

Grade Level(s): 9,10,11,12

Graduation Requirement: Equally Rigorous Science

Educator Certifications

Earth/Space Science (Grades 6-12)
Physics (Grades 6-12)
Science (Secondary Grades 7-12)
Biology (Grades 6-12)
Chemistry (Grades 6-12)

Integrated Science 3 (#2002440) 2022 - And Beyond

Course Standards

Name	Description
SC.912.E.5.9:	Analyze the broad effects of space exploration on the economy and culture of Florida.
SC.912.E.6.4:	Analyze how specific geologic processes and features are expressed in Florida and elsewhere.
SC.912.E.7.6:	Relate the formation of severe weather to the various physical factors.
SC.912.E.7.8:	Explain how various atmospheric, oceanic, and hydrologic conditions in Florida have influenced and can influence human behavior, both individually and collectively.
SC.912.E.7.9:	Cite evidence that the ocean has had a significant influence on climate change by absorbing, storing, and moving heat, carbon, and water.
SC.912.L.15.1:	Explain how the scientific theory of evolution is supported by the fossil record, comparative anatomy, comparative embryology, biogeography, molecular biology, and observed evolutionary change.
SC.912.L.15.6:	Discuss distinguishing characteristics of the domains and kingdoms of living organisms.
SC.912.L.15.10:	Identify basic trends in hominid evolution from early ancestors six million years ago to modern humans, including brain size, jaw size, language, and manufacture of tools.
SC.912.L.15.13:	Describe the conditions required for natural selection, including: overproduction of offspring, inherited variation, and the struggle to survive, which result in differential reproductive success.
SC.912.L.15.14:	Discuss mechanisms of evolutionary change other than natural selection such as genetic drift and gene flow.
SC.912.L.15.15:	Describe how mutation and genetic recombination increase genetic variation.
SC.912.L.16.4:	Explain how mutations in the DNA sequence may or may not result in phenotypic change. Explain how mutations in gametes may result in phenotypic changes in offspring.
SC.912.L.16.8:	Explain the relationship between mutation, cell cycle, and uncontrolled cell growth potentially resulting in cancer.
SC.912.L.16.10:	Evaluate the impact of biotechnology on the individual, society and the environment, including medical and ethical issues.
SC.912.L.16.13:	Describe the basic anatomy and physiology of the human reproductive system. Describe the process of human development from fertilization to birth and major changes that occur in each trimester of pregnancy.
SC.912.L.17.5:	Analyze how population size is determined by births, deaths, immigration, emigration, and limiting factors (biotic and abiotic) that determine carrying capacity.
SC.912.L.17.6:	Compare and contrast the relationships among organisms, including predation, parasitism, competition, commensalism, and mutualism.
SC.912.L.17.8:	Recognize the consequences of the losses of biodiversity due to catastrophic events, climate changes, human activity, and the introduction of invasive, non-native species.
SC.912.L.17.11:	Evaluate the costs and benefits of renewable and nonrenewable resources, such as water, energy, fossil fuels, wildlife, and forests.
SC.912.L.17.13:	Discuss the need for adequate monitoring of environmental parameters when making policy decisions.
SC.912.L.17.20:	Predict the impact of individuals on environmental systems and examine how human lifestyles affect sustainability.
SC.912.L.18.10:	Connect the role of adenosine triphosphate (ATP) to energy transfers within a cell.
SC.912.L.18.11:	Explain the role of enzymes as catalysts that lower the activation energy of biochemical reactions. Identify factors, such as pH and temperature, and their effect on enzyme activity.
SC.912.L.18.12:	Discuss the special properties of water that contribute to Earth's suitability as an environment for life: cohesive behavior, ability to moderate temperature, expansion upon freezing, and versatility as a solvent.
SC.912.N.1.1:	Define a problem based on a specific body of knowledge, for example: biology, chemistry, physics, and earth/space science, and do the following: 1. **Pose questions about the natural world,** (Articulate the purpose of the investigation and identify the relevant scientific concepts). 2. **Conduct systematic observations,** (Write procedures that are clear and replicable. Identify observables and examine relationships between test (independent) variable and outcome (dependent) variable. Employ appropriate methods for accurate and consistent observations; conduct and record measurements at appropriate levels of precision. Follow safety guidelines). 3. **Examine books and other sources of information to see what is already known,** 4. **Review what is known in light of empirical evidence,** (Examine whether available empirical evidence can be interpreted in terms of existing knowledge and models, and if not, modify or develop new models). 5. **Plan investigations,** (Design and evaluate a scientific investigation). 6. **Use tools to gather, analyze, and interpret data (this includes the use of measurement in metric and other systems, and also the generation and interpretation of graphical representations of data, including data tables and graphs),** (Collect data or evidence in an organized way. Properly use instruments, equipment, and materials (e.g., scales, probeware, meter sticks, microscopes, computers) including set-up, calibration, technique, maintenance, and storage). 7. **Pose answers, explanations, or descriptions of events,** 8. **Generate explanations that explicate or describe natural phenomena (inferences),** 9. **Use appropriate evidence and reasoning to justify these explanations to others,** 10. **Communicate results of scientific investigations, and** 11. **Evaluate the merits of the explanations produced by others.**
SC.912.N.1.2:	Describe and explain what characterizes science and its methods.
SC.912.N.1.3:	Recognize that the strength or usefulness of a scientific claim is evaluated through scientific argumentation, which depends on critical and logical thinking, and the active consideration of alternative scientific explanations to explain the data presented.
SC.912.N.1.5:	Describe and provide examples of how similar investigations conducted in many parts of the world result in the same outcome.
SC.912.N.1.6:	Describe how scientific inferences are drawn from scientific observations and provide examples from the content being studied.
SC.912.N.1.7:	Recognize the role of creativity in constructing scientific questions, methods and explanations.
SC.912.N.2.1:	Identify what is science, what clearly is not science, and what superficially resembles science (but fails to meet the criteria for science).

SC.912.N.2.2:	Identify which questions can be answered through science and which questions are outside the boundaries of scientific investigation, such as questions addressed by other ways of knowing, such as art, philosophy, and religion.
SC.912.N.2.4:	Explain that scientific knowledge is both durable and robust and open to change. Scientific knowledge can change because it is often examined and re-examined by new investigations and scientific argumentation. Because of these frequent examinations, scientific knowledge becomes stronger, leading to its durability.
SC.912.N.2.5:	Describe instances in which scientists' varied backgrounds, talents, interests, and goals influence the inferences and thus the explanations that they make about observations of natural phenomena and describe that competing interpretations (explanations) of scientists are a strength of science as they are a source of new, testable ideas that have the potential to add new evidence to support one or another of the explanations.
SC.912.N.3.1:	Explain that a scientific theory is the culmination of many scientific investigations drawing together all the current evidence concerning a substantial range of phenomena; thus, a scientific theory represents the most powerful explanation scientists have to offer.
SC.912.N.3.2:	Describe the role consensus plays in the historical development of a theory in any one of the disciplines of science.
SC.912.N.4.1:	Explain how scientific knowledge and reasoning provide an empirically-based perspective to inform society's decision making.
SC.912.N.4.2:	Weigh the merits of alternative strategies for solving a specific societal problem by comparing a number of different costs and benefits, such as human, economic, and environmental.
SC.912.P.8.10:	Describe oxidation-reduction reactions in living and non-living systems.
SC.912.P.10.2:	Explore the Law of Conservation of Energy by differentiating among open, closed, and isolated systems and explain that the total energy in an isolated system is a conserved quantity.
SC.912.P.10.3:	Compare and contrast work and power qualitatively and quantitatively.
SC.912.P.10.6:	Create and interpret potential energy diagrams, for example: chemical reactions, orbits around a central body, motion of a pendulum.
SC.912.P.10.9:	Describe the quantization of energy at the atomic level.
SC.912.P.10.11:	Explain and compare nuclear reactions (radioactive decay, fission and fusion), the energy changes associated with them and their associated safety issues.
SC.912.P.10.16:	Explain the relationship between moving charges and magnetic fields, as well as changing magnetic fields and electric fields, and their application to modern technologies.
SC.912.P.10.18:	Explore the theory of electromagnetism by comparing and contrasting the different parts of the electromagnetic spectrum in terms of wavelength, frequency, and energy, and relate them to phenomena and applications.
SC.912.P.10.21:	Qualitatively describe the shift in frequency in sound or electromagnetic waves due to the relative motion of a source or a receiver.
SC.912.P.10.22:	Construct ray diagrams and use thin lens and mirror equations to locate the images formed by lenses and mirrors.
SC.912.P.12.5:	Apply the law of conservation of linear momentum to interactions, such as collisions between objects.
SC.912.P.12.6:	Qualitatively apply the concept of angular momentum.
SC.912.P.12.7:	Recognize that nothing travels faster than the speed of light in vacuum which is the same for all observers no matter how they or the light source are moving.
SC.912.P.12.9:	Recognize that time, length, and energy depend on the frame of reference.
SC.912.P.12.10:	Interpret the behavior of ideal gases in terms of kinetic molecular theory.
SC.912.P.12.11:	Describe phase transitions in terms of kinetic molecular theory.
SC.912.P.12.12:	Explain how various factors, such as concentration, temperature, and presence of a catalyst affect the rate of a chemical reaction.
SC.912.P.12.13:	Explain the concept of dynamic equilibrium in terms of reversible processes occurring at the same rates.
MA.K12.MTR.1.1:	Mathematicians who participate in effortful learning both individually and with others: • Analyze the problem in a way that makes sense given the task. • Ask questions that will help with solving the task. • Build perseverance by modifying methods as needed while solving a challenging task. • Stay engaged and maintain a positive mindset when working to solve tasks. • Help and support each other when attempting a new method or approach. **Clarifications:** Teachers who encourage students to participate actively in effortful learning both individually and with others: • Cultivate a community of growth mindset learners. • Foster perseverance in students by choosing tasks that are challenging. • Develop students' ability to analyze and problem solve. • Recognize students' effort when solving challenging problems.
MA.K12.MTR.2.1:	Demonstrate understanding by representing problems in multiple ways. Mathematicians who demonstrate understanding by representing problems in multiple ways: • Build understanding through modeling and using manipulatives. • Represent solutions to problems in multiple ways using objects, drawings, tables, graphs and equations. • Progress from modeling problems with objects and drawings to using algorithms and equations. • Express connections between concepts and representations. • Choose a representation based on the given context or purpose. **Clarifications:** Teachers who encourage students to demonstrate understanding by representing problems in multiple ways: • Help students make connections between concepts and representations. • Provide opportunities for students to use manipulatives when investigating concepts. • Guide students from concrete to pictorial to abstract representations as understanding progresses. • Show students that various representations can have different purposes and can be useful in different situations.
MA.K12.MTR.3.1:	Complete tasks with mathematical fluency. Mathematicians who complete tasks with mathematical fluency: • Select efficient and appropriate methods for solving problems within the given context. • Maintain flexibility and accuracy while performing procedures and mental calculations. • Complete tasks accurately and with confidence. • Adapt procedures to apply them to a new context. • Use feedback to improve efficiency when performing calculations.

	Clarifications: Teachers who encourage students to complete tasks with mathematical fluency: • Provide students with the flexibility to solve problems by selecting a procedure that allows them to solve efficiently and accurately. • Offer multiple opportunities for students to practice efficient and generalizable methods. • Provide opportunities for students to reflect on the method they used and determine if a more efficient method could have been used.
MA.K12.MTR.4.1:	Engage in discussions that reflect on the mathematical thinking of self and others. Mathematicians who engage in discussions that reflect on the mathematical thinking of self and others: • Communicate mathematical ideas, vocabulary and methods effectively. • Analyze the mathematical thinking of others. • Compare the efficiency of a method to those expressed by others. • Recognize errors and suggest how to correctly solve the task. • Justify results by explaining methods and processes. • Construct possible arguments based on evidence. **Clarifications:** Teachers who encourage students to engage in discussions that reflect on the mathematical thinking of self and others: • Establish a culture in which students ask questions of the teacher and their peers, and error is an opportunity for learning. • Create opportunities for students to discuss their thinking with peers. • Select, sequence and present student work to advance and deepen understanding of correct and increasingly efficient methods. • Develop students' ability to justify methods and compare their responses to the responses of their peers.
MA.K12.MTR.5.1:	Use patterns and structure to help understand and connect mathematical concepts. Mathematicians who use patterns and structure to help understand and connect mathematical concepts: • Focus on relevant details within a problem. • Create plans and procedures to logically order events, steps or ideas to solve problems. • Decompose a complex problem into manageable parts. • Relate previously learned concepts to new concepts. • Look for similarities among problems. • Connect solutions of problems to more complicated large-scale situations. **Clarifications:** Teachers who encourage students to use patterns and structure to help understand and connect mathematical concepts: • Help students recognize the patterns in the world around them and connect these patterns to mathematical concepts. • Support students to develop generalizations based on the similarities found among problems. • Provide opportunities for students to create plans and procedures to solve problems. • Develop students' ability to construct relationships between their current understanding and more sophisticated ways of thinking.
MA.K12.MTR.6.1:	Assess the reasonableness of solutions. Mathematicians who assess the reasonableness of solutions: • Estimate to discover possible solutions. • Use benchmark quantities to determine if a solution makes sense. • Check calculations when solving problems. • Verify possible solutions by explaining the methods used. • Evaluate results based on the given context. **Clarifications:** Teachers who encourage students to assess the reasonableness of solutions: • Have students estimate or predict solutions prior to solving. • Prompt students to continually ask, "Does this solution make sense? How do you know?" • Reinforce that students check their work as they progress within and after a task. • Strengthen students' ability to verify solutions through justifications.
MA.K12.MTR.7.1:	Apply mathematics to real-world contexts. Mathematicians who apply mathematics to real-world contexts: • Connect mathematical concepts to everyday experiences. • Use models and methods to understand, represent and solve problems. • Perform investigations to gather data or determine if a method is appropriate. • Redesign models and methods to improve accuracy or efficiency. **Clarifications:** Teachers who encourage students to apply mathematics to real-world contexts: • Provide opportunities for students to create models, both concrete and abstract, and perform investigations. • Challenge students to question the accuracy of their models and methods. • Support students as they validate conclusions by comparing them to the given situation. • Indicate how various concepts can be applied to other disciplines.
ELA.K12.EE.1.1:	Cite evidence to explain and justify reasoning. **Clarifications:** K-1 Students include textual evidence in their oral communication with guidance and support from adults. The evidence can consist of details from the text without naming the text. During 1st grade, students learn how to incorporate the evidence in their writing. 2-3 Students include relevant textual evidence in their written and oral communication. Students should name the text when they refer to it. In 3rd grade, students should use a combination of direct and indirect citations. 4-5 Students continue with previous skills and reference comments made by speakers and peers. Students cite texts that they've directly quoted, paraphrased, or used for information. When writing, students will use the form of citation dictated by the instructor or the style guide referenced by the instructor.

	6-8 Students continue with previous skills and use a style guide to create a proper citation. 9-12 Students continue with previous skills and should be aware of existing style guides and the ways in which they differ.
ELA.K12.EE.2.1:	Read and comprehend grade-level complex texts proficiently. **Clarifications:** See Text Complexity for grade-level complexity bands and a text complexity rubric.
ELA.K12.EE.3.1:	Make inferences to support comprehension. **Clarifications:** Students will make inferences before the words infer or inference are introduced. Kindergarten students will answer questions like "Why is the girl smiling?" or make predictions about what will happen based on the title page. Students will use the terms and apply them in 2nd grade and beyond.
ELA.K12.EE.4.1:	Use appropriate collaborative techniques and active listening skills when engaging in discussions in a variety of situations. **Clarifications:** In kindergarten, students learn to listen to one another respectfully. In grades 1-2, students build upon these skills by justifying what they are thinking. For example: "I think _____ because _____." The collaborative conversations are becoming academic conversations. In grades 3-12, students engage in academic conversations discussing claims and justifying their reasoning, refining and applying skills. Students build on ideas, propel the conversation, and support claims and counterclaims with evidence.
ELA.K12.EE.5.1:	Use the accepted rules governing a specific format to create quality work. **Clarifications:** Students will incorporate skills learned into work products to produce quality work. For students to incorporate these skills appropriately, they must receive instruction. A 3rd grade student creating a poster board display must have instruction in how to effectively present information to do quality work.
ELA.K12.EE.6.1:	Use appropriate voice and tone when speaking or writing. **Clarifications:** In kindergarten and 1st grade, students learn the difference between formal and informal language. For example, the way we talk to our friends differs from the way we speak to adults. In 2nd grade and beyond, students practice appropriate social and academic language to discuss texts.
ELD.K12.ELL.SC.1:	English language learners communicate information, ideas and concepts necessary for academic success in the content area of Science.
ELD.K12.ELL.SI.1:	English language learners communicate for social and instructional purposes within the school setting.

General Course Information and Notes

GENERAL NOTES

Laboratory investigations that include the use of scientific inquiry, research, measurement, problem solving, laboratory apparatus and technologies, experimental procedures, and safety procedures are an integral part of this course. The National Science Teachers Association (NSTA) recommends that at the high school level, all students should be in the science lab or field, collecting data every week. School laboratory investigations (labs) are defined by the National Research Council (NRC) as an experience in the laboratory, classroom, or the field that provides students with opportunities to interact directly with natural phenomena or with data collected by others using tools, materials, data collection techniques, and models (NRC, 2006, p. 3). Laboratory investigations in the high school classroom should help all students develop a growing understanding of the complexity and ambiguity of empirical work, as well as the skills to calibrate and troubleshoot equipment used to make observations. Learners should understand measurement error; and have the skills to aggregate, interpret, and present the resulting data (National Research Council, 2006, p.77; NSTA, 2007).

Special Notes:

Instructional Practices
Teaching from a range of complex text is optimized when teachers in all subject areas implement the following strategies on a routine basis:

1. Ensuring wide reading from complex text that varies in length.
2. Making close reading and rereading of texts central to lessons.
3. Emphasizing text-specific complex questions, and cognitively complex tasks, reinforce focus on the text and cultivate independence.
4. Emphasizing students supporting answers based upon evidence from the text.
5. Providing extensive research and writing opportunities (claims and evidence).

Science and Engineering Practices (NRC *Framework for K-12 Science Education, 2010*)

- Asking questions (for science) and defining problems (for engineering).
- Developing and using models.
- Planning and carrying out investigations.
- Analyzing and interpreting data.
- Using mathematics, information and computer technology, and computational thinking.
- Constructing explanations (for science) and designing solutions (for engineering).
- Engaging in argument from evidence.
- Obtaining, evaluating, and communicating information.

Florida's Benchmarks for Excellent Student Thinking (B.E.S.T.) Standards

This course includes Florida's B.E.S.T. ELA Expectations (EE) and Mathematical Thinking and Reasoning Standards (MTRs) for students. Florida educators should intentionally embed these standards within the content and their instruction as applicable. For guidance on the implementation of the EEs and MTRs, please visit cpalms.org/Standards/BEST_Standards.aspx and select the appropriate B.E.S.T. Standards package.

English Language Development ELD Standards Special Notes Section:
Teachers are required to provide listening, speaking, reading and writing instruction that allows English language learners (ELL) to communicate information, ideas and concepts for academic success in the content area of Science. For the given level of English language proficiency and with visual, graphic, or interactive support, students will interact with grade level words, expressions, sentences and discourse to process or produce language necessary for academic success The ELD standard should specify a relevant content area concept or topic of study chosen by curriculum developers and teachers which maximizes an ELL's need for communication and social skills. To access an ELL supporting document which delineates performance definitions and descriptors, please click on the following link: cpalms.org/uploads/docs/standards/eld/SC.pdf

GENERAL INFORMATION

Course Number: 2002440

Course Path: Section: Grades PreK to 12 Education Courses > **Grade Group:** Grades 9 to 12 and Adult Education Courses > **Subject:** Science > **SubSubject:** Integrated Sciences >

Abbreviated Title: INTEG SCI 3

Number of Credits: One (1) credit

Course Length: Year (Y)

Course Attributes:

- Class Size Core Required

Course Type: Core Academic Course

Course Level: 2

Course Status: Draft - Course Pending Approval

Grade Level(s): 9,10,11,12

Graduation Requirement: Equally Rigorous Science

Educator Certifications

Earth/Space Science (Grades 6-12)
Physics (Grades 6-12)
Science (Secondary Grades 7-12)
Biology (Grades 6-12)
Chemistry (Grades 6-12)

Integrated Science 3 Honors (#2002450) 2022 - And Beyond

Course Standards

Name	Description
SC.912.E.5.8:	Connect the concepts of radiation and the electromagnetic spectrum to the use of historical and newly-developed observational tools.
SC.912.E.5.9:	Analyze the broad effects of space exploration on the economy and culture of Florida.
SC.912.E.6.4:	Analyze how specific geologic processes and features are expressed in Florida and elsewhere.
SC.912.E.7.1:	Analyze the movement of matter and energy through the different biogeochemical cycles, including water and carbon.
SC.912.E.7.5:	Predict future weather conditions based on present observations and conceptual models and recognize limitations and uncertainties of such predictions.
SC.912.E.7.6:	Relate the formation of severe weather to the various physical factors.
SC.912.E.7.8:	Explain how various atmospheric, oceanic, and hydrologic conditions in Florida have influenced and can influence human behavior, both individually and collectively.
SC.912.E.7.9:	Cite evidence that the ocean has had a significant influence on climate change by absorbing, storing, and moving heat, carbon, and water.
SC.912.L.15.1:	Explain how the scientific theory of evolution is supported by the fossil record, comparative anatomy, comparative embryology, biogeography, molecular biology, and observed evolutionary change.
SC.912.L.15.2:	Discuss the use of molecular clocks to estimate how long ago various groups of organisms diverged evolutionarily from one another.
SC.912.L.15.3:	Describe how biological diversity is increased by the origin of new species and how it is decreased by the natural process of extinction.
SC.912.L.15.4:	Describe how and why organisms are hierarchically classified and based on evolutionary relationships.
SC.912.L.15.5:	Explain the reasons for changes in how organisms are classified.
SC.912.L.15.6:	Discuss distinguishing characteristics of the domains and kingdoms of living organisms.
SC.912.L.15.8:	Describe the scientific explanations of the origin of life on Earth.
SC.912.L.15.10:	Identify basic trends in hominid evolution from early ancestors six million years ago to modern humans, including brain size, jaw size, language, and manufacture of tools.
SC.912.L.15.13:	Describe the conditions required for natural selection, including: overproduction of offspring, inherited variation, and the struggle to survive, which result in differential reproductive success.
SC.912.L.15.14:	Discuss mechanisms of evolutionary change other than natural selection such as genetic drift and gene flow.
SC.912.L.15.15:	Describe how mutation and genetic recombination increase genetic variation.
SC.912.L.16.4:	Explain how mutations in the DNA sequence may or may not result in phenotypic change. Explain how mutations in gametes may result in phenotypic changes in offspring.
SC.912.L.16.8:	Explain the relationship between mutation, cell cycle, and uncontrolled cell growth potentially resulting in cancer.
SC.912.L.16.10:	Evaluate the impact of biotechnology on the individual, society and the environment, including medical and ethical issues.
SC.912.L.16.13:	Describe the basic anatomy and physiology of the human reproductive system. Describe the process of human development from fertilization to birth and major changes that occur in each trimester of pregnancy.
SC.912.L.17.2:	Explain the general distribution of life in aquatic systems as a function of chemistry, geography, light, depth, salinity, and temperature.
SC.912.L.17.4:	Describe changes in ecosystems resulting from seasonal variations, climate change and succession.
SC.912.L.17.5:	Analyze how population size is determined by births, deaths, immigration, emigration, and limiting factors (biotic and abiotic) that determine carrying capacity.
SC.912.L.17.6:	Compare and contrast the relationships among organisms, including predation, parasitism, competition, commensalism, and mutualism.
SC.912.L.17.8:	Recognize the consequences of the losses of biodiversity due to catastrophic events, climate changes, human activity, and the introduction of invasive, non-native species.
SC.912.L.17.9:	Use a food web to identify and distinguish producers, consumers, and decomposers. Explain the pathway of energy transfer through trophic levels and the reduction of available energy at successive trophic levels.
SC.912.L.17.11:	Evaluate the costs and benefits of renewable and nonrenewable resources, such as water, energy, fossil fuels, wildlife, and forests.
SC.912.L.17.13:	Discuss the need for adequate monitoring of environmental parameters when making policy decisions.
SC.912.L.17.16:	Discuss the large-scale environmental impacts resulting from human activity, including waste spills, oil spills, runoff, greenhouse gases, ozone depletion, and surface and groundwater pollution.
SC.912.L.17.20:	Predict the impact of individuals on environmental systems and examine how human lifestyles affect sustainability.
SC.912.L.18.10:	Connect the role of adenosine triphosphate (ATP) to energy transfers within a cell.
SC.912.L.18.11:	Explain the role of enzymes as catalysts that lower the activation energy of biochemical reactions. Identify factors, such as pH and temperature, and their effect on enzyme activity.
SC.912.L.18.12:	Discuss the special properties of water that contribute to Earth's suitability as an environment for life: cohesive behavior, ability to moderate temperature, expansion upon freezing, and versatility as a solvent.
SC.912.N.1.1:	Define a problem based on a specific body of knowledge, for example: biology, chemistry, physics, and earth/space science, and do the following: 1. **Pose questions about the natural world,** (Articulate the purpose of the investigation and identify the relevant scientific concepts). 2. **Conduct systematic observations,** (Write procedures that are clear and replicable. Identify observables and examine relationships between test (independent) variable and outcome (dependent) variable. Employ appropriate methods for accurate and consistent observations; conduct and record measurements at appropriate levels of precision. Follow safety guidelines). 3. **Examine books and other sources of information to see what is already known,** 4. **Review what is known in light of empirical evidence,** (Examine whether available empirical evidence can be interpreted in terms of existing knowledge and models, and if not, modify or develop new models). 5. **Plan investigations,** (Design and evaluate a scientific investigation). 6. **Use tools to gather, analyze, and interpret data (this includes the use of measurement in metric and other systems, and also the generation and interpretation of graphical representations of data, including data tables and graphs),** (Collect data or evidence in an organized way. Properly use instruments, equipment, and materials (e.g., scales, probeware, meter sticks, microscopes, computers) including set-

	up, calibration, technique, maintenance, and storage). 7. **Pose answers, explanations, or descriptions of events,** 8. **Generate explanations that explicate or describe natural phenomena (inferences),** 9. **Use appropriate evidence and reasoning to justify these explanations to others,** 10. **Communicate results of scientific investigations, and** 11. **Evaluate the merits of the explanations produced by others.**
SC.912.N.1.4:	Identify sources of information and assess their reliability according to the strict standards of scientific investigation.
SC.912.N.1.5:	Describe and provide examples of how similar investigations conducted in many parts of the world result in the same outcome.
SC.912.N.1.6:	Describe how scientific inferences are drawn from scientific observations and provide examples from the content being studied.
SC.912.N.1.7:	Recognize the role of creativity in constructing scientific questions, methods and explanations.
SC.912.N.2.2:	Identify which questions can be answered through science and which questions are outside the boundaries of scientific investigation, such as questions addressed by other ways of knowing, such as art, philosophy, and religion.
SC.912.N.2.4:	Explain that scientific knowledge is both durable and robust and open to change. Scientific knowledge can change because it is often examined and re-examined by new investigations and scientific argumentation. Because of these frequent examinations, scientific knowledge becomes stronger, leading to its durability.
SC.912.N.2.5:	Describe instances in which scientists' varied backgrounds, talents, interests, and goals influence the inferences and thus the explanations that they make about observations of natural phenomena and describe that competing interpretations (explanations) of scientists are a strength of science as they are a source of new, testable ideas that have the potential to add new evidence to support one or another of the explanations.
SC.912.N.3.1:	Explain that a scientific theory is the culmination of many scientific investigations drawing together all the current evidence concerning a substantial range of phenomena; thus, a scientific theory represents the most powerful explanation scientists have to offer.
SC.912.N.3.2:	Describe the role consensus plays in the historical development of a theory in any one of the disciplines of science.
SC.912.P.8.10:	Describe oxidation-reduction reactions in living and non-living systems.
SC.912.P.10.2:	Explore the Law of Conservation of Energy by differentiating among open, closed, and isolated systems and explain that the total energy in an isolated system is a conserved quantity.
SC.912.P.10.3:	Compare and contrast work and power qualitatively and quantitatively.
SC.912.P.10.6:	Create and interpret potential energy diagrams, for example: chemical reactions, orbits around a central body, motion of a pendulum.
SC.912.P.10.9:	Describe the quantization of energy at the atomic level.
SC.912.P.10.10:	Compare the magnitude and range of the four fundamental forces (gravitational, electromagnetic, weak nuclear, strong nuclear).
SC.912.P.10.11:	Explain and compare nuclear reactions (radioactive decay, fission and fusion), the energy changes associated with them and their associated safety issues.
SC.912.P.10.13:	Relate the configuration of static charges to the electric field, electric force, electric potential, and electric potential energy.
SC.912.P.10.16:	Explain the relationship between moving charges and magnetic fields, as well as changing magnetic fields and electric fields, and their application to modern technologies.
SC.912.P.10.17:	Explore the theory of electromagnetism by explaining electromagnetic waves in terms of oscillating electric and magnetic fields.
SC.912.P.10.18:	Explore the theory of electromagnetism by comparing and contrasting the different parts of the electromagnetic spectrum in terms of wavelength, frequency, and energy, and relate them to phenomena and applications.
SC.912.P.10.21:	Qualitatively describe the shift in frequency in sound or electromagnetic waves due to the relative motion of a source or a receiver.
SC.912.P.10.22:	Construct ray diagrams and use thin lens and mirror equations to locate the images formed by lenses and mirrors.
SC.912.P.12.5:	Apply the law of conservation of linear momentum to interactions, such as collisions between objects.
SC.912.P.12.6:	Qualitatively apply the concept of angular momentum.
SC.912.P.12.7:	Recognize that nothing travels faster than the speed of light in vacuum which is the same for all observers no matter how they or the light source are moving.
SC.912.P.12.9:	Recognize that time, length, and energy depend on the frame of reference.
SC.912.P.12.10:	Interpret the behavior of ideal gases in terms of kinetic molecular theory.
SC.912.P.12.11:	Describe phase transitions in terms of kinetic molecular theory.
SC.912.P.12.12:	Explain how various factors, such as concentration, temperature, and presence of a catalyst affect the rate of a chemical reaction.
SC.912.P.12.13:	Explain the concept of dynamic equilibrium in terms of reversible processes occurring at the same rates.
MA.K12.MTR.1.1:	Mathematicians who participate in effortful learning both individually and with others: • Analyze the problem in a way that makes sense given the task. • Ask questions that will help with solving the task. • Build perseverance by modifying methods as needed while solving a challenging task. • Stay engaged and maintain a positive mindset when working to solve tasks. • Help and support each other when attempting a new method or approach. **Clarifications:** Teachers who encourage students to participate actively in effortful learning both individually and with others: • Cultivate a community of growth mindset learners. • Foster perseverance in students by choosing tasks that are challenging. • Develop students' ability to analyze and problem solve. • Recognize students' effort when solving challenging problems.
MA.K12.MTR.2.1:	Demonstrate understanding by representing problems in multiple ways. Mathematicians who demonstrate understanding by representing problems in multiple ways: • Build understanding through modeling and using manipulatives. • Represent solutions to problems in multiple ways using objects, drawings, tables, graphs and equations. • Progress from modeling problems with objects and drawings to using algorithms and equations. • Express connections between concepts and representations. • Choose a representation based on the given context or purpose. **Clarifications:** Teachers who encourage students to demonstrate understanding by representing problems in multiple ways: • Help students make connections between concepts and representations.

- Provide opportunities for students to use manipulatives when investigating concepts.
- Guide students from concrete to pictorial to abstract representations as understanding progresses.
- Show students that various representations can have different purposes and can be useful in different situations.

MA.K12.MTR.3.1:

Complete tasks with mathematical fluency.
Mathematicians who complete tasks with mathematical fluency:

- Select efficient and appropriate methods for solving problems within the given context.
- Maintain flexibility and accuracy while performing procedures and mental calculations.
- Complete tasks accurately and with confidence.
- Adapt procedures to apply them to a new context.
- Use feedback to improve efficiency when performing calculations.

Clarifications:
Teachers who encourage students to complete tasks with mathematical fluency:

- Provide students with the flexibility to solve problems by selecting a procedure that allows them to solve efficiently and accurately.
- Offer multiple opportunities for students to practice efficient and generalizable methods.
- Provide opportunities for students to reflect on the method they used and determine if a more efficient method could have been used.

MA.K12.MTR.4.1:

Engage in discussions that reflect on the mathematical thinking of self and others.
Mathematicians who engage in discussions that reflect on the mathematical thinking of self and others:

- Communicate mathematical ideas, vocabulary and methods effectively.
- Analyze the mathematical thinking of others.
- Compare the efficiency of a method to those expressed by others.
- Recognize errors and suggest how to correctly solve the task.
- Justify results by explaining methods and processes.
- Construct possible arguments based on evidence.

Clarifications:
Teachers who encourage students to engage in discussions that reflect on the mathematical thinking of self and others:

- Establish a culture in which students ask questions of the teacher and their peers, and error is an opportunity for learning.
- Create opportunities for students to discuss their thinking with peers.
- Select, sequence and present student work to advance and deepen understanding of correct and increasingly efficient methods.
- Develop students' ability to justify methods and compare their responses to the responses of their peers.

MA.K12.MTR.5.1:

Use patterns and structure to help understand and connect mathematical concepts.
Mathematicians who use patterns and structure to help understand and connect mathematical concepts:

- Focus on relevant details within a problem.
- Create plans and procedures to logically order events, steps or ideas to solve problems.
- Decompose a complex problem into manageable parts.
- Relate previously learned concepts to new concepts.
- Look for similarities among problems.
- Connect solutions of problems to more complicated large-scale situations.

Clarifications:
Teachers who encourage students to use patterns and structure to help understand and connect mathematical concepts:

- Help students recognize the patterns in the world around them and connect these patterns to mathematical concepts.
- Support students to develop generalizations based on the similarities found among problems.
- Provide opportunities for students to create plans and procedures to solve problems.
- Develop students' ability to construct relationships between their current understanding and more sophisticated ways of thinking.

MA.K12.MTR.6.1:

Assess the reasonableness of solutions.
Mathematicians who assess the reasonableness of solutions:

- Estimate to discover possible solutions.
- Use benchmark quantities to determine if a solution makes sense.
- Check calculations when solving problems.
- Verify possible solutions by explaining the methods used.
- Evaluate results based on the given context.

Clarifications:
Teachers who encourage students to assess the reasonableness of solutions:

- Have students estimate or predict solutions prior to solving.
- Prompt students to continually ask, "Does this solution make sense? How do you know?"
- Reinforce that students check their work as they progress within and after a task.
- Strengthen students' ability to verify solutions through justifications.

MA.K12.MTR.7.1:

Apply mathematics to real-world contexts.
Mathematicians who apply mathematics to real-world contexts:

- Connect mathematical concepts to everyday experiences.
- Use models and methods to understand, represent and solve problems.
- Perform investigations to gather data or determine if a method is appropriate. • Redesign models and methods to improve accuracy or efficiency.

Clarifications:
Teachers who encourage students to apply mathematics to real-world contexts:

- Provide opportunities for students to create models, both concrete and abstract, and perform investigations.
- Challenge students to question the accuracy of their models and methods.

	• Support students as they validate conclusions by comparing them to the given situation. • Indicate how various concepts can be applied to other disciplines.
ELA.K12.EE.1.1:	Cite evidence to explain and justify reasoning. **Clarifications:** K-1 Students include textual evidence in their oral communication with guidance and support from adults. The evidence can consist of details from the text without naming the text. During 1st grade, students learn how to incorporate the evidence in their writing. 2-3 Students include relevant textual evidence in their written and oral communication. Students should name the text when they refer to it. In 3rd grade, students should use a combination of direct and indirect citations. 4-5 Students continue with previous skills and reference comments made by speakers and peers. Students cite texts that they've directly quoted, paraphrased, or used for information. When writing, students will use the form of citation dictated by the instructor or the style guide referenced by the instructor. 6-8 Students continue with previous skills and use a style guide to create a proper citation. 9-12 Students continue with previous skills and should be aware of existing style guides and the ways in which they differ.
ELA.K12.EE.2.1:	Read and comprehend grade-level complex texts proficiently. **Clarifications:** See Text Complexity for grade-level complexity bands and a text complexity rubric.
ELA.K12.EE.3.1:	Make inferences to support comprehension. **Clarifications:** Students will make inferences before the words infer or inference are introduced. Kindergarten students will answer questions like "Why is the girl smiling?" or make predictions about what will happen based on the title page. Students will use the terms and apply them in 2nd grade and beyond.
ELA.K12.EE.4.1:	Use appropriate collaborative techniques and active listening skills when engaging in discussions in a variety of situations. **Clarifications:** In kindergarten, students learn to listen to one another respectfully. In grades 1-2, students build upon these skills by justifying what they are thinking. For example: "I think _____ because _____." The collaborative conversations are becoming academic conversations. In grades 3-12, students engage in academic conversations discussing claims and justifying their reasoning, refining and applying skills. Students build on ideas, propel the conversation, and support claims and counterclaims with evidence.
ELA.K12.EE.5.1:	Use the accepted rules governing a specific format to create quality work. **Clarifications:** Students will incorporate skills learned into work products to produce quality work. For students to incorporate these skills appropriately, they must receive instruction. A 3rd grade student creating a poster board display must have instruction in how to effectively present information to do quality work.
ELA.K12.EE.6.1:	Use appropriate voice and tone when speaking or writing. **Clarifications:** In kindergarten and 1st grade, students learn the difference between formal and informal language. For example, the way we talk to our friends differs from the way we speak to adults. In 2nd grade and beyond, students practice appropriate social and academic language to discuss texts.
ELD.K12.ELL.SC.1:	English language learners communicate information, ideas and concepts necessary for academic success in the content area of Science.
ELD.K12.ELL.SI.1:	English language learners communicate for social and instructional purposes within the school setting.

General Course Information and Notes

GENERAL NOTES

While the content focus of this course is consistent with the Integrated Science 3 course, students will explore these concepts in greater depth. In general, the academic pace and rigor will be greatly increased for honors level course work.

Laboratory investigations that include the use of scientific inquiry, research, measurement, problem solving, laboratory apparatus and technologies, experimental procedures, and safety procedures are an integral part of this course. The National Science Teachers Association (NSTA) recommends that at the high school level, all students should be in the science lab or field, collecting data every week. School laboratory investigations (labs) are defined by the National Research Council (NRC) as an experience in the laboratory, classroom, or the field that provides students with opportunities to interact directly with natural phenomena or with data collected by others using tools, materials, data collection techniques, and models (NRC, 2006, p. 3). Laboratory investigations in the high school classroom should help all students develop a growing understanding of the complexity and ambiguity of empirical work, as well as the skills to calibrate and troubleshoot equipment used to make observations. Learners should understand measurement error; and have the skills to aggregate, interpret, and present the resulting data (National Research Council, 2006, p.77; NSTA, 2007).

Special Notes:

Instructional Practices
Teaching from a range of complex text is optimized when teachers in all subject areas implement the following strategies on a routine basis:

1. Ensuring wide reading from complex text that varies in length.
2. Making close reading and rereading of texts central to lessons.
3. Emphasizing text-specific complex questions, and cognitively complex tasks, reinforce focus on the text and cultivate independence.
4. Emphasizing students supporting answers based upon evidence from the text.
5. Providing extensive research and writing opportunities (claims and evidence).

Science and Engineering Practices (NRC *Framework for K-12 Science Education, 2010*)

- Asking questions (for science) and defining problems (for engineering).
- Developing and using models.
- Planning and carrying out investigations.
- Analyzing and interpreting data.
- Using mathematics, information and computer technology, and computational thinking.
- Constructing explanations (for science) and designing solutions (for engineering).
- Engaging in argument from evidence.
- Obtaining, evaluating, and communicating information.

Honors and Advanced Level Course Note: Advanced courses require a greater demand on students through increased academic rigor. Academic rigor is obtained through the application, analysis, evaluation, and creation of complex ideas that are often abstract and multi-faceted. Students are challenged to think and collaborate critically on the content they are learning. Honors level rigor will be achieved by increasing text complexity through text selection, focus on high-level qualitative measures, and complexity of task. Instruction will be structured to give students a deeper understanding of conceptual themes and organization within and across disciplines. Academic rigor is more than simply assigning to students a greater quantity of work.

Florida's Benchmarks for Excellent Student Thinking (B.E.S.T.) Standards
This course includes Florida's B.E.S.T. ELA Expectations (EE) and Mathematical Thinking and Reasoning Standards (MTRs) for students. Florida educators should intentionally embed these standards within the content and their instruction as applicable. For guidance on the implementation of the EEs and MTRs, please visit cpalms.org/Standards/BEST_Standards.aspx and select the appropriate B.E.S.T. Standards package.

English Language Development ELD Standards Special Notes Section:
Teachers are required to provide listening, speaking, reading and writing instruction that allows English language learners (ELL) to communicate information, ideas and concepts for academic success in the content area of Science. For the given level of English language proficiency and with visual, graphic, or interactive support, students will interact with grade level words, expressions, sentences and discourse to process or produce language necessary for academic success The ELD standard should specify a relevant content area concept or topic of study chosen by curriculum developers and teachers which maximizes an ELL's need for communication and social skills. To access an ELL supporting document which delineates performance definitions and descriptors, please click on the following link: cpalms.org/uploads/docs/standards/eld/SC.pdf

GENERAL INFORMATION

Course Number: 2002450

Course Path: Section: Grades PreK to 12 Education Courses > **Grade Group:** Grades 9 to 12 and Adult Education Courses > **Subject:** Science > **SubSubject:** Integrated Sciences >

Abbreviated Title: INTEG SCI 3 HON

Number of Credits: One (1) credit

Course Length: Year (Y)

Course Attributes:

- Honors
- Class Size Core Required

Course Type: Core Academic Course

Course Level: 3

Course Status: Draft - Course Pending Approval

Grade Level(s): 9,10,11,12

Graduation Requirement: Equally Rigorous Science

Educator Certifications

Earth/Space Science (Grades 6-12)
Physics (Grades 6-12)
Science (Secondary Grades 7-12)
Biology (Grades 6-12)
Chemistry (Grades 6-12)

Forensic Science 1 (#2002480) 2022 - And Beyond

Course Standards

Name	Description
SC.912.E.5.8:	Connect the concepts of radiation and the electromagnetic spectrum to the use of historical and newly-developed observational tools.
SC.912.L.14.1:	Describe the scientific theory of cells (cell theory) and relate the history of its discovery to the process of science.
SC.912.L.14.2:	Relate structure to function for the components of plant and animal cells. Explain the role of cell membranes as a highly selective barrier (passive and active transport).
SC.912.L.14.4:	Compare and contrast structure and function of various types of microscopes.
SC.912.L.14.6:	Explain the significance of genetic factors, environmental factors, and pathogenic agents to health from the perspectives of both individual and public health.
SC.912.L.14.11:	Classify and state the defining characteristics of epithelial tissue, connective tissue, muscle tissue, and nervous tissue.
SC.912.L.14.12:	Describe the anatomy and histology of bone tissue.
SC.912.L.14.34:	Describe the composition and physiology of blood, including that of the plasma and the formed elements.
SC.912.L.14.35:	Describe the steps in hemostasis, including the mechanism of coagulation. Include the basis for blood typing and transfusion reactions.
SC.912.L.14.51:	Describe the function of the vertebrate integumentary system.
SC.912.L.15.15:	Describe how mutation and genetic recombination increase genetic variation.
SC.912.L.16.2:	Discuss observed inheritance patterns caused by various modes of inheritance, including dominant, recessive, codominant, sex-linked, polygenic, and multiple alleles.
SC.912.L.16.9:	Explain how and why the genetic code is universal and is common to almost all organisms.
SC.912.L.16.10:	Evaluate the impact of biotechnology on the individual, society and the environment, including medical and ethical issues.
SC.912.L.16.11:	Discuss the technologies associated with forensic medicine and DNA identification, including restriction fragment length polymorphism (RFLP) analysis.
SC.912.L.16.12:	Describe how basic DNA technology (restriction digestion by endonucleases, gel electrophoresis, polymerase chain reaction, ligation, and transformation) is used to construct recombinant DNA molecules (DNA cloning).
SC.912.L.17.1:	Discuss the characteristics of populations, such as number of individuals, age structure, density, and pattern of distribution.
SC.912.L.18.1:	Describe the basic molecular structures and primary functions of the four major categories of biological macromolecules.
SC.912.N.1.1:	Define a problem based on a specific body of knowledge, for example: biology, chemistry, physics, and earth/space science, and do the following: 1. **Pose questions about the natural world,** (Articulate the purpose of the investigation and identify the relevant scientific concepts). 2. **Conduct systematic observations,** (Write procedures that are clear and replicable. Identify observables and examine relationships between test (independent) variable and outcome (dependent) variable. Employ appropriate methods for accurate and consistent observations; conduct and record measurements at appropriate levels of precision. Follow safety guidelines). 3. **Examine books and other sources of information to see what is already known,** 4. **Review what is known in light of empirical evidence,** (Examine whether available empirical evidence can be interpreted in terms of existing knowledge and models, and if not, modify or develop new models). 5. **Plan investigations,** (Design and evaluate a scientific investigation). 6. **Use tools to gather, analyze, and interpret data (this includes the use of measurement in metric and other systems, and also the generation and interpretation of graphical representations of data, including data tables and graphs),** (Collect data or evidence in an organized way. Properly use instruments, equipment, and materials (e.g., scales, probeware, meter sticks, microscopes, computers) including set-up, calibration, technique, maintenance, and storage). 7. **Pose answers, explanations, or descriptions of events,** 8. **Generate explanations that explicate or describe natural phenomena (inferences),** 9. **Use appropriate evidence and reasoning to justify these explanations to others,** 10. **Communicate results of scientific investigations, and** 11. **Evaluate the merits of the explanations produced by others.**
SC.912.N.1.2:	Describe and explain what characterizes science and its methods.
SC.912.N.1.3:	Recognize that the strength or usefulness of a scientific claim is evaluated through scientific argumentation, which depends on critical and logical thinking, and the active consideration of alternative scientific explanations to explain the data presented.
SC.912.N.1.4:	Identify sources of information and assess their reliability according to the strict standards of scientific investigation.
SC.912.N.1.6:	Describe how scientific inferences are drawn from scientific observations and provide examples from the content being studied.
SC.912.N.2.1:	Identify what is science, what clearly is not science, and what superficially resembles science (but fails to meet the criteria for science).
SC.912.N.2.4:	Explain that scientific knowledge is both durable and robust and open to change. Scientific knowledge can change because it is often examined and re-examined by new investigations and scientific argumentation. Because of these frequent examinations, scientific knowledge becomes stronger, leading to its durability.
SC.912.N.3.1:	Explain that a scientific theory is the culmination of many scientific investigations drawing together all the current evidence concerning a substantial range of phenomena; thus, a scientific theory represents the most powerful explanation scientists have to offer.
SC.912.N.3.2:	Describe the role consensus plays in the historical development of a theory in any one of the disciplines of science.
SC.912.N.3.5:	Describe the function of models in science, and identify the wide range of models used in science.
SC.912.N.4.1:	Explain how scientific knowledge and reasoning provide an empirically-based perspective to inform society's decision making.
SC.912.N.4.2:	Weigh the merits of alternative strategies for solving a specific societal problem by comparing a number of different costs and benefits, such as human, economic, and environmental.
SC.912.P.8.1:	Differentiate among the four states of matter.
SC.912.P.8.2:	Differentiate between physical and chemical properties and physical and chemical changes of matter.
SC.912.P.8.7:	Interpret formula representations of molecules and compounds in terms of composition and structure.
SC.912.P.8.11:	Relate acidity and basicity to hydronium and hydroxyl ion concentration and pH.

SC.912.P.8.12:	Describe the properties of the carbon atom that make the diversity of carbon compounds possible.
SC.912.P.10.1:	Differentiate among the various forms of energy and recognize that they can be transformed from one form to others.
SC.912.P.10.18:	Explore the theory of electromagnetism by comparing and contrasting the different parts of the electromagnetic spectrum in terms of wavelength, frequency, and energy, and relate them to phenomena and applications.
SC.912.P.10.20:	Describe the measurable properties of waves and explain the relationships among them and how these properties change when the wave moves from one medium to another.
SC.912.P.10.21:	Qualitatively describe the shift in frequency in sound or electromagnetic waves due to the relative motion of a source or a receiver.
SC.912.P.12.1:	Distinguish between scalar and vector quantities and assess which should be used to describe an event.
SC.912.P.12.2:	Analyze the motion of an object in terms of its position, velocity, and acceleration (with respect to a frame of reference) as functions of time.
SC.912.P.12.3:	Interpret and apply Newton's three laws of motion.
SC.912.P.12.5:	Apply the law of conservation of linear momentum to interactions, such as collisions between objects.
SC.912.P.12.7:	Recognize that nothing travels faster than the speed of light in vacuum which is the same for all observers no matter how they or the light source are moving.
SC.912.P.12.9:	Recognize that time, length, and energy depend on the frame of reference.
SC.912.P.12.12:	Explain how various factors, such as concentration, temperature, and presence of a catalyst affect the rate of a chemical reaction.
MA.K12.MTR.1.1:	Mathematicians who participate in effortful learning both individually and with others: • Analyze the problem in a way that makes sense given the task. • Ask questions that will help with solving the task. • Build perseverance by modifying methods as needed while solving a challenging task. • Stay engaged and maintain a positive mindset when working to solve tasks. • Help and support each other when attempting a new method or approach. **Clarifications:** Teachers who encourage students to participate actively in effortful learning both individually and with others: • Cultivate a community of growth mindset learners. • Foster perseverance in students by choosing tasks that are challenging. • Develop students' ability to analyze and problem solve. • Recognize students' effort when solving challenging problems.
MA.K12.MTR.2.1:	Demonstrate understanding by representing problems in multiple ways. Mathematicians who demonstrate understanding by representing problems in multiple ways: • Build understanding through modeling and using manipulatives. • Represent solutions to problems in multiple ways using objects, drawings, tables, graphs and equations. • Progress from modeling problems with objects and drawings to using algorithms and equations. • Express connections between concepts and representations. • Choose a representation based on the given context or purpose. **Clarifications:** Teachers who encourage students to demonstrate understanding by representing problems in multiple ways: • Help students make connections between concepts and representations. • Provide opportunities for students to use manipulatives when investigating concepts. • Guide students from concrete to pictorial to abstract representations as understanding progresses. • Show students that various representations can have different purposes and can be useful in different situations.
MA.K12.MTR.3.1:	Complete tasks with mathematical fluency. Mathematicians who complete tasks with mathematical fluency: • Select efficient and appropriate methods for solving problems within the given context. • Maintain flexibility and accuracy while performing procedures and mental calculations. • Complete tasks accurately and with confidence. • Adapt procedures to apply them to a new context. • Use feedback to improve efficiency when performing calculations. **Clarifications:** Teachers who encourage students to complete tasks with mathematical fluency: • Provide students with the flexibility to solve problems by selecting a procedure that allows them to solve efficiently and accurately. • Offer multiple opportunities for students to practice efficient and generalizable methods. • Provide opportunities for students to reflect on the method they used and determine if a more efficient method could have been used.
MA.K12.MTR.4.1:	Engage in discussions that reflect on the mathematical thinking of self and others. Mathematicians who engage in discussions that reflect on the mathematical thinking of self and others: • Communicate mathematical ideas, vocabulary and methods effectively. • Analyze the mathematical thinking of others. • Compare the efficiency of a method to those expressed by others. • Recognize errors and suggest how to correctly solve the task. • Justify results by explaining methods and processes. • Construct possible arguments based on evidence. **Clarifications:** Teachers who encourage students to engage in discussions that reflect on the mathematical thinking of self and others: • Establish a culture in which students ask questions of the teacher and their peers, and error is an opportunity for learning. • Create opportunities for students to discuss their thinking with peers. • Select, sequence and present student work to advance and deepen understanding of correct and increasingly efficient methods. • Develop students' ability to justify methods and compare their responses to the responses of their peers.
	Use patterns and structure to help understand and connect mathematical concepts.

MA.K12.MTR.5.1:	Mathematicians who use patterns and structure to help understand and connect mathematical concepts: • Focus on relevant details within a problem. • Create plans and procedures to logically order events, steps or ideas to solve problems. • Decompose a complex problem into manageable parts. • Relate previously learned concepts to new concepts. • Look for similarities among problems. • Connect solutions of problems to more complicated large-scale situations. **Clarifications:** Teachers who encourage students to use patterns and structure to help understand and connect mathematical concepts: • Help students recognize the patterns in the world around them and connect these patterns to mathematical concepts. • Support students to develop generalizations based on the similarities found among problems. • Provide opportunities for students to create plans and procedures to solve problems. • Develop students' ability to construct relationships between their current understanding and more sophisticated ways of thinking.
MA.K12.MTR.6.1:	Assess the reasonableness of solutions. Mathematicians who assess the reasonableness of solutions: • Estimate to discover possible solutions. • Use benchmark quantities to determine if a solution makes sense. • Check calculations when solving problems. • Verify possible solutions by explaining the methods used. • Evaluate results based on the given context. **Clarifications:** Teachers who encourage students to assess the reasonableness of solutions: • Have students estimate or predict solutions prior to solving. • Prompt students to continually ask, "Does this solution make sense? How do you know?" • Reinforce that students check their work as they progress within and after a task. • Strengthen students' ability to verify solutions through justifications.
MA.K12.MTR.7.1:	Apply mathematics to real-world contexts. Mathematicians who apply mathematics to real-world contexts: • Connect mathematical concepts to everyday experiences. • Use models and methods to understand, represent and solve problems. • Perform investigations to gather data or determine if a method is appropriate. • Redesign models and methods to improve accuracy or efficiency. **Clarifications:** Teachers who encourage students to apply mathematics to real-world contexts: • Provide opportunities for students to create models, both concrete and abstract, and perform investigations. • Challenge students to question the accuracy of their models and methods. • Support students as they validate conclusions by comparing them to the given situation. • Indicate how various concepts can be applied to other disciplines.
ELA.K12.EE.1.1:	Cite evidence to explain and justify reasoning. **Clarifications:** K-1 Students include textual evidence in their oral communication with guidance and support from adults. The evidence can consist of details from the text without naming the text. During 1st grade, students learn how to incorporate the evidence in their writing. 2-3 Students include relevant textual evidence in their written and oral communication. Students should name the text when they refer to it. In 3rd grade, students should use a combination of direct and indirect citations. 4-5 Students continue with previous skills and reference comments made by speakers and peers. Students cite texts that they've directly quoted, paraphrased, or used for information. When writing, students will use the form of citation dictated by the instructor or the style guide referenced by the instructor. 6-8 Students continue with previous skills and use a style guide to create a proper citation. 9-12 Students continue with previous skills and should be aware of existing style guides and the ways in which they differ.
ELA.K12.EE.2.1:	Read and comprehend grade-level complex texts proficiently. **Clarifications:** See Text Complexity for grade-level complexity bands and a text complexity rubric.
ELA.K12.EE.3.1:	Make inferences to support comprehension. **Clarifications:** Students will make inferences before the words infer or inference are introduced. Kindergarten students will answer questions like "Why is the girl smiling?" or make predictions about what will happen based on the title page. Students will use the terms and apply them in 2nd grade and beyond.
ELA.K12.EE.4.1:	Use appropriate collaborative techniques and active listening skills when engaging in discussions in a variety of situations. **Clarifications:** In kindergarten, students learn to listen to one another respectfully. In grades 1-2, students build upon these skills by justifying what they are thinking. For example: "I think _____ because _____." The collaborative conversations are becoming academic conversations. In grades 3-12, students engage in academic conversations discussing claims and justifying their reasoning, refining and applying skills. Students build on ideas, propel the conversation, and support claims and counterclaims with evidence.
	Use the accepted rules governing a specific format to create quality work.

ELA.K12.EE.5.1:	**Clarifications:** Students will incorporate skills learned into work products to produce quality work. For students to incorporate these skills appropriately, they must receive instruction. A 3rd grade student creating a poster board display must have instruction in how to effectively present information to do quality work.
ELA.K12.EE.6.1:	Use appropriate voice and tone when speaking or writing. **Clarifications:** In kindergarten and 1st grade, students learn the difference between formal and informal language. For example, the way we talk to our friends differs from the way we speak to adults. In 2nd grade and beyond, students practice appropriate social and academic language to discuss texts.
ELD.K12.ELL.SC.1:	English language learners communicate information, ideas and concepts necessary for academic success in the content area of Science.
ELD.K12.ELL.SI.1:	English language learners communicate for social and instructional purposes within the school setting.

General Course Information and Notes

GENERAL NOTES

Laboratory investigations that include the use of scientific inquiry, research, measurement, problem solving, laboratory apparatus and technologies, experimental procedures, and safety procedures are an integral part of this course. The National Science Teachers Association (NSTA) recommends that at the high school level, all students should be in the science lab or field, collecting data every week. School laboratory investigations (labs) are defined by the National Research Council (NRC) as an experience in the laboratory, classroom, or the field that provides students with opportunities to interact directly with natural phenomena or with data collected by others using tools, materials, data collection techniques, and models (NRC, 2006, p. 3). Laboratory investigations in the high school classroom should help all students develop a growing understanding of the complexity and ambiguity of empirical work, as well as the skills to calibrate and troubleshoot equipment used to make observations. Learners should understand measurement error; and have the skills to aggregate, interpret, and present the resulting data (National Research Council, 2006, p.77; NSTA, 2007).

Special Notes:
Instructional Practices
Teaching from a range of complex text is optimized when teachers in all subject areas implement the following strategies on a routine basis:

1. Ensuring wide reading from complex text that varies in length.
2. Making close reading and rereading of texts central to lessons.
3. Emphasizing text-specific complex questions, and cognitively complex tasks, reinforce focus on the text and cultivate independence.
4. Emphasizing students supporting answers based upon evidence from the text.
5. Providing extensive research and writing opportunities (claims and evidence).

Science and Engineering Practices (NRC *Framework for K-12 Science Education, 2010*)

- Asking questions (for science) and defining problems (for engineering).
- Developing and using models.
- Planning and carrying out investigations.
- Analyzing and interpreting data.
- Using mathematics, information and computer technology, and computational thinking.
- Constructing explanations (for science) and designing solutions (for engineering).
- Engaging in argument from evidence.
- Obtaining, evaluating, and communicating information.

Florida's Benchmarks for Excellent Student Thinking (B.E.S.T.) Standards
This course includes Florida's B.E.S.T. ELA Expectations (EE) and Mathematical Thinking and Reasoning Standards (MTRs) for students. Florida educators should intentionally embed these standards within the content and their instruction as applicable. For guidance on the implementation of the EEs and MTRs, please visit cpalms.org/Standards/BEST_Standards.aspx and select the appropriate B.E.S.T. Standards package.

English Language Development ELD Standards Special Notes Section:
Teachers are required to provide listening, speaking, reading and writing instruction that allows English language learners (ELL) to communicate information, ideas and concepts for academic success in the content area of Science. For the given level of English language proficiency and with visual, graphic, or interactive support, students will interact with grade level words, expressions, sentences and discourse to process or produce language necessary for academic success The ELD standard should specify a relevant content area concept or topic of study chosen by curriculum developers and teachers which maximizes an ELL's need for communication and social skills. To access an ELL supporting document which delineates performance definitions and descriptors, please click on the following link: cpalms.org/uploads/docs/standards/eld/SC.pdf

Additional Instructional Resources:
A.V.E. for Success Collection is provided by the Florida Association of School Administrators: fasa.net/4DCGI/cms/review.html?Action=CMS_Document&DocID=139. Please be aware that these resources have not been reviewed by CPALMS and there may be a charge for the use of some of them in this collection.

GENERAL INFORMATION

Course Number: 2002480

Course Path: Section: Grades PreK to 12 Education Courses > **Grade Group:** Grades 9 to 12 and Adult Education Courses > **Subject:** Science > **SubSubject:** Integrated Sciences >

Abbreviated Title: FOR SCI 1

Number of Credits: One (1) credit

Course Length: Year (Y)

Course Type: Core Academic Course

Course Level: 2

Course Status: Draft - Course Pending Approval

Grade Level(s): 9,10,11,12

Graduation Requirement: Equally Rigorous Science

Educator Certifications

Middle Grades General Science (Middle Grades 5-9)
Earth/Space Science (Grades 6-12)
Physics (Grades 6-12)
Science (Secondary Grades 7-12)
Biology (Grades 6-12)
Chemistry (Grades 6-12)

Forensic Sciences 2 (#2002490) 2022 - And Beyond

Course Standards

Name	Description
SC.912.E.5.8:	Connect the concepts of radiation and the electromagnetic spectrum to the use of historical and newly-developed observational tools.
SC.912.L.14.4:	Compare and contrast structure and function of various types of microscopes.
SC.912.L.14.6:	Explain the significance of genetic factors, environmental factors, and pathogenic agents to health from the perspectives of both individual and public health.
SC.912.L.14.11:	Classify and state the defining characteristics of epithelial tissue, connective tissue, muscle tissue, and nervous tissue.
SC.912.L.14.12:	Describe the anatomy and histology of bone tissue.
SC.912.L.14.13:	Distinguish between bones of the axial skeleton and the appendicular skeleton.
SC.912.L.14.14:	Identify the major bones of the axial and appendicular skeleton.
SC.912.L.14.15:	Identify major markings (such as foramina, fossae, tubercles, etc.) on a skeleton. Explain why these markings are important.
SC.912.L.14.16:	Describe the anatomy and histology, including ultrastructure, of muscle tissue.
SC.912.L.14.36:	Describe the factors affecting blood flow through the cardiovascular system.
SC.912.L.14.43:	Describe the histology of the respiratory system.
SC.912.L.14.44:	Describe the physiology of the respiratory system including the mechanisms of ventilation, gas exchange, gas transport and the mechanisms that control the rate of ventilation.
SC.912.L.14.46:	Describe the physiology of the digestive system, including mechanical digestion, chemical digestion, absorption and the neural and hormonal mechanisms of control.
SC.912.L.14.47:	Describe the physiology of urine formation by the kidney.
SC.912.L.16.3:	Describe the basic process of DNA replication and how it relates to the transmission and conservation of the genetic information.
SC.912.L.16.4:	Explain how mutations in the DNA sequence may or may not result in phenotypic change. Explain how mutations in gametes may result in phenotypic changes in offspring.
SC.912.L.16.5:	Explain the basic processes of transcription and translation, and how they result in the expression of genes.
SC.912.L.16.9:	Explain how and why the genetic code is universal and is common to almost all organisms.
SC.912.L.16.10:	Evaluate the impact of biotechnology on the individual, society and the environment, including medical and ethical issues.
SC.912.L.16.11:	Discuss the technologies associated with forensic medicine and DNA identification, including restriction fragment length polymorphism (RFLP) analysis.
SC.912.L.16.12:	Describe how basic DNA technology (restriction digestion by endonucleases, gel electrophoresis, polymerase chain reaction, ligation, and transformation) is used to construct recombinant DNA molecules (DNA cloning).
SC.912.L.17.6:	Compare and contrast the relationships among organisms, including predation, parasitism, competition, commensalism, and mutualism.
SC.912.L.17.9:	Use a food web to identify and distinguish producers, consumers, and decomposers. Explain the pathway of energy transfer through trophic levels and the reduction of available energy at successive trophic levels.
SC.912.L.18.3:	Describe the structures of fatty acids, triglycerides, phospholipids, and steroids. Explain the functions of lipids in living organisms. Identify some reactions that fatty acids undergo. Relate the structure and function of cell membranes.
SC.912.L.18.4:	Describe the structures of proteins and amino acids. Explain the functions of proteins in living organisms. Identify some reactions that amino acids undergo. Relate the structure and function of enzymes.
SC.912.L.18.10:	Connect the role of adenosine triphosphate (ATP) to energy transfers within a cell.
SC.912.L.18.11:	Explain the role of enzymes as catalysts that lower the activation energy of biochemical reactions. Identify factors, such as pH and temperature, and their effect on enzyme activity.
SC.912.L.18.12:	Discuss the special properties of water that contribute to Earth's suitability as an environment for life: cohesive behavior, ability to moderate temperature, expansion upon freezing, and versatility as a solvent.
SC.912.N.1.1:	Define a problem based on a specific body of knowledge, for example: biology, chemistry, physics, and earth/space science, and do the following: 1. **Pose questions about the natural world,** (Articulate the purpose of the investigation and identify the relevant scientific concepts). 2. **Conduct systematic observations,** (Write procedures that are clear and replicable. Identify observables and examine relationships between test (independent) variable and outcome (dependent) variable. Employ appropriate methods for accurate and consistent observations; conduct and record measurements at appropriate levels of precision. Follow safety guidelines). 3. **Examine books and other sources of information to see what is already known,** 4. **Review what is known in light of empirical evidence,** (Examine whether available empirical evidence can be interpreted in terms of existing knowledge and models, and if not, modify or develop new models). 5. **Plan investigations,** (Design and evaluate a scientific investigation). 6. **Use tools to gather, analyze, and interpret data (this includes the use of measurement in metric and other systems, and also the generation and interpretation of graphical representations of data, including data tables and graphs),** (Collect data or evidence in an organized way. Properly use instruments, equipment, and materials (e.g., scales, probeware, meter sticks, microscopes, computers) including set-up, calibration, technique, maintenance, and storage). 7. **Pose answers, explanations, or descriptions of events,** 8. **Generate explanations that explicate or describe natural phenomena (inferences),** 9. **Use appropriate evidence and reasoning to justify these explanations to others,** 10. **Communicate results of scientific investigations, and** 11. **Evaluate the merits of the explanations produced by others.**
SC.912.N.1.2:	Describe and explain what characterizes science and its methods.
SC.912.N.1.3:	Recognize that the strength or usefulness of a scientific claim is evaluated through scientific argumentation, which depends on critical and logical thinking, and the active consideration of alternative scientific explanations to explain the data presented.
SC.912.N.1.4:	Identify sources of information and assess their reliability according to the strict standards of scientific investigation.

SC.912.N.1.5:	Describe and provide examples of how similar investigations conducted in many parts of the world result in the same outcome.
SC.912.N.1.6:	Describe how scientific inferences are drawn from scientific observations and provide examples from the content being studied.
SC.912.N.2.4:	Explain that scientific knowledge is both durable and robust and open to change. Scientific knowledge can change because it is often examined and re-examined by new investigations and scientific argumentation. Because of these frequent examinations, scientific knowledge becomes stronger, leading to its durability.
SC.912.N.3.5:	Describe the function of models in science, and identify the wide range of models used in science.
SC.912.N.4.1:	Explain how scientific knowledge and reasoning provide an empirically-based perspective to inform society's decision making.
SC.912.N.4.2:	Weigh the merits of alternative strategies for solving a specific societal problem by comparing a number of different costs and benefits, such as human, economic, and environmental.
SC.912.P.8.7:	Interpret formula representations of molecules and compounds in terms of composition and structure.
SC.912.P.8.8:	Characterize types of chemical reactions, for example: redox, acid-base, synthesis, and single and double replacement reactions.
SC.912.P.8.10:	Describe oxidation-reduction reactions in living and non-living systems.
SC.912.P.8.13:	Identify selected functional groups and relate how they contribute to properties of carbon compounds.
SC.912.P.10.4:	Describe heat as the energy transferred by convection, conduction, and radiation, and explain the connection of heat to change in temperature or states of matter.
SC.912.P.10.7:	Distinguish between endothermic and exothermic chemical processes.
SC.912.P.10.13:	Relate the configuration of static charges to the electric field, electric force, electric potential, and electric potential energy.
SC.912.P.10.14:	Differentiate among conductors, semiconductors, and insulators.
SC.912.P.10.15:	Investigate and explain the relationships among current, voltage, resistance, and power.
SC.912.P.10.18:	Explore the theory of electromagnetism by comparing and contrasting the different parts of the electromagnetic spectrum in terms of wavelength, frequency, and energy, and relate them to phenomena and applications.
SC.912.P.12.1:	Distinguish between scalar and vector quantities and assess which should be used to describe an event.
SC.912.P.12.2:	Analyze the motion of an object in terms of its position, velocity, and acceleration (with respect to a frame of reference) as functions of time.
SC.912.P.12.3:	Interpret and apply Newton's three laws of motion.
SC.912.P.12.5:	Apply the law of conservation of linear momentum to interactions, such as collisions between objects.
SC.912.P.12.6:	Qualitatively apply the concept of angular momentum.
SC.912.P.12.12:	Explain how various factors, such as concentration, temperature, and presence of a catalyst affect the rate of a chemical reaction.
MA.K12.MTR.1.1:	Mathematicians who participate in effortful learning both individually and with others: • Analyze the problem in a way that makes sense given the task. • Ask questions that will help with solving the task. • Build perseverance by modifying methods as needed while solving a challenging task. • Stay engaged and maintain a positive mindset when working to solve tasks. • Help and support each other when attempting a new method or approach. **Clarifications:** Teachers who encourage students to participate actively in effortful learning both individually and with others: • Cultivate a community of growth mindset learners. • Foster perseverance in students by choosing tasks that are challenging. • Develop students' ability to analyze and problem solve. • Recognize students' effort when solving challenging problems.
MA.K12.MTR.2.1:	Demonstrate understanding by representing problems in multiple ways. Mathematicians who demonstrate understanding by representing problems in multiple ways: • Build understanding through modeling and using manipulatives. • Represent solutions to problems in multiple ways using objects, drawings, tables, graphs and equations. • Progress from modeling problems with objects and drawings to using algorithms and equations. • Express connections between concepts and representations. • Choose a representation based on the given context or purpose. **Clarifications:** Teachers who encourage students to demonstrate understanding by representing problems in multiple ways: • Help students make connections between concepts and representations. • Provide opportunities for students to use manipulatives when investigating concepts. • Guide students from concrete to pictorial to abstract representations as understanding progresses. • Show students that various representations can have different purposes and can be useful in different situations.
MA.K12.MTR.3.1:	Complete tasks with mathematical fluency. Mathematicians who complete tasks with mathematical fluency: • Select efficient and appropriate methods for solving problems within the given context. • Maintain flexibility and accuracy while performing procedures and mental calculations. • Complete tasks accurately and with confidence. • Adapt procedures to apply them to a new context. • Use feedback to improve efficiency when performing calculations. **Clarifications:** Teachers who encourage students to complete tasks with mathematical fluency: • Provide students with the flexibility to solve problems by selecting a procedure that allows them to solve efficiently and accurately. • Offer multiple opportunities for students to practice efficient and generalizable methods. • Provide opportunities for students to reflect on the method they used and determine if a more efficient method could have been used.
	Engage in discussions that reflect on the mathematical thinking of self and others. Mathematicians who engage in discussions that reflect on the mathematical thinking of self and others: • Communicate mathematical ideas, vocabulary and methods effectively. • Analyze the mathematical thinking of others.

MA.K12.MTR.4.1:	• Compare the efficiency of a method to those expressed by others. • Recognize errors and suggest how to correctly solve the task. • Justify results by explaining methods and processes. • Construct possible arguments based on evidence. **Clarifications:** Teachers who encourage students to engage in discussions that reflect on the mathematical thinking of self and others: • Establish a culture in which students ask questions of the teacher and their peers, and error is an opportunity for learning. • Create opportunities for students to discuss their thinking with peers. • Select, sequence and present student work to advance and deepen understanding of correct and increasingly efficient methods. • Develop students' ability to justify methods and compare their responses to the responses of their peers.
MA.K12.MTR.5.1:	Use patterns and structure to help understand and connect mathematical concepts. Mathematicians who use patterns and structure to help understand and connect mathematical concepts: • Focus on relevant details within a problem. • Create plans and procedures to logically order events, steps or ideas to solve problems. • Decompose a complex problem into manageable parts. • Relate previously learned concepts to new concepts. • Look for similarities among problems. • Connect solutions of problems to more complicated large-scale situations. **Clarifications:** Teachers who encourage students to use patterns and structure to help understand and connect mathematical concepts: • Help students recognize the patterns in the world around them and connect these patterns to mathematical concepts. • Support students to develop generalizations based on the similarities found among problems. • Provide opportunities for students to create plans and procedures to solve problems. • Develop students' ability to construct relationships between their current understanding and more sophisticated ways of thinking.
MA.K12.MTR.6.1:	Assess the reasonableness of solutions. Mathematicians who assess the reasonableness of solutions: • Estimate to discover possible solutions. • Use benchmark quantities to determine if a solution makes sense. • Check calculations when solving problems. • Verify possible solutions by explaining the methods used. • Evaluate results based on the given context. **Clarifications:** Teachers who encourage students to assess the reasonableness of solutions: • Have students estimate or predict solutions prior to solving. • Prompt students to continually ask, "Does this solution make sense? How do you know?" • Reinforce that students check their work as they progress within and after a task. • Strengthen students' ability to verify solutions through justifications.
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ELA.K12.EE.1.1:	Cite evidence to explain and justify reasoning. **Clarifications:** K-1 Students include textual evidence in their oral communication with guidance and support from adults. The evidence can consist of details from the text without naming the text. During 1st grade, students learn how to incorporate the evidence in their writing. 2-3 Students include relevant textual evidence in their written and oral communication. Students should name the text when they refer to it. In 3rd grade, students should use a combination of direct and indirect citations. 4-5 Students continue with previous skills and reference comments made by speakers and peers. Students cite texts that they've directly quoted, paraphrased, or used for information. When writing, students will use the form of citation dictated by the instructor or the style guide referenced by the instructor. 6-8 Students continue with previous skills and use a style guide to create a proper citation. 9-12 Students continue with previous skills and should be aware of existing style guides and the ways in which they differ.
ELA.K12.EE.2.1:	Read and comprehend grade-level complex texts proficiently. **Clarifications:** See Text Complexity for grade-level complexity bands and a text complexity rubric.
	Make inferences to support comprehension. **Clarifications:**

ELA.K12.EE.3.1:	Students will make inferences before the words infer or inference are introduced. Kindergarten students will answer questions like "Why is the girl smiling?" or make predictions about what will happen based on the title page. Students will use the terms and apply them in 2nd grade and beyond.
ELA.K12.EE.4.1:	Use appropriate collaborative techniques and active listening skills when engaging in discussions in a variety of situations. **Clarifications:** In kindergarten, students learn to listen to one another respectfully. In grades 1-2, students build upon these skills by justifying what they are thinking. For example: "I think _____ because _____." The collaborative conversations are becoming academic conversations. In grades 3-12, students engage in academic conversations discussing claims and justifying their reasoning, refining and applying skills. Students build on ideas, propel the conversation, and support claims and counterclaims with evidence.
ELA.K12.EE.5.1:	Use the accepted rules governing a specific format to create quality work. **Clarifications:** Students will incorporate skills learned into work products to produce quality work. For students to incorporate these skills appropriately, they must receive instruction. A 3rd grade student creating a poster board display must have instruction in how to effectively present information to do quality work.
ELA.K12.EE.6.1:	Use appropriate voice and tone when speaking or writing. **Clarifications:** In kindergarten and 1st grade, students learn the difference between formal and informal language. For example, the way we talk to our friends differs from the way we speak to adults. In 2nd grade and beyond, students practice appropriate social and academic language to discuss texts.
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GENERAL NOTES

Laboratory investigations that include the use of scientific inquiry, research, measurement, problem solving, laboratory apparatus and technologies, experimental procedures, and safety procedures are an integral part of this course. The National Science Teachers Association (NSTA) recommends that at the high school level, all students should be in the science lab or field, collecting data every week. School laboratory investigations (labs) are defined by the National Research Council (NRC) as an experience in the laboratory, classroom, or the field that provides students with opportunities to interact directly with natural phenomena or with data collected by others using tools, materials, data collection techniques, and models (NRC, 2006, p. 3). Laboratory investigations in the high school classroom should help all students develop a growing understanding of the complexity and ambiguity of empirical work, as well as the skills to calibrate and troubleshoot equipment used to make observations. Learners should understand measurement error; and have the skills to aggregate, interpret, and present the resulting data (National Research Council, 2006, p.77; NSTA, 2007).

Special Notes:
Instructional Practices
Teaching from a range of complex text is optimized when teachers in all subject areas implement the following strategies on a routine basis:

1. Ensuring wide reading from complex text that varies in length.
2. Making close reading and rereading of texts central to lessons.
3. Emphasizing text-specific complex questions, and cognitively complex tasks, reinforce focus on the text and cultivate independence.
4. Emphasizing students supporting answers based upon evidence from the text.
5. Providing extensive research and writing opportunities (claims and evidence).

Science and Engineering Practices (NRC *Framework for K-12 Science Education, 2010*)

- Asking questions (for science) and defining problems (for engineering).
- Developing and using models.
- Planning and carrying out investigations.
- Analyzing and interpreting data.
- Using mathematics, information and computer technology, and computational thinking.
- Constructing explanations (for science) and designing solutions (for engineering).
- Engaging in argument from evidence.
- Obtaining, evaluating, and communicating information.

Florida's Benchmarks for Excellent Student Thinking (B.E.S.T.) Standards
This course includes Florida's B.E.S.T. ELA Expectations (EE) and Mathematical Thinking and Reasoning Standards (MTRs) for students. Florida educators should intentionally embed these standards within the content and their instruction as applicable. For guidance on the implementation of the EEs and MTRs, please visit cpalms.org/Standards/BEST_Standards.aspx and select the appropriate B.E.S.T. Standards package.

English Language Development ELD Standards Special Notes Section:
Teachers are required to provide listening, speaking, reading and writing instruction that allows English language learners (ELL) to communicate information, ideas and concepts for academic success in the content area of Science. For the given level of English language proficiency and with visual, graphic, or interactive support, students will interact with grade level words, expressions, sentences and discourse to process or produce language necessary for academic success The ELD standard should specify a relevant content area concept or topic of study chosen by curriculum developers and teachers which maximizes an ELL's need for communication and social skills. To access an ELL supporting document which delineates performance definitions and descriptors, please click on the following link: cpalms.org/uploads/docs/standards/eld/SC.pdf

GENERAL INFORMATION

Course Number: 2002490

Course Path: Section: Grades PreK to 12 Education Courses > **Grade Group:** Grades 9 to 12 and Adult Education Courses > **Subject:** Science > **SubSubject:** Integrated Sciences >

Abbreviated Title: FOR SCI 2

Number of Credits: One (1) credit

Course Length: Year (Y)

Course Type: Core Academic Course

Course Level: 2

Course Status: Draft - Course Pending Approval

Grade Level(s): 9,10,11,12

Graduation Requirement: Equally Rigorous Science

Educator Certifications

Middle Grades General Science (Middle Grades 5-9)
Earth/Space Science (Grades 6-12)
Biology (Grades 6-12)
Chemistry (Grades 6-12)
Physics (Grades 6-12)
Science (Secondary Grades 7-12)

Marine Science 1 (#2002500) 2022 - And Beyond

Course Standards

Name	Description
SC.912.E.7.9:	Cite evidence that the ocean has had a significant influence on climate change by absorbing, storing, and moving heat, carbon, and water.
SC.912.L.14.6:	Explain the significance of genetic factors, environmental factors, and pathogenic agents to health from the perspectives of both individual and public health.
SC.912.L.15.13:	Describe the conditions required for natural selection, including: overproduction of offspring, inherited variation, and the struggle to survive, which result in differential reproductive success.
SC.912.L.17.1:	Discuss the characteristics of populations, such as number of individuals, age structure, density, and pattern of distribution.
SC.912.L.17.2:	Explain the general distribution of life in aquatic systems as a function of chemistry, geography, light, depth, salinity, and temperature.
SC.912.L.17.3:	Discuss how various oceanic and freshwater processes, such as currents, tides, and waves, affect the abundance of aquatic organisms.
SC.912.L.17.4:	Describe changes in ecosystems resulting from seasonal variations, climate change and succession.
SC.912.L.17.6:	Compare and contrast the relationships among organisms, including predation, parasitism, competition, commensalism, and mutualism.
SC.912.L.17.7:	Characterize the biotic and abiotic components that define freshwater systems, marine systems and terrestrial systems.
SC.912.L.17.8:	Recognize the consequences of the losses of biodiversity due to catastrophic events, climate changes, human activity, and the introduction of invasive, non-native species.
SC.912.L.17.9:	Use a food web to identify and distinguish producers, consumers, and decomposers. Explain the pathway of energy transfer through trophic levels and the reduction of available energy at successive trophic levels.
SC.912.L.17.10:	Diagram and explain the biogeochemical cycles of an ecosystem, including water, carbon, and nitrogen cycle.
SC.912.L.17.11:	Evaluate the costs and benefits of renewable and nonrenewable resources, such as water, energy, fossil fuels, wildlife, and forests.
SC.912.L.17.16:	Discuss the large-scale environmental impacts resulting from human activity, including waste spills, oil spills, runoff, greenhouse gases, ozone depletion, and surface and groundwater pollution.
SC.912.L.18.12:	Discuss the special properties of water that contribute to Earth's suitability as an environment for life: cohesive behavior, ability to moderate temperature, expansion upon freezing, and versatility as a solvent.
SC.912.N.1.1:	Define a problem based on a specific body of knowledge, for example: biology, chemistry, physics, and earth/space science, and do the following: 1. **Pose questions about the natural world,** (Articulate the purpose of the investigation and identify the relevant scientific concepts). 2. **Conduct systematic observations,** (Write procedures that are clear and replicable. Identify observables and examine relationships between test (independent) variable and outcome (dependent) variable. Employ appropriate methods for accurate and consistent observations; conduct and record measurements at appropriate levels of precision. Follow safety guidelines). 3. **Examine books and other sources of information to see what is already known,** 4. **Review what is known in light of empirical evidence,** (Examine whether available empirical evidence can be interpreted in terms of existing knowledge and models, and if not, modify or develop new models). 5. **Plan investigations,** (Design and evaluate a scientific investigation). 6. **Use tools to gather, analyze, and interpret data (this includes the use of measurement in metric and other systems, and also the generation and interpretation of graphical representations of data, including data tables and graphs),** (Collect data or evidence in an organized way. Properly use instruments, equipment, and materials (e.g., scales, probeware, meter sticks, microscopes, computers) including set-up, calibration, technique, maintenance, and storage). 7. **Pose answers, explanations, or descriptions of events,** 8. **Generate explanations that explicate or describe natural phenomena (inferences),** 9. **Use appropriate evidence and reasoning to justify these explanations to others,** 10. **Communicate results of scientific investigations, and** 11. **Evaluate the merits of the explanations produced by others.**
SC.912.N.1.2:	Describe and explain what characterizes science and its methods.
SC.912.N.1.3:	Recognize that the strength or usefulness of a scientific claim is evaluated through scientific argumentation, which depends on critical and logical thinking, and the active consideration of alternative scientific explanations to explain the data presented.
SC.912.N.1.4:	Identify sources of information and assess their reliability according to the strict standards of scientific investigation.
SC.912.N.1.5:	Describe and provide examples of how similar investigations conducted in many parts of the world result in the same outcome.
SC.912.N.1.6:	Describe how scientific inferences are drawn from scientific observations and provide examples from the content being studied.
SC.912.N.1.7:	Recognize the role of creativity in constructing scientific questions, methods and explanations.
SC.912.N.2.1:	Identify what is science, what clearly is not science, and what superficially resembles science (but fails to meet the criteria for science).
SC.912.N.2.4:	Explain that scientific knowledge is both durable and robust and open to change. Scientific knowledge can change because it is often examined and re-examined by new investigations and scientific argumentation. Because of these frequent examinations, scientific knowledge becomes stronger, leading to its durability.
SC.912.N.2.5:	Describe instances in which scientists' varied backgrounds, talents, interests, and goals influence the inferences and thus the explanations that they make about observations of natural phenomena and describe that competing interpretations (explanations) of scientists are a strength of science as they are a source of new, testable ideas that have the potential to add new evidence to support one or another of the explanations.
SC.912.N.3.1:	Explain that a scientific theory is the culmination of many scientific investigations drawing together all the current evidence concerning a substantial range of phenomena; thus, a scientific theory represents the most powerful explanation scientists have to offer.
SC.912.N.3.5:	Describe the function of models in science, and identify the wide range of models used in science.
SC.912.N.4.1:	Explain how scientific knowledge and reasoning provide an empirically-based perspective to inform society's decision making.
SC.912.N.4.2:	Weigh the merits of alternative strategies for solving a specific societal problem by comparing a number of different costs and benefits, such as human, economic, and environmental.
SC.912.P.10.2:	Explore the Law of Conservation of Energy by differentiating among open, closed, and isolated systems and explain that the total energy in an isolated system is a conserved quantity.

SC.912.P.10.20:	Describe the measurable properties of waves and explain the relationships among them and how these properties change when the wave moves from one medium to another.
MA.K12.MTR.1.1:	Mathematicians who participate in effortful learning both individually and with others: • Analyze the problem in a way that makes sense given the task. • Ask questions that will help with solving the task. • Build perseverance by modifying methods as needed while solving a challenging task. • Stay engaged and maintain a positive mindset when working to solve tasks. • Help and support each other when attempting a new method or approach. **Clarifications:** Teachers who encourage students to participate actively in effortful learning both individually and with others: • Cultivate a community of growth mindset learners. • Foster perseverance in students by choosing tasks that are challenging. • Develop students' ability to analyze and problem solve. • Recognize students' effort when solving challenging problems.
MA.K12.MTR.2.1:	Demonstrate understanding by representing problems in multiple ways. Mathematicians who demonstrate understanding by representing problems in multiple ways: • Build understanding through modeling and using manipulatives. • Represent solutions to problems in multiple ways using objects, drawings, tables, graphs and equations. • Progress from modeling problems with objects and drawings to using algorithms and equations. • Express connections between concepts and representations. • Choose a representation based on the given context or purpose. **Clarifications:** Teachers who encourage students to demonstrate understanding by representing problems in multiple ways: • Help students make connections between concepts and representations. • Provide opportunities for students to use manipulatives when investigating concepts. • Guide students from concrete to pictorial to abstract representations as understanding progresses. • Show students that various representations can have different purposes and can be useful in different situations.
MA.K12.MTR.3.1:	Complete tasks with mathematical fluency. Mathematicians who complete tasks with mathematical fluency: • Select efficient and appropriate methods for solving problems within the given context. • Maintain flexibility and accuracy while performing procedures and mental calculations. • Complete tasks accurately and with confidence. • Adapt procedures to apply them to a new context. • Use feedback to improve efficiency when performing calculations. **Clarifications:** Teachers who encourage students to complete tasks with mathematical fluency: • Provide students with the flexibility to solve problems by selecting a procedure that allows them to solve efficiently and accurately. • Offer multiple opportunities for students to practice efficient and generalizable methods. • Provide opportunities for students to reflect on the method they used and determine if a more efficient method could have been used.
MA.K12.MTR.4.1:	Engage in discussions that reflect on the mathematical thinking of self and others. Mathematicians who engage in discussions that reflect on the mathematical thinking of self and others: • Communicate mathematical ideas, vocabulary and methods effectively. • Analyze the mathematical thinking of others. • Compare the efficiency of a method to those expressed by others. • Recognize errors and suggest how to correctly solve the task. • Justify results by explaining methods and processes. • Construct possible arguments based on evidence. **Clarifications:** Teachers who encourage students to engage in discussions that reflect on the mathematical thinking of self and others: • Establish a culture in which students ask questions of the teacher and their peers, and error is an opportunity for learning. • Create opportunities for students to discuss their thinking with peers. • Select, sequence and present student work to advance and deepen understanding of correct and increasingly efficient methods. • Develop students' ability to justify methods and compare their responses to the responses of their peers.
MA.K12.MTR.5.1:	Use patterns and structure to help understand and connect mathematical concepts. Mathematicians who use patterns and structure to help understand and connect mathematical concepts: • Focus on relevant details within a problem. • Create plans and procedures to logically order events, steps or ideas to solve problems. • Decompose a complex problem into manageable parts. • Relate previously learned concepts to new concepts. • Look for similarities among problems. • Connect solutions of problems to more complicated large-scale situations. **Clarifications:** Teachers who encourage students to use patterns and structure to help understand and connect mathematical concepts: • Help students recognize the patterns in the world around them and connect these patterns to mathematical concepts. • Support students to develop generalizations based on the similarities found among problems. • Provide opportunities for students to create plans and procedures to solve problems.

	• Develop students' ability to construct relationships between their current understanding and more sophisticated ways of thinking.
MA.K12.MTR.6.1:	Assess the reasonableness of solutions. Mathematicians who assess the reasonableness of solutions: • Estimate to discover possible solutions. • Use benchmark quantities to determine if a solution makes sense. • Check calculations when solving problems. • Verify possible solutions by explaining the methods used. • Evaluate results based on the given context. **Clarifications:** Teachers who encourage students to assess the reasonableness of solutions: • Have students estimate or predict solutions prior to solving. • Prompt students to continually ask, "Does this solution make sense? How do you know?" • Reinforce that students check their work as they progress within and after a task. • Strengthen students' ability to verify solutions through justifications.
MA.K12.MTR.7.1:	Apply mathematics to real-world contexts. Mathematicians who apply mathematics to real-world contexts: • Connect mathematical concepts to everyday experiences. • Use models and methods to understand, represent and solve problems. • Perform investigations to gather data or determine if a method is appropriate. • Redesign models and methods to improve accuracy or efficiency. **Clarifications:** Teachers who encourage students to apply mathematics to real-world contexts: • Provide opportunities for students to create models, both concrete and abstract, and perform investigations. • Challenge students to question the accuracy of their models and methods. • Support students as they validate conclusions by comparing them to the given situation. • Indicate how various concepts can be applied to other disciplines.
ELA.K12.EE.1.1:	Cite evidence to explain and justify reasoning. **Clarifications:** K-1 Students include textual evidence in their oral communication with guidance and support from adults. The evidence can consist of details from the text without naming the text. During 1st grade, students learn how to incorporate the evidence in their writing. 2-3 Students include relevant textual evidence in their written and oral communication. Students should name the text when they refer to it. In 3rd grade, students should use a combination of direct and indirect citations. 4-5 Students continue with previous skills and reference comments made by speakers and peers. Students cite texts that they've directly quoted, paraphrased, or used for information. When writing, students will use the form of citation dictated by the instructor or the style guide referenced by the instructor. 6-8 Students continue with previous skills and use a style guide to create a proper citation. 9-12 Students continue with previous skills and should be aware of existing style guides and the ways in which they differ.
ELA.K12.EE.2.1:	Read and comprehend grade-level complex texts proficiently. **Clarifications:** See Text Complexity for grade-level complexity bands and a text complexity rubric.
ELA.K12.EE.3.1:	Make inferences to support comprehension. **Clarifications:** Students will make inferences before the words infer or inference are introduced. Kindergarten students will answer questions like "Why is the girl smiling?" or make predictions about what will happen based on the title page. Students will use the terms and apply them in 2nd grade and beyond.
ELA.K12.EE.4.1:	Use appropriate collaborative techniques and active listening skills when engaging in discussions in a variety of situations. **Clarifications:** In kindergarten, students learn to listen to one another respectfully. In grades 1-2, students build upon these skills by justifying what they are thinking. For example: "I think _____ because _____." The collaborative conversations are becoming academic conversations. In grades 3-12, students engage in academic conversations discussing claims and justifying their reasoning, refining and applying skills. Students build on ideas, propel the conversation, and support claims and counterclaims with evidence.
ELA.K12.EE.5.1:	Use the accepted rules governing a specific format to create quality work. **Clarifications:** Students will incorporate skills learned into work products to produce quality work. For students to incorporate these skills appropriately, they must receive instruction. A 3rd grade student creating a poster board display must have instruction in how to effectively present information to do quality work.
ELA.K12.EE.6.1:	Use appropriate voice and tone when speaking or writing. **Clarifications:** In kindergarten and 1st grade, students learn the difference between formal and informal language. For example, the way we talk to our friends differs from the way we speak to adults. In 2nd grade and beyond, students practice appropriate social and academic language to discuss texts.
ELD.K12.ELL.SC.1:	English language learners communicate information, ideas and concepts necessary for academic success in the content area of Science.
ELD.K12.ELL.SI.1:	English language learners communicate for social and instructional purposes within the school setting.

GENERAL NOTES

Laboratory investigations that include the use of scientific inquiry, research, measurement, problem solving, laboratory apparatus and technologies, experimental procedures, and safety procedures are an integral part of this course. The National Science Teachers Association (NSTA) recommends that at the high school level, all students should be in the science lab or field, collecting data every week. School laboratory investigations (labs) are defined by the National Research Council (NRC) as an experience in the laboratory, classroom, or the field that provides students with opportunities to interact directly with natural phenomena or with data collected by others using tools, materials, data collection techniques, and models (NRC, 2006, p. 3). Laboratory investigations in the high school classroom should help all students develop a growing understanding of the complexity and ambiguity of empirical work, as well as the skills to calibrate and troubleshoot equipment used to make observations. Learners should understand measurement error; and have the skills to aggregate, interpret, and present the resulting data (National Research Council, 2006, p.77; NSTA, 2007).

Special Notes:

Instructional Practices

Teaching from a range of complex text is optimized when teachers in all subject areas implement the following strategies on a routine basis:

1. Ensuring wide reading from complex text that varies in length.
2. Making close reading and rereading of texts central to lessons.
3. Emphasizing text-specific complex questions, and cognitively complex tasks, reinforce focus on the text and cultivate independence.
4. Emphasizing students supporting answers based upon evidence from the text.
5. Providing extensive research and writing opportunities (claims and evidence).

Science and Engineering Practices (NRC *Framework for K-12 Science Education, 2010*)

- Asking questions (for science) and defining problems (for engineering).
- Developing and using models.
- Planning and carrying out investigations.
- Analyzing and interpreting data.
- Using mathematics, information and computer technology, and computational thinking.
- Constructing explanations (for science) and designing solutions (for engineering).
- Engaging in argument from evidence.
- Obtaining, evaluating, and communicating information.

Florida's Benchmarks for Excellent Student Thinking (B.E.S.T.) Standards

This course includes Florida's B.E.S.T. ELA Expectations (EE) and Mathematical Thinking and Reasoning Standards (MTRs) for students. Florida educators should intentionally embed these standards within the content and their instruction as applicable. For guidance on the implementation of the EEs and MTRs, please visit cpalms.org/Standards/BEST_Standards.aspx and select the appropriate B.E.S.T. Standards package.

English Language Development ELD Standards Special Notes Section:

Teachers are required to provide listening, speaking, reading and writing instruction that allows English language learners (ELL) to communicate information, ideas and concepts for academic success in the content area of Science. For the given level of English language proficiency and with visual, graphic, or interactive support, students will interact with grade level words, expressions, sentences and discourse to process or produce language necessary for academic success The ELD standard should specify a relevant content area concept or topic of study chosen by curriculum developers and teachers which maximizes an ELL's need for communication and social skills. To access an ELL supporting document which delineates performance definitions and descriptors, please click on the following link: cpalms.org/uploads/docs/standards/eld/SC.pdf

Additional Instructional Resources:

A.V.E. for Success Collection is provided by the Florida Association of School Administrators: fasa.net/4DCGI/cms/review.html?Action=CMS_Document&DocID=139. Please be aware that these resources have not been reviewed by CPALMS and there may be a charge for the use of some of them in this collection.

GENERAL INFORMATION

Course Number: 2002500

Course Path: Section: Grades PreK to 12 Education Courses > **Grade Group:** Grades 9 to 12 and Adult Education Courses > **Subject:** Science > **SubSubject:** Marine Sciences > **Abbreviated Title:** MARINE SCI 1

Number of Credits: One (1) credit

Course Length: Year (Y)

Course Type: Core Academic Course

Course Level: 2

Course Status: Draft - Course Pending Approval

Grade Level(s): 9,10,11,12

Graduation Requirement: Equally Rigorous Science

Educator Certifications

Biology (Grades 6-12)

Chemistry (Grades 6-12)
Physics (Grades 6-12)
Earth/Space Science (Grades 6-12)
Science (Secondary Grades 7-12)

Marine Science 1 Honors (#2002510) 2022 - And Beyond

Course Standards

Name	Description
SC.912.E.7.6:	Relate the formation of severe weather to the various physical factors.
SC.912.E.7.9:	Cite evidence that the ocean has had a significant influence on climate change by absorbing, storing, and moving heat, carbon, and water.
SC.912.L.14.6:	Explain the significance of genetic factors, environmental factors, and pathogenic agents to health from the perspectives of both individual and public health.
SC.912.L.15.13:	Describe the conditions required for natural selection, including: overproduction of offspring, inherited variation, and the struggle to survive, which result in differential reproductive success.
SC.912.L.16.10:	Evaluate the impact of biotechnology on the individual, society and the environment, including medical and ethical issues.
SC.912.L.17.1:	Discuss the characteristics of populations, such as number of individuals, age structure, density, and pattern of distribution.
SC.912.L.17.2:	Explain the general distribution of life in aquatic systems as a function of chemistry, geography, light, depth, salinity, and temperature.
SC.912.L.17.3:	Discuss how various oceanic and freshwater processes, such as currents, tides, and waves, affect the abundance of aquatic organisms.
SC.912.L.17.4:	Describe changes in ecosystems resulting from seasonal variations, climate change and succession.
SC.912.L.17.6:	Compare and contrast the relationships among organisms, including predation, parasitism, competition, commensalism, and mutualism.
SC.912.L.17.7:	Characterize the biotic and abiotic components that define freshwater systems, marine systems and terrestrial systems.
SC.912.L.17.8:	Recognize the consequences of the losses of biodiversity due to catastrophic events, climate changes, human activity, and the introduction of invasive, non-native species.
SC.912.L.17.9:	Use a food web to identify and distinguish producers, consumers, and decomposers. Explain the pathway of energy transfer through trophic levels and the reduction of available energy at successive trophic levels.
SC.912.L.17.10:	Diagram and explain the biogeochemical cycles of an ecosystem, including water, carbon, and nitrogen cycle.
SC.912.L.17.11:	Evaluate the costs and benefits of renewable and nonrenewable resources, such as water, energy, fossil fuels, wildlife, and forests.
SC.912.L.17.16:	Discuss the large-scale environmental impacts resulting from human activity, including waste spills, oil spills, runoff, greenhouse gases, ozone depletion, and surface and groundwater pollution.
SC.912.L.17.17:	Assess the effectiveness of innovative methods of protecting the environment.
SC.912.L.17.18:	Describe how human population size and resource use relate to environmental quality.
SC.912.L.18.12:	Discuss the special properties of water that contribute to Earth's suitability as an environment for life: cohesive behavior, ability to moderate temperature, expansion upon freezing, and versatility as a solvent.
SC.912.N.1.1:	Define a problem based on a specific body of knowledge, for example: biology, chemistry, physics, and earth/space science, and do the following: 1. **Pose questions about the natural world,** (Articulate the purpose of the investigation and identify the relevant scientific concepts). 2. **Conduct systematic observations,** (Write procedures that are clear and replicable. Identify observables and examine relationships between test (independent) variable and outcome (dependent) variable. Employ appropriate methods for accurate and consistent observations; conduct and record measurements at appropriate levels of precision. Follow safety guidelines). 3. **Examine books and other sources of information to see what is already known,** 4. **Review what is known in light of empirical evidence,** (Examine whether available empirical evidence can be interpreted in terms of existing knowledge and models, and if not, modify or develop new models). 5. **Plan investigations,** (Design and evaluate a scientific investigation). 6. **Use tools to gather, analyze, and interpret data (this includes the use of measurement in metric and other systems, and also the generation and interpretation of graphical representations of data, including data tables and graphs),** (Collect data or evidence in an organized way. Properly use instruments, equipment, and materials (e.g., scales, probeware, meter sticks, microscopes, computers) including set-up, calibration, technique, maintenance, and storage). 7. **Pose answers, explanations, or descriptions of events,** 8. **Generate explanations that explicate or describe natural phenomena (inferences),** 9. **Use appropriate evidence and reasoning to justify these explanations to others,** 10. **Communicate results of scientific investigations, and** 11. **Evaluate the merits of the explanations produced by others.**
SC.912.N.1.2:	Describe and explain what characterizes science and its methods.
SC.912.N.1.3:	Recognize that the strength or usefulness of a scientific claim is evaluated through scientific argumentation, which depends on critical and logical thinking, and the active consideration of alternative scientific explanations to explain the data presented.
SC.912.N.1.4:	Identify sources of information and assess their reliability according to the strict standards of scientific investigation.
SC.912.N.1.5:	Describe and provide examples of how similar investigations conducted in many parts of the world result in the same outcome.
SC.912.N.1.6:	Describe how scientific inferences are drawn from scientific observations and provide examples from the content being studied.
SC.912.N.1.7:	Recognize the role of creativity in constructing scientific questions, methods and explanations.
SC.912.N.2.1:	Identify what is science, what clearly is not science, and what superficially resembles science (but fails to meet the criteria for science).
SC.912.N.2.4:	Explain that scientific knowledge is both durable and robust and open to change. Scientific knowledge can change because it is often examined and re-examined by new investigations and scientific argumentation. Because of these frequent examinations, scientific knowledge becomes stronger, leading to its durability.
SC.912.N.2.5:	Describe instances in which scientists' varied backgrounds, talents, interests, and goals influence the inferences and thus the explanations that they make about observations of natural phenomena and describe that competing interpretations (explanations) of scientists are a strength of science as they are a source of new, testable ideas that have the potential to add new evidence to support one or another of the explanations.
SC.912.N.3.1:	Explain that a scientific theory is the culmination of many scientific investigations drawing together all the current evidence concerning a substantial range of phenomena; thus, a scientific theory represents the most powerful explanation scientists have to offer.
SC.912.N.3.5:	Describe the function of models in science, and identify the wide range of models used in science.

SC.912.N.4.1:	Explain how scientific knowledge and reasoning provide an empirically-based perspective to inform society's decision making.
SC.912.N.4.2:	Weigh the merits of alternative strategies for solving a specific societal problem by comparing a number of different costs and benefits, such as human, economic, and environmental.
SC.912.P.10.2:	Explore the Law of Conservation of Energy by differentiating among open, closed, and isolated systems and explain that the total energy in an isolated system is a conserved quantity.
SC.912.P.10.20:	Describe the measurable properties of waves and explain the relationships among them and how these properties change when the wave moves from one medium to another.
MA.K12.MTR.1.1:	Mathematicians who participate in effortful learning both individually and with others: • Analyze the problem in a way that makes sense given the task. • Ask questions that will help with solving the task. • Build perseverance by modifying methods as needed while solving a challenging task. • Stay engaged and maintain a positive mindset when working to solve tasks. • Help and support each other when attempting a new method or approach. **Clarifications:** Teachers who encourage students to participate actively in effortful learning both individually and with others: • Cultivate a community of growth mindset learners. • Foster perseverance in students by choosing tasks that are challenging. • Develop students' ability to analyze and problem solve. • Recognize students' effort when solving challenging problems.
MA.K12.MTR.2.1:	Demonstrate understanding by representing problems in multiple ways. Mathematicians who demonstrate understanding by representing problems in multiple ways: • Build understanding through modeling and using manipulatives. • Represent solutions to problems in multiple ways using objects, drawings, tables, graphs and equations. • Progress from modeling problems with objects and drawings to using algorithms and equations. • Express connections between concepts and representations. • Choose a representation based on the given context or purpose. **Clarifications:** Teachers who encourage students to demonstrate understanding by representing problems in multiple ways: • Help students make connections between concepts and representations. • Provide opportunities for students to use manipulatives when investigating concepts. • Guide students from concrete to pictorial to abstract representations as understanding progresses. • Show students that various representations can have different purposes and can be useful in different situations.
MA.K12.MTR.3.1:	Complete tasks with mathematical fluency. Mathematicians who complete tasks with mathematical fluency: • Select efficient and appropriate methods for solving problems within the given context. • Maintain flexibility and accuracy while performing procedures and mental calculations. • Complete tasks accurately and with confidence. • Adapt procedures to apply them to a new context. • Use feedback to improve efficiency when performing calculations. **Clarifications:** Teachers who encourage students to complete tasks with mathematical fluency: • Provide students with the flexibility to solve problems by selecting a procedure that allows them to solve efficiently and accurately. • Offer multiple opportunities for students to practice efficient and generalizable methods. • Provide opportunities for students to reflect on the method they used and determine if a more efficient method could have been used.
MA.K12.MTR.4.1:	Engage in discussions that reflect on the mathematical thinking of self and others. Mathematicians who engage in discussions that reflect on the mathematical thinking of self and others: • Communicate mathematical ideas, vocabulary and methods effectively. • Analyze the mathematical thinking of others. • Compare the efficiency of a method to those expressed by others. • Recognize errors and suggest how to correctly solve the task. • Justify results by explaining methods and processes. • Construct possible arguments based on evidence. **Clarifications:** Teachers who encourage students to engage in discussions that reflect on the mathematical thinking of self and others: • Establish a culture in which students ask questions of the teacher and their peers, and error is an opportunity for learning. • Create opportunities for students to discuss their thinking with peers. • Select, sequence and present student work to advance and deepen understanding of correct and increasingly efficient methods. • Develop students' ability to justify methods and compare their responses to the responses of their peers.
MA.K12.MTR.5.1:	Use patterns and structure to help understand and connect mathematical concepts. Mathematicians who use patterns and structure to help understand and connect mathematical concepts: • Focus on relevant details within a problem. • Create plans and procedures to logically order events, steps or ideas to solve problems. • Decompose a complex problem into manageable parts. • Relate previously learned concepts to new concepts. • Look for similarities among problems. • Connect solutions of problems to more complicated large-scale situations.

	Clarifications: Teachers who encourage students to use patterns and structure to help understand and connect mathematical concepts: • Help students recognize the patterns in the world around them and connect these patterns to mathematical concepts. • Support students to develop generalizations based on the similarities found among problems. • Provide opportunities for students to create plans and procedures to solve problems. • Develop students' ability to construct relationships between their current understanding and more sophisticated ways of thinking.
MA.K12.MTR.6.1:	Assess the reasonableness of solutions. Mathematicians who assess the reasonableness of solutions: • Estimate to discover possible solutions. • Use benchmark quantities to determine if a solution makes sense. • Check calculations when solving problems. • Verify possible solutions by explaining the methods used. • Evaluate results based on the given context. **Clarifications:** Teachers who encourage students to assess the reasonableness of solutions: • Have students estimate or predict solutions prior to solving. • Prompt students to continually ask, "Does this solution make sense? How do you know?" • Reinforce that students check their work as they progress within and after a task. • Strengthen students' ability to verify solutions through justifications.
MA.K12.MTR.7.1:	Apply mathematics to real-world contexts. Mathematicians who apply mathematics to real-world contexts: • Connect mathematical concepts to everyday experiences. • Use models and methods to understand, represent and solve problems. • Perform investigations to gather data or determine if a method is appropriate. • Redesign models and methods to improve accuracy or efficiency. **Clarifications:** Teachers who encourage students to apply mathematics to real-world contexts: • Provide opportunities for students to create models, both concrete and abstract, and perform investigations. • Challenge students to question the accuracy of their models and methods. • Support students as they validate conclusions by comparing them to the given situation. • Indicate how various concepts can be applied to other disciplines.
ELA.K12.EE.1.1:	Cite evidence to explain and justify reasoning. **Clarifications:** K-1 Students include textual evidence in their oral communication with guidance and support from adults. The evidence can consist of details from the text without naming the text. During 1st grade, students learn how to incorporate the evidence in their writing. 2-3 Students include relevant textual evidence in their written and oral communication. Students should name the text when they refer to it. In 3rd grade, students should use a combination of direct and indirect citations. 4-5 Students continue with previous skills and reference comments made by speakers and peers. Students cite texts that they've directly quoted, paraphrased, or used for information. When writing, students will use the form of citation dictated by the instructor or the style guide referenced by the instructor. 6-8 Students continue with previous skills and use a style guide to create a proper citation. 9-12 Students continue with previous skills and should be aware of existing style guides and the ways in which they differ.
ELA.K12.EE.2.1:	Read and comprehend grade-level complex texts proficiently. **Clarifications:** See Text Complexity for grade-level complexity bands and a text complexity rubric.
ELA.K12.EE.3.1:	Make inferences to support comprehension. **Clarifications:** Students will make inferences before the words infer or inference are introduced. Kindergarten students will answer questions like "Why is the girl smiling?" or make predictions about what will happen based on the title page. Students will use the terms and apply them in 2nd grade and beyond.
ELA.K12.EE.4.1:	Use appropriate collaborative techniques and active listening skills when engaging in discussions in a variety of situations. **Clarifications:** In kindergarten, students learn to listen to one another respectfully. In grades 1-2, students build upon these skills by justifying what they are thinking. For example: "I think _____ because _____." The collaborative conversations are becoming academic conversations. In grades 3-12, students engage in academic conversations discussing claims and justifying their reasoning, refining and applying skills. Students build on ideas, propel the conversation, and support claims and counterclaims with evidence.
ELA.K12.EE.5.1:	Use the accepted rules governing a specific format to create quality work. **Clarifications:** Students will incorporate skills learned into work products to produce quality work. For students to incorporate these skills appropriately, they must receive instruction. A 3rd grade student creating a poster board display must have instruction in how to effectively present information to do quality work.
ELA.K12.EE.6.1:	Use appropriate voice and tone when speaking or writing. **Clarifications:** In kindergarten and 1st grade, students learn the difference between formal and informal language. For example, the way we talk to our friends

	differs from the way we speak to adults. In 2nd grade and beyond, students practice appropriate social and academic language to discuss texts.
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ELD.K12.ELL.SI.1:	English language learners communicate for social and instructional purposes within the school setting.

General Course Information and Notes

GENERAL NOTES

While the content focus of this course is consistent with the Marine Science I course, students will explore these concepts in greater depth. In general, the academic pace and rigor will be greatly increased for honors level course work. Laboratory investigations that include the use of scientific inquiry, research, measurement, problem solving, laboratory apparatus and technologies, experimental procedures, and safety procedures are an integral part of this course. The National Science Teachers Association (NSTA) recommends that at the high school level, all students should be in the science lab or field, collecting data every week. School laboratory investigations (labs) are defined by the National Research Council (NRC) as an experience in the laboratory, classroom, or the field that provides students with opportunities to interact directly with natural phenomena or with data collected by others using tools, materials, data collection techniques, and models (NRC, 2006, p. 3). Laboratory investigations in the high school classroom should help all students develop a growing understanding of the complexity and ambiguity of empirical work, as well as the skills to calibrate and troubleshoot equipment used to make observations. Learners should understand measurement error; and have the skills to aggregate, interpret, and present the resulting data (National Research Council, 2006, p.77; NSTA, 2007).

Special Notes:
Instructional Practices
Teaching from a range of complex text is optimized when teachers in all subject areas implement the following strategies on a routine basis:

1. Ensuring wide reading from complex text that varies in length.
2. Making close reading and rereading of texts central to lessons.
3. Emphasizing text-specific complex questions, and cognitively complex tasks, reinforce focus on the text and cultivate independence.
4. Emphasizing students supporting answers based upon evidence from the text.
5. Providing extensive research and writing opportunities (claims and evidence).

Science and Engineering Practices (NRC *Framework for K-12 Science Education, 2010*)

- Asking questions (for science) and defining problems (for engineering).
- Developing and using models.
- Planning and carrying out investigations.
- Analyzing and interpreting data.
- Using mathematics, information and computer technology, and computational thinking.
- Constructing explanations (for science) and designing solutions (for engineering).
- Engaging in argument from evidence.
- Obtaining, evaluating, and communicating information.

Honors and Advanced Level Course Note: Advanced courses require a greater demand on students through increased academic rigor. Academic rigor is obtained through the application, analysis, evaluation, and creation of complex ideas that are often abstract and multi-faceted. Students are challenged to think and collaborate critically on the content they are learning. Honors level rigor will be achieved by increasing text complexity through text selection, focus on high-level qualitative measures, and complexity of task. Instruction will be structured to give students a deeper understanding of conceptual themes and organization within and across disciplines. Academic rigor is more than simply assigning to students a greater quantity of work.

Florida's Benchmarks for Excellent Student Thinking (B.E.S.T.) Standards
This course includes Florida's B.E.S.T. ELA Expectations (EE) and Mathematical Thinking and Reasoning Standards (MTRs) for students. Florida educators should intentionally embed these standards within the content and their instruction as applicable. For guidance on the implementation of the EEs and MTRs, please visit cpalms.org/Standards/BEST_Standards.aspx and select the appropriate B.E.S.T. Standards package.

English Language Development ELD Standards Special Notes Section:
Teachers are required to provide listening, speaking, reading and writing instruction that allows English language learners (ELL) to communicate information, ideas and concepts for academic success in the content area of Science. For the given level of English language proficiency and with visual, graphic, or interactive support, students will interact with grade level words, expressions, sentences and discourse to process or produce language necessary for academic success The ELD standard should specify a relevant content area concept or topic of study chosen by curriculum developers and teachers which maximizes an ELL's need for communication and social skills. To access an ELL supporting document which delineates performance definitions and descriptors, please click on the following link: cpalms.org/uploads/docs/standards/eld/SC.pdf

Additional Instructional Resources:
A.V.E. for Success Collection is provided by the Florida Association of School Administrators: fasa.net/4DCGI/cms/review.html?Action=CMS_Document&DocID=139. Please be aware that these resources have not been reviewed by CPALMS and there may be a charge for the use of some of them in this collection.

GENERAL INFORMATION

Course Number: 2002510

Course Path: Section: Grades PreK to 12 Education Courses > **Grade Group:** Grades 9 to 12 and Adult Education Courses > **Subject:** Science > **SubSubject:** Marine Sciences > **Abbreviated Title:** MARINE SCI 1 HON

Number of Credits: One (1) credit

Course Length: Year (Y)

Course Attributes:

- Honors

Course Type: Core Academic Course

Course Level: 3

Course Status: Draft - Course Pending Approval

Grade Level(s): 9,10,11,12

Graduation Requirement: Equally Rigorous Science

Educator Certifications

Biology (Grades 6-12)
Chemistry (Grades 6-12)
Physics (Grades 6-12)
Earth/Space Science (Grades 6-12)
Science (Secondary Grades 7-12)

Marine Science 2 (#2002520) 2022 - And Beyond

Course Standards

Name	Description
SC.912.E.7.4:	Summarize the conditions that contribute to the climate of a geographic area, including the relationships to lakes and oceans.
SC.912.E.7.8:	Explain how various atmospheric, oceanic, and hydrologic conditions in Florida have influenced and can influence human behavior, both individually and collectively.
SC.912.E.7.9:	Cite evidence that the ocean has had a significant influence on climate change by absorbing, storing, and moving heat, carbon, and water.
SC.912.L.17.4:	Describe changes in ecosystems resulting from seasonal variations, climate change and succession.
SC.912.L.17.5:	Analyze how population size is determined by births, deaths, immigration, emigration, and limiting factors (biotic and abiotic) that determine carrying capacity.
SC.912.L.17.7:	Characterize the biotic and abiotic components that define freshwater systems, marine systems and terrestrial systems.
SC.912.L.17.10:	Diagram and explain the biogeochemical cycles of an ecosystem, including water, carbon, and nitrogen cycle.
SC.912.L.17.11:	Evaluate the costs and benefits of renewable and nonrenewable resources, such as water, energy, fossil fuels, wildlife, and forests.
SC.912.L.17.13:	Discuss the need for adequate monitoring of environmental parameters when making policy decisions.
SC.912.L.17.16:	Discuss the large-scale environmental impacts resulting from human activity, including waste spills, oil spills, runoff, greenhouse gases, ozone depletion, and surface and groundwater pollution.
SC.912.L.18.2:	Describe the important structural characteristics of monosaccharides, disaccharides, and polysaccharides and explain the functions of carbohydrates in living things.
SC.912.N.1.1:	Define a problem based on a specific body of knowledge, for example: biology, chemistry, physics, and earth/space science, and do the following: 1. **Pose questions about the natural world,** (Articulate the purpose of the investigation and identify the relevant scientific concepts). 2. **Conduct systematic observations,** (Write procedures that are clear and replicable. Identify observables and examine relationships between test (independent) variable and outcome (dependent) variable. Employ appropriate methods for accurate and consistent observations; conduct and record measurements at appropriate levels of precision. Follow safety guidelines). 3. **Examine books and other sources of information to see what is already known,** 4. **Review what is known in light of empirical evidence,** (Examine whether available empirical evidence can be interpreted in terms of existing knowledge and models, and if not, modify or develop new models). 5. **Plan investigations,** (Design and evaluate a scientific investigation). 6. **Use tools to gather, analyze, and interpret data (this includes the use of measurement in metric and other systems, and also the generation and interpretation of graphical representations of data, including data tables and graphs),** (Collect data or evidence in an organized way. Properly use instruments, equipment, and materials (e.g., scales, probeware, meter sticks, microscopes, computers) including set-up, calibration, technique, maintenance, and storage). 7. **Pose answers, explanations, or descriptions of events,** 8. **Generate explanations that explicate or describe natural phenomena (inferences),** 9. **Use appropriate evidence and reasoning to justify these explanations to others,** 10. **Communicate results of scientific investigations, and** 11. **Evaluate the merits of the explanations produced by others.**
SC.912.N.1.2:	Describe and explain what characterizes science and its methods.
SC.912.N.1.3:	Recognize that the strength or usefulness of a scientific claim is evaluated through scientific argumentation, which depends on critical and logical thinking, and the active consideration of alternative scientific explanations to explain the data presented.
SC.912.N.1.4:	Identify sources of information and assess their reliability according to the strict standards of scientific investigation.
SC.912.N.1.5:	Describe and provide examples of how similar investigations conducted in many parts of the world result in the same outcome.
SC.912.N.1.6:	Describe how scientific inferences are drawn from scientific observations and provide examples from the content being studied.
SC.912.N.1.7:	Recognize the role of creativity in constructing scientific questions, methods and explanations.
SC.912.N.2.1:	Identify what is science, what clearly is not science, and what superficially resembles science (but fails to meet the criteria for science).
SC.912.N.2.4:	Explain that scientific knowledge is both durable and robust and open to change. Scientific knowledge can change because it is often examined and re-examined by new investigations and scientific argumentation. Because of these frequent examinations, scientific knowledge becomes stronger, leading to its durability.
SC.912.N.2.5:	Describe instances in which scientists' varied backgrounds, talents, interests, and goals influence the inferences and thus the explanations that they make about observations of natural phenomena and describe that competing interpretations (explanations) of scientists are a strength of science as they are a source of new, testable ideas that have the potential to add new evidence to support one or another of the explanations.
SC.912.N.3.1:	Explain that a scientific theory is the culmination of many scientific investigations drawing together all the current evidence concerning a substantial range of phenomena; thus, a scientific theory represents the most powerful explanation scientists have to offer.
SC.912.N.3.5:	Describe the function of models in science, and identify the wide range of models used in science.
SC.912.N.4.1:	Explain how scientific knowledge and reasoning provide an empirically-based perspective to inform society's decision making.
SC.912.N.4.2:	Weigh the merits of alternative strategies for solving a specific societal problem by comparing a number of different costs and benefits, such as human, economic, and environmental.
SC.912.P.10.2:	Explore the Law of Conservation of Energy by differentiating among open, closed, and isolated systems and explain that the total energy in an isolated system is a conserved quantity.
SC.912.P.10.20:	Describe the measurable properties of waves and explain the relationships among them and how these properties change when the wave moves from one medium to another.
	Mathematicians who participate in effortful learning both individually and with others: • Analyze the problem in a way that makes sense given the task. • Ask questions that will help with solving the task. • Build perseverance by modifying methods as needed while solving a challenging task.

- Stay engaged and maintain a positive mindset when working to solve tasks.
- Help and support each other when attempting a new method or approach.

MA.K12.MTR.1.1:

Clarifications:
Teachers who encourage students to participate actively in effortful learning both individually and with others:

- Cultivate a community of growth mindset learners.
- Foster perseverance in students by choosing tasks that are challenging.
- Develop students' ability to analyze and problem solve.
- Recognize students' effort when solving challenging problems.

Demonstrate understanding by representing problems in multiple ways.
Mathematicians who demonstrate understanding by representing problems in multiple ways:

- Build understanding through modeling and using manipulatives.
- Represent solutions to problems in multiple ways using objects, drawings, tables, graphs and equations.
- Progress from modeling problems with objects and drawings to using algorithms and equations.
- Express connections between concepts and representations.
- Choose a representation based on the given context or purpose.

MA.K12.MTR.2.1:

Clarifications:
Teachers who encourage students to demonstrate understanding by representing problems in multiple ways:

- Help students make connections between concepts and representations.
- Provide opportunities for students to use manipulatives when investigating concepts.
- Guide students from concrete to pictorial to abstract representations as understanding progresses.
- Show students that various representations can have different purposes and can be useful in different situations.

Complete tasks with mathematical fluency.
Mathematicians who complete tasks with mathematical fluency:

- Select efficient and appropriate methods for solving problems within the given context.
- Maintain flexibility and accuracy while performing procedures and mental calculations.
- Complete tasks accurately and with confidence.
- Adapt procedures to apply them to a new context.
- Use feedback to improve efficiency when performing calculations.

MA.K12.MTR.3.1:

Clarifications:
Teachers who encourage students to complete tasks with mathematical fluency:

- Provide students with the flexibility to solve problems by selecting a procedure that allows them to solve efficiently and accurately.
- Offer multiple opportunities for students to practice efficient and generalizable methods.
- Provide opportunities for students to reflect on the method they used and determine if a more efficient method could have been used.

Engage in discussions that reflect on the mathematical thinking of self and others.
Mathematicians who engage in discussions that reflect on the mathematical thinking of self and others:

- Communicate mathematical ideas, vocabulary and methods effectively.
- Analyze the mathematical thinking of others.
- Compare the efficiency of a method to those expressed by others.
- Recognize errors and suggest how to correctly solve the task.
- Justify results by explaining methods and processes.
- Construct possible arguments based on evidence.

MA.K12.MTR.4.1:

Clarifications:
Teachers who encourage students to engage in discussions that reflect on the mathematical thinking of self and others:

- Establish a culture in which students ask questions of the teacher and their peers, and error is an opportunity for learning.
- Create opportunities for students to discuss their thinking with peers.
- Select, sequence and present student work to advance and deepen understanding of correct and increasingly efficient methods.
- Develop students' ability to justify methods and compare their responses to the responses of their peers.

Use patterns and structure to help understand and connect mathematical concepts.
Mathematicians who use patterns and structure to help understand and connect mathematical concepts:

- Focus on relevant details within a problem.
- Create plans and procedures to logically order events, steps or ideas to solve problems.
- Decompose a complex problem into manageable parts.
- Relate previously learned concepts to new concepts.
- Look for similarities among problems.
- Connect solutions of problems to more complicated large-scale situations.

MA.K12.MTR.5.1:

Clarifications:
Teachers who encourage students to use patterns and structure to help understand and connect mathematical concepts:

- Help students recognize the patterns in the world around them and connect these patterns to mathematical concepts.
- Support students to develop generalizations based on the similarities found among problems.
- Provide opportunities for students to create plans and procedures to solve problems.
- Develop students' ability to construct relationships between their current understanding and more sophisticated ways of thinking.

Assess the reasonableness of solutions.
Mathematicians who assess the reasonableness of solutions:

- Estimate to discover possible solutions.
- Use benchmark quantities to determine if a solution makes sense.

MA.K12.MTR.6.1:	• Check calculations when solving problems. • Verify possible solutions by explaining the methods used. • Evaluate results based on the given context. **Clarifications:** Teachers who encourage students to assess the reasonableness of solutions: • Have students estimate or predict solutions prior to solving. • Prompt students to continually ask, "Does this solution make sense? How do you know?" • Reinforce that students check their work as they progress within and after a task. • Strengthen students' ability to verify solutions through justifications.
MA.K12.MTR.7.1:	Apply mathematics to real-world contexts. Mathematicians who apply mathematics to real-world contexts: • Connect mathematical concepts to everyday experiences. • Use models and methods to understand, represent and solve problems. • Perform investigations to gather data or determine if a method is appropriate. • Redesign models and methods to improve accuracy or efficiency. **Clarifications:** Teachers who encourage students to apply mathematics to real-world contexts: • Provide opportunities for students to create models, both concrete and abstract, and perform investigations. • Challenge students to question the accuracy of their models and methods. • Support students as they validate conclusions by comparing them to the given situation. • Indicate how various concepts can be applied to other disciplines.
ELA.K12.EE.1.1:	Cite evidence to explain and justify reasoning. **Clarifications:** K-1 Students include textual evidence in their oral communication with guidance and support from adults. The evidence can consist of details from the text without naming the text. During 1st grade, students learn how to incorporate the evidence in their writing. 2-3 Students include relevant textual evidence in their written and oral communication. Students should name the text when they refer to it. In 3rd grade, students should use a combination of direct and indirect citations. 4-5 Students continue with previous skills and reference comments made by speakers and peers. Students cite texts that they've directly quoted, paraphrased, or used for information. When writing, students will use the form of citation dictated by the instructor or the style guide referenced by the instructor. 6-8 Students continue with previous skills and use a style guide to create a proper citation. 9-12 Students continue with previous skills and should be aware of existing style guides and the ways in which they differ.
ELA.K12.EE.2.1:	Read and comprehend grade-level complex texts proficiently. **Clarifications:** See Text Complexity for grade-level complexity bands and a text complexity rubric.
ELA.K12.EE.3.1:	Make inferences to support comprehension. **Clarifications:** Students will make inferences before the words infer or inference are introduced. Kindergarten students will answer questions like "Why is the girl smiling?" or make predictions about what will happen based on the title page. Students will use the terms and apply them in 2nd grade and beyond.
ELA.K12.EE.4.1:	Use appropriate collaborative techniques and active listening skills when engaging in discussions in a variety of situations. **Clarifications:** In kindergarten, students learn to listen to one another respectfully. In grades 1-2, students build upon these skills by justifying what they are thinking. For example: "I think _____ because _____." The collaborative conversations are becoming academic conversations. In grades 3-12, students engage in academic conversations discussing claims and justifying their reasoning, refining and applying skills. Students build on ideas, propel the conversation, and support claims and counterclaims with evidence.
ELA.K12.EE.5.1:	Use the accepted rules governing a specific format to create quality work. **Clarifications:** Students will incorporate skills learned into work products to produce quality work. For students to incorporate these skills appropriately, they must receive instruction. A 3rd grade student creating a poster board display must have instruction in how to effectively present information to do quality work.
ELA.K12.EE.6.1:	Use appropriate voice and tone when speaking or writing. **Clarifications:** In kindergarten and 1st grade, students learn the difference between formal and informal language. For example, the way we talk to our friends differs from the way we speak to adults. In 2nd grade and beyond, students practice appropriate social and academic language to discuss texts.
ELD.K12.ELL.SC.1:	English language learners communicate information, ideas and concepts necessary for academic success in the content area of Science.
ELD.K12.ELL.SI.1:	English language learners communicate for social and instructional purposes within the school setting.

General Course Information and Notes

GENERAL NOTES

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Special Notes:

Instructional Practices

Teaching from a range of complex text is optimized when teachers in all subject areas implement the following strategies on a routine basis:

1. Ensuring wide reading from complex text that varies in length.
2. Making close reading and rereading of texts central to lessons.
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- Asking questions (for science) and defining problems (for engineering).
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English Language Development ELD Standards Special Notes Section:

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GENERAL INFORMATION

Course Number: 2002520

Course Path: Section: Grades PreK to 12 Education Courses > **Grade Group:** Grades 9 to 12 and Adult Education Courses > **Subject:** Science > **SubSubject:** Marine Sciences > **Abbreviated Title:** MARINE SCI 2

Number of Credits: One (1) credit

Course Length: Year (Y)

Course Type: Core Academic Course

Course Level: 2

Course Status: Draft - Course Pending Approval

Grade Level(s): 9,10,11,12

Graduation Requirement: Equally Rigorous Science

Educator Certifications

Biology (Grades 6-12)
Chemistry (Grades 6-12)
Physics (Grades 6-12)
Earth/Space Science (Grades 6-12)
Science (Secondary Grades 7-12)

Marine Science 2 Honors (#2002530) 2022 - And Beyond

Course Standards

Name	Description
SC.912.E.7.2:	Analyze the causes of the various kinds of surface and deep water motion within the oceans and their impacts on the transfer of energy between the poles and the equator.
SC.912.E.7.3:	Differentiate and describe the various interactions among Earth systems, including: atmosphere, hydrosphere, cryosphere, geosphere, and biosphere.
SC.912.E.7.4:	Summarize the conditions that contribute to the climate of a geographic area, including the relationships to lakes and oceans.
SC.912.E.7.5:	Predict future weather conditions based on present observations and conceptual models and recognize limitations and uncertainties of such predictions.
SC.912.E.7.8:	Explain how various atmospheric, oceanic, and hydrologic conditions in Florida have influenced and can influence human behavior, both individually and collectively.
SC.912.E.7.9:	Cite evidence that the ocean has had a significant influence on climate change by absorbing, storing, and moving heat, carbon, and water.
SC.912.L.17.4:	Describe changes in ecosystems resulting from seasonal variations, climate change and succession.
SC.912.L.17.5:	Analyze how population size is determined by births, deaths, immigration, emigration, and limiting factors (biotic and abiotic) that determine carrying capacity.
SC.912.L.17.7:	Characterize the biotic and abiotic components that define freshwater systems, marine systems and terrestrial systems.
SC.912.L.17.10:	Diagram and explain the biogeochemical cycles of an ecosystem, including water, carbon, and nitrogen cycle.
SC.912.L.17.11:	Evaluate the costs and benefits of renewable and nonrenewable resources, such as water, energy, fossil fuels, wildlife, and forests.
SC.912.L.17.13:	Discuss the need for adequate monitoring of environmental parameters when making policy decisions.
SC.912.L.17.15:	Discuss the effects of technology on environmental quality.
SC.912.L.17.16:	Discuss the large-scale environmental impacts resulting from human activity, including waste spills, oil spills, runoff, greenhouse gases, ozone depletion, and surface and groundwater pollution.
SC.912.L.18.12:	Discuss the special properties of water that contribute to Earth's suitability as an environment for life: cohesive behavior, ability to moderate temperature, expansion upon freezing, and versatility as a solvent.
SC.912.N.1.1:	Define a problem based on a specific body of knowledge, for example: biology, chemistry, physics, and earth/space science, and do the following: 1. **Pose questions about the natural world,** (Articulate the purpose of the investigation and identify the relevant scientific concepts). 2. **Conduct systematic observations,** (Write procedures that are clear and replicable. Identify observables and examine relationships between test (independent) variable and outcome (dependent) variable. Employ appropriate methods for accurate and consistent observations; conduct and record measurements at appropriate levels of precision. Follow safety guidelines). 3. **Examine books and other sources of information to see what is already known,** 4. **Review what is known in light of empirical evidence,** (Examine whether available empirical evidence can be interpreted in terms of existing knowledge and models, and if not, modify or develop new models). 5. **Plan investigations,** (Design and evaluate a scientific investigation). 6. **Use tools to gather, analyze, and interpret data (this includes the use of measurement in metric and other systems, and also the generation and interpretation of graphical representations of data, including data tables and graphs),** (Collect data or evidence in an organized way. Properly use instruments, equipment, and materials (e.g., scales, probeware, meter sticks, microscopes, computers) including set-up, calibration, technique, maintenance, and storage). 7. **Pose answers, explanations, or descriptions of events,** 8. **Generate explanations that explicate or describe natural phenomena (inferences),** 9. **Use appropriate evidence and reasoning to justify these explanations to others,** 10. **Communicate results of scientific investigations, and** 11. **Evaluate the merits of the explanations produced by others.**
SC.912.N.1.2:	Describe and explain what characterizes science and its methods.
SC.912.N.1.3:	Recognize that the strength or usefulness of a scientific claim is evaluated through scientific argumentation, which depends on critical and logical thinking, and the active consideration of alternative scientific explanations to explain the data presented.
SC.912.N.1.4:	Identify sources of information and assess their reliability according to the strict standards of scientific investigation.
SC.912.N.1.5:	Describe and provide examples of how similar investigations conducted in many parts of the world result in the same outcome.
SC.912.N.1.6:	Describe how scientific inferences are drawn from scientific observations and provide examples from the content being studied.
SC.912.N.1.7:	Recognize the role of creativity in constructing scientific questions, methods and explanations.
SC.912.N.2.1:	Identify what is science, what clearly is not science, and what superficially resembles science (but fails to meet the criteria for science).
SC.912.N.2.4:	Explain that scientific knowledge is both durable and robust and open to change. Scientific knowledge can change because it is often examined and re-examined by new investigations and scientific argumentation. Because of these frequent examinations, scientific knowledge becomes stronger, leading to its durability.
SC.912.N.2.5:	Describe instances in which scientists' varied backgrounds, talents, interests, and goals influence the inferences and thus the explanations that they make about observations of natural phenomena and describe that competing interpretations (explanations) of scientists are a strength of science as they are a source of new, testable ideas that have the potential to add new evidence to support one or another of the explanations.
SC.912.N.3.1:	Explain that a scientific theory is the culmination of many scientific investigations drawing together all the current evidence concerning a substantial range of phenomena; thus, a scientific theory represents the most powerful explanation scientists have to offer.
SC.912.N.3.5:	Describe the function of models in science, and identify the wide range of models used in science.
SC.912.N.4.1:	Explain how scientific knowledge and reasoning provide an empirically-based perspective to inform society's decision making.
SC.912.N.4.2:	Weigh the merits of alternative strategies for solving a specific societal problem by comparing a number of different costs and benefits, such as human, economic, and environmental.
SC.912.P.10.2:	Explore the Law of Conservation of Energy by differentiating among open, closed, and isolated systems and explain that the total energy in an isolated system is a conserved quantity.

SC.912.P.10.20:	Describe the measurable properties of waves and explain the relationships among them and how these properties change when the wave moves from one medium to another.
MA.K12.MTR.1.1:	Mathematicians who participate in effortful learning both individually and with others: • Analyze the problem in a way that makes sense given the task. • Ask questions that will help with solving the task. • Build perseverance by modifying methods as needed while solving a challenging task. • Stay engaged and maintain a positive mindset when working to solve tasks. • Help and support each other when attempting a new method or approach. **Clarifications:** Teachers who encourage students to participate actively in effortful learning both individually and with others: • Cultivate a community of growth mindset learners. • Foster perseverance in students by choosing tasks that are challenging. • Develop students' ability to analyze and problem solve. • Recognize students' effort when solving challenging problems.
MA.K12.MTR.2.1:	Demonstrate understanding by representing problems in multiple ways. Mathematicians who demonstrate understanding by representing problems in multiple ways: • Build understanding through modeling and using manipulatives. • Represent solutions to problems in multiple ways using objects, drawings, tables, graphs and equations. • Progress from modeling problems with objects and drawings to using algorithms and equations. • Express connections between concepts and representations. • Choose a representation based on the given context or purpose. **Clarifications:** Teachers who encourage students to demonstrate understanding by representing problems in multiple ways: • Help students make connections between concepts and representations. • Provide opportunities for students to use manipulatives when investigating concepts. • Guide students from concrete to pictorial to abstract representations as understanding progresses. • Show students that various representations can have different purposes and can be useful in different situations.
MA.K12.MTR.3.1:	Complete tasks with mathematical fluency. Mathematicians who complete tasks with mathematical fluency: • Select efficient and appropriate methods for solving problems within the given context. • Maintain flexibility and accuracy while performing procedures and mental calculations. • Complete tasks accurately and with confidence. • Adapt procedures to apply them to a new context. • Use feedback to improve efficiency when performing calculations. **Clarifications:** Teachers who encourage students to complete tasks with mathematical fluency: • Provide students with the flexibility to solve problems by selecting a procedure that allows them to solve efficiently and accurately. • Offer multiple opportunities for students to practice efficient and generalizable methods. • Provide opportunities for students to reflect on the method they used and determine if a more efficient method could have been used.
MA.K12.MTR.4.1:	Engage in discussions that reflect on the mathematical thinking of self and others. Mathematicians who engage in discussions that reflect on the mathematical thinking of self and others: • Communicate mathematical ideas, vocabulary and methods effectively. • Analyze the mathematical thinking of others. • Compare the efficiency of a method to those expressed by others. • Recognize errors and suggest how to correctly solve the task. • Justify results by explaining methods and processes. • Construct possible arguments based on evidence. **Clarifications:** Teachers who encourage students to engage in discussions that reflect on the mathematical thinking of self and others: • Establish a culture in which students ask questions of the teacher and their peers, and error is an opportunity for learning. • Create opportunities for students to discuss their thinking with peers. • Select, sequence and present student work to advance and deepen understanding of correct and increasingly efficient methods. • Develop students' ability to justify methods and compare their responses to the responses of their peers.
MA.K12.MTR.5.1:	Use patterns and structure to help understand and connect mathematical concepts. Mathematicians who use patterns and structure to help understand and connect mathematical concepts: • Focus on relevant details within a problem. • Create plans and procedures to logically order events, steps or ideas to solve problems. • Decompose a complex problem into manageable parts. • Relate previously learned concepts to new concepts. • Look for similarities among problems. • Connect solutions of problems to more complicated large-scale situations. **Clarifications:** Teachers who encourage students to use patterns and structure to help understand and connect mathematical concepts: • Help students recognize the patterns in the world around them and connect these patterns to mathematical concepts. • Support students to develop generalizations based on the similarities found among problems. • Provide opportunities for students to create plans and procedures to solve problems.

	• Develop students' ability to construct relationships between their current understanding and more sophisticated ways of thinking.
MA.K12.MTR.6.1:	Assess the reasonableness of solutions. Mathematicians who assess the reasonableness of solutions: • Estimate to discover possible solutions. • Use benchmark quantities to determine if a solution makes sense. • Check calculations when solving problems. • Verify possible solutions by explaining the methods used. • Evaluate results based on the given context. **Clarifications:** Teachers who encourage students to assess the reasonableness of solutions: • Have students estimate or predict solutions prior to solving. • Prompt students to continually ask, "Does this solution make sense? How do you know?" • Reinforce that students check their work as they progress within and after a task. • Strengthen students' ability to verify solutions through justifications.
MA.K12.MTR.7.1:	Apply mathematics to real-world contexts. Mathematicians who apply mathematics to real-world contexts: • Connect mathematical concepts to everyday experiences. • Use models and methods to understand, represent and solve problems. • Perform investigations to gather data or determine if a method is appropriate. • Redesign models and methods to improve accuracy or efficiency. **Clarifications:** Teachers who encourage students to apply mathematics to real-world contexts: • Provide opportunities for students to create models, both concrete and abstract, and perform investigations. • Challenge students to question the accuracy of their models and methods. • Support students as they validate conclusions by comparing them to the given situation. • Indicate how various concepts can be applied to other disciplines.
ELA.K12.EE.1.1:	Cite evidence to explain and justify reasoning. **Clarifications:** K-1 Students include textual evidence in their oral communication with guidance and support from adults. The evidence can consist of details from the text without naming the text. During 1st grade, students learn how to incorporate the evidence in their writing. 2-3 Students include relevant textual evidence in their written and oral communication. Students should name the text when they refer to it. In 3rd grade, students should use a combination of direct and indirect citations. 4-5 Students continue with previous skills and reference comments made by speakers and peers. Students cite texts that they've directly quoted, paraphrased, or used for information. When writing, students will use the form of citation dictated by the instructor or the style guide referenced by the instructor. 6-8 Students continue with previous skills and use a style guide to create a proper citation. 9-12 Students continue with previous skills and should be aware of existing style guides and the ways in which they differ.
ELA.K12.EE.2.1:	Read and comprehend grade-level complex texts proficiently. **Clarifications:** See Text Complexity for grade-level complexity bands and a text complexity rubric.
ELA.K12.EE.3.1:	Make inferences to support comprehension. **Clarifications:** Students will make inferences before the words infer or inference are introduced. Kindergarten students will answer questions like "Why is the girl smiling?" or make predictions about what will happen based on the title page. Students will use the terms and apply them in 2nd grade and beyond.
ELA.K12.EE.4.1:	Use appropriate collaborative techniques and active listening skills when engaging in discussions in a variety of situations. **Clarifications:** In kindergarten, students learn to listen to one another respectfully. In grades 1-2, students build upon these skills by justifying what they are thinking. For example: "I think _____ because _____." The collaborative conversations are becoming academic conversations. In grades 3-12, students engage in academic conversations discussing claims and justifying their reasoning, refining and applying skills. Students build on ideas, propel the conversation, and support claims and counterclaims with evidence.
ELA.K12.EE.5.1:	Use the accepted rules governing a specific format to create quality work. **Clarifications:** Students will incorporate skills learned into work products to produce quality work. For students to incorporate these skills appropriately, they must receive instruction. A 3rd grade student creating a poster board display must have instruction in how to effectively present information to do quality work.
ELA.K12.EE.6.1:	Use appropriate voice and tone when speaking or writing. **Clarifications:** In kindergarten and 1st grade, students learn the difference between formal and informal language. For example, the way we talk to our friends differs from the way we speak to adults. In 2nd grade and beyond, students practice appropriate social and academic language to discuss texts.
ELD.K12.ELL.SC.1:	English language learners communicate information, ideas and concepts necessary for academic success in the content area of Science.
ELD.K12.ELL.SI.1:	English language learners communicate for social and instructional purposes within the school setting.

GENERAL NOTES

While the content focus of this course is consistent with the Marine Science 2 course, students will explore these concepts in greater depth. In general, the academic pace and rigor will be greatly increased for honors level course work. Laboratory investigations that include the use of scientific inquiry, research, measurement, problem solving, laboratory apparatus and technologies, experimental procedures, and safety procedures are an integral part of this course. The National Science Teachers Association (NSTA) recommends that at the high school level, all students should be in the science lab or field, collecting data every week. School laboratory investigations (labs) are defined by the National Research Council (NRC) as an experience in the laboratory, classroom, or the field that provides students with opportunities to interact directly with natural phenomena or with data collected by others using tools, materials, data collection techniques, and models (NRC, 2006, p. 3). Laboratory investigations in the high school classroom should help all students develop a growing understanding of the complexity and ambiguity of empirical work, as well as the skills to calibrate and troubleshoot equipment used to make observations. Learners should understand measurement error; and have the skills to aggregate, interpret, and present the resulting data (National Research Council, 2006, p.77; NSTA, 2007).

Special Notes:

Special Notes:
Instructional Practices
Teaching from a range of complex text is optimized when teachers in all subject areas implement the following strategies on a routine basis:

1. Ensuring wide reading from complex text that varies in length.
2. Making close reading and rereading of texts central to lessons.
3. Emphasizing text-specific complex questions, and cognitively complex tasks, reinforce focus on the text and cultivate independence.
4. Emphasizing students supporting answers based upon evidence from the text.
5. Providing extensive research and writing opportunities (claims and evidence).

Science and Engineering Practices (NRC *Framework for K-12 Science Education, 2010*)

- Asking questions (for science) and defining problems (for engineering).
- Developing and using models.
- Planning and carrying out investigations.
- Analyzing and interpreting data.
- Using mathematics, information and computer technology, and computational thinking.
- Constructing explanations (for science) and designing solutions (for engineering).
- Engaging in argument from evidence.
- Obtaining, evaluating, and communicating information.

Honors and Advanced Level Course Note: Advanced courses require a greater demand on students through increased academic rigor. Academic rigor is obtained through the application, analysis, evaluation, and creation of complex ideas that are often abstract and multi-faceted. Students are challenged to think and collaborate critically on the content they are learning. Honors level rigor will be achieved by increasing text complexity through text selection, focus on high-level qualitative measures, and complexity of task. Instruction will be structured to give students a deeper understanding of conceptual themes and organization within and across disciplines. Academic rigor is more than simply assigning to students a greater quantity of work.

Florida's Benchmarks for Excellent Student Thinking (B.E.S.T.) Standards
This course includes Florida's B.E.S.T. ELA Expectations (EE) and Mathematical Thinking and Reasoning Standards (MTRs) for students. Florida educators should intentionally embed these standards within the content and their instruction as applicable. For guidance on the implementation of the EEs and MTRs, please visit cpalms.org/Standards/BEST_Standards.aspx and select the appropriate B.E.S.T. Standards package.

English Language Development ELD Standards Special Notes Section:
Teachers are required to provide listening, speaking, reading and writing instruction that allows English language learners (ELL) to communicate information, ideas and concepts for academic success in the content area of Science. For the given level of English language proficiency and with visual, graphic, or interactive support, students will interact with grade level words, expressions, sentences and discourse to process or produce language necessary for academic success The ELD standard should specify a relevant content area concept or topic of study chosen by curriculum developers and teachers which maximizes an ELL's need for communication and social skills. To access an ELL supporting document which delineates performance definitions and descriptors, please click on the following link: cpalms.org/uploads/docs/standards/eld/SC.pdf

GENERAL INFORMATION

Course Number: 2002530

Course Path: Section: Grades PreK to 12 Education Courses > **Grade Group:** Grades 9 to 12 and Adult Education Courses > **Subject:** Science > **SubSubject:** Marine Sciences > **Abbreviated Title:** MARINE SCI 2 HON

Number of Credits: One (1) credit

Course Length: Year (Y)

Course Attributes:

- Honors

Course Type: Core Academic Course

Course Level: 3

Course Status: Draft - Course Pending Approval

Grade Level(s): 9,10,11,12

Graduation Requirement: Equally Rigorous Science

Educator Certifications

Biology (Grades 6-12)
Chemistry (Grades 6-12)
Physics (Grades 6-12)
Science (Secondary Grades 7-12)

Solar Energy Honors (#2002540) 2022 - And Beyond

Course Standards

Name	Description
SC.912.E.5.4:	Explain the physical properties of the Sun and its dynamic nature and connect them to conditions and events on Earth.
SC.912.E.6.6:	Analyze past, present, and potential future consequences to the environment resulting from various energy production technologies.
SC.912.E.7.1:	Analyze the movement of matter and energy through the different biogeochemical cycles, including water and carbon.
SC.912.E.7.2:	Analyze the causes of the various kinds of surface and deep water motion within the oceans and their impacts on the transfer of energy between the poles and the equator.
SC.912.E.7.9:	Cite evidence that the ocean has had a significant influence on climate change by absorbing, storing, and moving heat, carbon, and water.
SC.912.L.17.11:	Evaluate the costs and benefits of renewable and nonrenewable resources, such as water, energy, fossil fuels, wildlife, and forests.
SC.912.L.17.12:	Discuss the political, social, and environmental consequences of sustainable use of land.
SC.912.L.17.13:	Discuss the need for adequate monitoring of environmental parameters when making policy decisions.
SC.912.L.17.15:	Discuss the effects of technology on environmental quality.
SC.912.L.17.16:	Discuss the large-scale environmental impacts resulting from human activity, including waste spills, oil spills, runoff, greenhouse gases, ozone depletion, and surface and groundwater pollution.
SC.912.L.17.17:	Assess the effectiveness of innovative methods of protecting the environment.
SC.912.L.17.18:	Describe how human population size and resource use relate to environmental quality.
SC.912.L.17.19:	Describe how different natural resources are produced and how their rates of use and renewal limit availability.
SC.912.L.17.20:	Predict the impact of individuals on environmental systems and examine how human lifestyles affect sustainability.
SC.912.N.1.1:	Define a problem based on a specific body of knowledge, for example: biology, chemistry, physics, and earth/space science, and do the following: 1. **Pose questions about the natural world,** (Articulate the purpose of the investigation and identify the relevant scientific concepts). 2. **Conduct systematic observations,** (Write procedures that are clear and replicable. Identify observables and examine relationships between test (independent) variable and outcome (dependent) variable. Employ appropriate methods for accurate and consistent observations; conduct and record measurements at appropriate levels of precision. Follow safety guidelines). 3. **Examine books and other sources of information to see what is already known,** 4. **Review what is known in light of empirical evidence,** (Examine whether available empirical evidence can be interpreted in terms of existing knowledge and models, and if not, modify or develop new models). 5. **Plan investigations,** (Design and evaluate a scientific investigation). 6. **Use tools to gather, analyze, and interpret data (this includes the use of measurement in metric and other systems, and also the generation and interpretation of graphical representations of data, including data tables and graphs),** (Collect data or evidence in an organized way. Properly use instruments, equipment, and materials (e.g., scales, probeware, meter sticks, microscopes, computers) including set-up, calibration, technique, maintenance, and storage). 7. **Pose answers, explanations, or descriptions of events,** 8. **Generate explanations that explicate or describe natural phenomena (inferences),** 9. **Use appropriate evidence and reasoning to justify these explanations to others,** 10. **Communicate results of scientific investigations, and** 11. **Evaluate the merits of the explanations produced by others.**
SC.912.N.1.2:	Describe and explain what characterizes science and its methods.
SC.912.N.1.3:	Recognize that the strength or usefulness of a scientific claim is evaluated through scientific argumentation, which depends on critical and logical thinking, and the active consideration of alternative scientific explanations to explain the data presented.
SC.912.N.1.4:	Identify sources of information and assess their reliability according to the strict standards of scientific investigation.
SC.912.N.1.5:	Describe and provide examples of how similar investigations conducted in many parts of the world result in the same outcome.
SC.912.N.1.6:	Describe how scientific inferences are drawn from scientific observations and provide examples from the content being studied.
SC.912.N.1.7:	Recognize the role of creativity in constructing scientific questions, methods and explanations.
SC.912.N.2.1:	Identify what is science, what clearly is not science, and what superficially resembles science (but fails to meet the criteria for science).
SC.912.N.2.2:	Identify which questions can be answered through science and which questions are outside the boundaries of scientific investigation, such as questions addressed by other ways of knowing, such as art, philosophy, and religion.
SC.912.N.2.3:	Identify examples of pseudoscience (such as astrology, phrenology) in society.
SC.912.N.2.4:	Explain that scientific knowledge is both durable and robust and open to change. Scientific knowledge can change because it is often examined and re-examined by new investigations and scientific argumentation. Because of these frequent examinations, scientific knowledge becomes stronger, leading to its durability.
SC.912.N.2.5:	Describe instances in which scientists' varied backgrounds, talents, interests, and goals influence the inferences and thus the explanations that they make about observations of natural phenomena and describe that competing interpretations (explanations) of scientists are a strength of science as they are a source of new, testable ideas that have the potential to add new evidence to support one or another of the explanations.
SC.912.N.3.1:	Explain that a scientific theory is the culmination of many scientific investigations drawing together all the current evidence concerning a substantial range of phenomena; thus, a scientific theory represents the most powerful explanation scientists have to offer.
SC.912.N.3.5:	Describe the function of models in science, and identify the wide range of models used in science.
SC.912.N.4.1:	Explain how scientific knowledge and reasoning provide an empirically-based perspective to inform society's decision making.
SC.912.N.4.2:	Weigh the merits of alternative strategies for solving a specific societal problem by comparing a number of different costs and benefits, such as human, economic, and environmental.
SC.912.P.8.12:	Describe the properties of the carbon atom that make the diversity of carbon compounds possible.
SC.912.P.8.13:	Identify selected functional groups and relate how they contribute to properties of carbon compounds.
SC.912.P.10.1:	Differentiate among the various forms of energy and recognize that they can be transformed from one form to others.

SC.912.P.10.2:	Explore the Law of Conservation of Energy by differentiating among open, closed, and isolated systems and explain that the total energy in an isolated system is a conserved quantity.
SC.912.P.10.3:	Compare and contrast work and power qualitatively and quantitatively.
SC.912.P.10.4:	Describe heat as the energy transferred by convection, conduction, and radiation, and explain the connection of heat to change in temperature or states of matter.
SC.912.P.10.9:	Describe the quantization of energy at the atomic level.
MA.K12.MTR.1.1:	Mathematicians who participate in effortful learning both individually and with others: • Analyze the problem in a way that makes sense given the task. • Ask questions that will help with solving the task. • Build perseverance by modifying methods as needed while solving a challenging task. • Stay engaged and maintain a positive mindset when working to solve tasks. • Help and support each other when attempting a new method or approach. **Clarifications:** Teachers who encourage students to participate actively in effortful learning both individually and with others: • Cultivate a community of growth mindset learners. • Foster perseverance in students by choosing tasks that are challenging. • Develop students' ability to analyze and problem solve. • Recognize students' effort when solving challenging problems.
MA.K12.MTR.2.1:	Demonstrate understanding by representing problems in multiple ways. Mathematicians who demonstrate understanding by representing problems in multiple ways: • Build understanding through modeling and using manipulatives. • Represent solutions to problems in multiple ways using objects, drawings, tables, graphs and equations. • Progress from modeling problems with objects and drawings to using algorithms and equations. • Express connections between concepts and representations. • Choose a representation based on the given context or purpose. **Clarifications:** Teachers who encourage students to demonstrate understanding by representing problems in multiple ways: • Help students make connections between concepts and representations. • Provide opportunities for students to use manipulatives when investigating concepts. • Guide students from concrete to pictorial to abstract representations as understanding progresses. • Show students that various representations can have different purposes and can be useful in different situations.
MA.K12.MTR.3.1:	Complete tasks with mathematical fluency. Mathematicians who complete tasks with mathematical fluency: • Select efficient and appropriate methods for solving problems within the given context. • Maintain flexibility and accuracy while performing procedures and mental calculations. • Complete tasks accurately and with confidence. • Adapt procedures to apply them to a new context. • Use feedback to improve efficiency when performing calculations. **Clarifications:** Teachers who encourage students to complete tasks with mathematical fluency: • Provide students with the flexibility to solve problems by selecting a procedure that allows them to solve efficiently and accurately. • Offer multiple opportunities for students to practice efficient and generalizable methods. • Provide opportunities for students to reflect on the method they used and determine if a more efficient method could have been used.
MA.K12.MTR.4.1:	Engage in discussions that reflect on the mathematical thinking of self and others. Mathematicians who engage in discussions that reflect on the mathematical thinking of self and others: • Communicate mathematical ideas, vocabulary and methods effectively. • Analyze the mathematical thinking of others. • Compare the efficiency of a method to those expressed by others. • Recognize errors and suggest how to correctly solve the task. • Justify results by explaining methods and processes. • Construct possible arguments based on evidence. **Clarifications:** Teachers who encourage students to engage in discussions that reflect on the mathematical thinking of self and others: • Establish a culture in which students ask questions of the teacher and their peers, and error is an opportunity for learning. • Create opportunities for students to discuss their thinking with peers. • Select, sequence and present student work to advance and deepen understanding of correct and increasingly efficient methods. • Develop students' ability to justify methods and compare their responses to the responses of their peers.
MA.K12.MTR.5.1:	Use patterns and structure to help understand and connect mathematical concepts. Mathematicians who use patterns and structure to help understand and connect mathematical concepts: • Focus on relevant details within a problem. • Create plans and procedures to logically order events, steps or ideas to solve problems. • Decompose a complex problem into manageable parts. • Relate previously learned concepts to new concepts. • Look for similarities among problems. • Connect solutions of problems to more complicated large-scale situations. **Clarifications:**

	Teachers who encourage students to use patterns and structure to help understand and connect mathematical concepts: • Help students recognize the patterns in the world around them and connect these patterns to mathematical concepts. • Support students to develop generalizations based on the similarities found among problems. • Provide opportunities for students to create plans and procedures to solve problems. • Develop students' ability to construct relationships between their current understanding and more sophisticated ways of thinking.
MA.K12.MTR.6.1:	Assess the reasonableness of solutions. Mathematicians who assess the reasonableness of solutions: • Estimate to discover possible solutions. • Use benchmark quantities to determine if a solution makes sense. • Check calculations when solving problems. • Verify possible solutions by explaining the methods used. • Evaluate results based on the given context. **Clarifications:** Teachers who encourage students to assess the reasonableness of solutions: • Have students estimate or predict solutions prior to solving. • Prompt students to continually ask, "Does this solution make sense? How do you know?" • Reinforce that students check their work as they progress within and after a task. • Strengthen students' ability to verify solutions through justifications.
MA.K12.MTR.7.1:	Apply mathematics to real-world contexts. Mathematicians who apply mathematics to real-world contexts: • Connect mathematical concepts to everyday experiences. • Use models and methods to understand, represent and solve problems. • Perform investigations to gather data or determine if a method is appropriate. • Redesign models and methods to improve accuracy or efficiency. **Clarifications:** Teachers who encourage students to apply mathematics to real-world contexts: • Provide opportunities for students to create models, both concrete and abstract, and perform investigations. • Challenge students to question the accuracy of their models and methods. • Support students as they validate conclusions by comparing them to the given situation. • Indicate how various concepts can be applied to other disciplines.
ELA.K12.EE.1.1:	Cite evidence to explain and justify reasoning. **Clarifications:** K-1 Students include textual evidence in their oral communication with guidance and support from adults. The evidence can consist of details from the text without naming the text. During 1st grade, students learn how to incorporate the evidence in their writing. 2-3 Students include relevant textual evidence in their written and oral communication. Students should name the text when they refer to it. In 3rd grade, students should use a combination of direct and indirect citations. 4-5 Students continue with previous skills and reference comments made by speakers and peers. Students cite texts that they've directly quoted, paraphrased, or used for information. When writing, students will use the form of citation dictated by the instructor or the style guide referenced by the instructor. 6-8 Students continue with previous skills and use a style guide to create a proper citation. 9-12 Students continue with previous skills and should be aware of existing style guides and the ways in which they differ.
ELA.K12.EE.2.1:	Read and comprehend grade-level complex texts proficiently. **Clarifications:** See Text Complexity for grade-level complexity bands and a text complexity rubric.
ELA.K12.EE.3.1:	Make inferences to support comprehension. **Clarifications:** Students will make inferences before the words infer or inference are introduced. Kindergarten students will answer questions like "Why is the girl smiling?" or make predictions about what will happen based on the title page. Students will use the terms and apply them in 2nd grade and beyond.
ELA.K12.EE.4.1:	Use appropriate collaborative techniques and active listening skills when engaging in discussions in a variety of situations. **Clarifications:** In kindergarten, students learn to listen to one another respectfully. In grades 1-2, students build upon these skills by justifying what they are thinking. For example: "I think _____ because _____." The collaborative conversations are becoming academic conversations. In grades 3-12, students engage in academic conversations discussing claims and justifying their reasoning, refining and applying skills. Students build on ideas, propel the conversation, and support claims and counterclaims with evidence.
ELA.K12.EE.5.1:	Use the accepted rules governing a specific format to create quality work. **Clarifications:** Students will incorporate skills learned into work products to produce quality work. For students to incorporate these skills appropriately, they must receive instruction. A 3rd grade student creating a poster board display must have instruction in how to effectively present information to do quality work.
ELA.K12.EE.6.1:	Use appropriate voice and tone when speaking or writing. **Clarifications:** In kindergarten and 1st grade, students learn the difference between formal and informal language. For example, the way we talk to our friends differs from the way we speak to adults. In 2nd grade and beyond, students practice appropriate social and academic language to discuss texts.

ELD.K12.ELL.SC.1:	English language learners communicate information, ideas and concepts necessary for academic success in the content area of Science.
ELD.K12.ELL.SI.1:	English language learners communicate for social and instructional purposes within the school setting.

General Course Information and Notes

GENERAL NOTES

Laboratory investigations that include the use of scientific inquiry, research, measurement, problem solving, laboratory apparatus and technologies, experimental procedures, and safety procedures are an integral part of this course. The National Science Teachers Association (NSTA) recommends that at the high school level, all students should be in the science lab or field, collecting data every week. School laboratory investigations (labs) are defined by the National Research Council (NRC) as an experience in the laboratory, classroom, or the field that provides students with opportunities to interact directly with natural phenomena or with data collected by others using tools, materials, data collection techniques, and models (NRC, 2006, p. 3). Laboratory investigations in the high school classroom should help all students develop a growing understanding of the complexity and ambiguity of empirical work, as well as the skills to calibrate and troubleshoot equipment used to make observations. Learners should understand measurement error; and have the skills to aggregate, interpret, and present the resulting data (National Research Council, 2006, p.77; NSTA, 2007).

Special Notes:
Instructional Practices
Teaching from a range of complex text is optimized when teachers in all subject areas implement the following strategies on a routine basis:

1. Ensuring wide reading from complex text that varies in length.
2. Making close reading and rereading of texts central to lessons.
3. Emphasizing text-specific complex questions, and cognitively complex tasks, reinforce focus on the text and cultivate independence.
4. Emphasizing students supporting answers based upon evidence from the text.
5. Providing extensive research and writing opportunities (claims and evidence).

Science and Engineering Practices (NRC *Framework for K-12 Science Education, 2010*)

- Asking questions (for science) and defining problems (for engineering).
- Developing and using models.
- Planning and carrying out investigations.
- Analyzing and interpreting data.
- Using mathematics, information and computer technology, and computational thinking.
- Constructing explanations (for science) and designing solutions (for engineering).
- Engaging in argument from evidence.
- Obtaining, evaluating, and communicating information.

Honors and Advanced Level Course Note: Advanced courses require a greater demand on students through increased academic rigor. Academic rigor is obtained through the application, analysis, evaluation, and creation of complex ideas that are often abstract and multi-faceted. Students are challenged to think and collaborate critically on the content they are learning. Honors level rigor will be achieved by increasing text complexity through text selection, focus on high-level qualitative measures, and complexity of task. Instruction will be structured to give students a deeper understanding of conceptual themes and organization within and across disciplines. Academic rigor is more than simply assigning to students a greater quantity of work.

Florida's Benchmarks for Excellent Student Thinking (B.E.S.T.) Standards
This course includes Florida's B.E.S.T. ELA Expectations (EE) and Mathematical Thinking and Reasoning Standards (MTRs) for students. Florida educators should intentionally embed these standards within the content and their instruction as applicable. For guidance on the implementation of the EEs and MTRs, please visit cpalms.org/Standards/BEST_Standards.aspx and select the appropriate B.E.S.T. Standards package.

English Language Development ELD Standards Special Notes Section:
Teachers are required to provide listening, speaking, reading and writing instruction that allows English language learners (ELL) to communicate information, ideas and concepts for academic success in the content area of Science. For the given level of English language proficiency and with visual, graphic, or interactive support, students will interact with grade level words, expressions, sentences and discourse to process or produce language necessary for academic success The ELD standard should specify a relevant content area concept or topic of study chosen by curriculum developers and teachers which maximizes an ELL's need for communication and social skills. To access an ELL supporting document which delineates performance definitions and descriptors, please click on the following link: cpalms.org/uploads/docs/standards/eld/SC.pdf

GENERAL INFORMATION

Course Number: 2002540

Course Path: Section: Grades PreK to 12 Education Courses > **Grade Group:** Grades 9 to 12 and Adult Education Courses > **Subject:** Science > **SubSubject:** Integrated Sciences > **Abbreviated Title:** SOLAR ENERGY HON

Number of Credits: One (1) credit

Course Length: Year (Y)

Course Attributes:
- Honors

Course Type: Elective Course

Course Level: 3

Course Status: Draft - Course Pending Approval

Grade Level(s): 9,10,11,12

Educator Certifications

Earth/Space Science (Grades 6-12)
Physics (Grades 6-12)
Biology (Grades 6-12)
Chemistry (Grades 6-12)

M/J Physical Science (#2003010) 2022 - And Beyond

Course Standards

Use grade appropriate Nature of Science benchmarks (i.e. if this course is offered to seventh grade students, then the SC.7.N benchmarks should be integrated into the course content, and SC.6.N and SC.8.N benchmarks should be omitted from the seventh grade course).

Name	Description
SC.6.N.1.1:	Define a problem from the sixth grade curriculum, use appropriate reference materials to support scientific understanding, plan and carry out scientific investigation of various types, such as systematic observations or experiments, identify variables, collect and organize data, interpret data in charts, tables, and graphics, analyze information, make predictions, and defend conclusions.
SC.6.N.1.2:	Explain why scientific investigations should be replicable.
SC.6.N.1.3:	Explain the difference between an experiment and other types of scientific investigation, and explain the relative benefits and limitations of each.
SC.6.N.1.4:	Discuss, compare, and negotiate methods used, results obtained, and explanations among groups of students conducting the same investigation.
SC.6.N.1.5:	Recognize that science involves creativity, not just in designing experiments, but also in creating explanations that fit evidence.
SC.6.N.2.1:	Distinguish science from other activities involving thought.
SC.6.N.2.2:	Explain that scientific knowledge is durable because it is open to change as new evidence or interpretations are encountered.
SC.6.N.2.3:	Recognize that scientists who make contributions to scientific knowledge come from all kinds of backgrounds and possess varied talents, interests, and goals.
SC.6.N.3.1:	Recognize and explain that a scientific theory is a well-supported and widely accepted explanation of nature and is not simply a claim posed by an individual. Thus, the use of the term theory in science is very different than how it is used in everyday life.
SC.6.N.3.2:	Recognize and explain that a scientific law is a description of a specific relationship under given conditions in the natural world. Thus, scientific laws are different from societal laws.
SC.6.N.3.3:	Give several examples of scientific laws.
SC.6.N.3.4:	Identify the role of models in the context of the sixth grade science benchmarks.
SC.6.P.11.1:	Explore the Law of Conservation of Energy by differentiating between potential and kinetic energy. Identify situations where kinetic energy is transformed into potential energy and vice versa.
SC.6.P.12.1:	Measure and graph distance versus time for an object moving at a constant speed. Interpret this relationship.
SC.6.P.13.1:	Investigate and describe types of forces including contact forces and forces acting at a distance, such as electrical, magnetic, and gravitational.
SC.6.P.13.2:	Explore the Law of Gravity by recognizing that every object exerts gravitational force on every other object and that the force depends on how much mass the objects have and how far apart they are.
SC.6.P.13.3:	Investigate and describe that an unbalanced force acting on an object changes its speed, or direction of motion, or both.
SC.7.N.1.1:	Define a problem from the seventh grade curriculum, use appropriate reference materials to support scientific understanding, plan and carry out scientific investigation of various types, such as systematic observations or experiments, identify variables, collect and organize data, interpret data in charts, tables, and graphics, analyze information, make predictions, and defend conclusions.
SC.7.N.1.2:	Differentiate replication (by others) from repetition (multiple trials).
SC.7.N.1.3:	Distinguish between an experiment (which must involve the identification and control of variables) and other forms of scientific investigation and explain that not all scientific knowledge is derived from experimentation.
SC.7.N.1.4:	Identify test variables (independent variables) and outcome variables (dependent variables) in an experiment.
SC.7.N.1.5:	Describe the methods used in the pursuit of a scientific explanation as seen in different fields of science such as biology, geology, and physics.
SC.7.N.1.6:	Explain that empirical evidence is the cumulative body of observations of a natural phenomenon on which scientific explanations are based.
SC.7.N.1.7:	Explain that scientific knowledge is the result of a great deal of debate and confirmation within the science community.
SC.7.N.2.1:	Identify an instance from the history of science in which scientific knowledge has changed when new evidence or new interpretations are encountered.
SC.7.N.3.1:	Recognize and explain the difference between theories and laws and give several examples of scientific theories and the evidence that supports them.
SC.7.N.3.2:	Identify the benefits and limitations of the use of scientific models.
SC.7.P.10.1:	Illustrate that the sun's energy arrives as radiation with a wide range of wavelengths, including infrared, visible, and ultraviolet, and that white light is made up of a spectrum of many different colors.
SC.7.P.10.2:	Observe and explain that light can be reflected, refracted, and/or absorbed.
SC.7.P.10.3:	Recognize that light waves, sound waves, and other waves move at different speeds in different materials.
SC.7.P.11.1:	Recognize that adding heat to or removing heat from a system may result in a temperature change and possibly a change of state.
SC.7.P.11.2:	Investigate and describe the transformation of energy from one form to another.
SC.7.P.11.3:	Cite evidence to explain that energy cannot be created nor destroyed, only changed from one form to another.
SC.7.P.11.4:	Observe and describe that heat flows in predictable ways, moving from warmer objects to cooler ones until they reach the same temperature.
SC.8.N.1.1:	Define a problem from the eighth grade curriculum using appropriate reference materials to support scientific understanding, plan and carry out scientific investigations of various types, such as systematic observations or experiments, identify variables, collect and organize data, interpret data in charts, tables, and graphics, analyze information, make predictions, and defend conclusions.
SC.8.N.1.2:	Design and conduct a study using repeated trials and replication.
SC.8.N.1.3:	Use phrases such as "results support" or "fail to support" in science, understanding that science does not offer conclusive 'proof' of a knowledge claim.
SC.8.N.1.4:	Explain how hypotheses are valuable if they lead to further investigations, even if they turn out not to be supported by the data.
SC.8.N.1.5:	Analyze the methods used to develop a scientific explanation as seen in different fields of science.
SC.8.N.1.6:	Understand that scientific investigations involve the collection of relevant empirical evidence, the use of logical reasoning, and the application of imagination in devising hypotheses, predictions, explanations and models to make sense of the collected evidence.
SC.8.N.2.1:	Distinguish between scientific and pseudoscientific ideas.
SC.8.N.2.2:	Discuss what characterizes science and its methods.
SC.8.N.3.1:	Select models useful in relating the results of their own investigations.

SC.8.N.3.2:	Explain why theories may be modified but are rarely discarded.
SC.8.N.4.1:	Explain that science is one of the processes that can be used to inform decision making at the community, state, national, and international levels.
SC.8.N.4.2:	Explain how political, social, and economic concerns can affect science, and vice versa.
SC.8.P.8.1:	Explore the scientific theory of atoms (also known as atomic theory) by using models to explain the motion of particles in solids, liquids, and gases.
SC.8.P.8.2:	Differentiate between weight and mass recognizing that weight is the amount of gravitational pull on an object and is distinct from, though proportional to, mass.
SC.8.P.8.3:	Explore and describe the densities of various materials through measurement of their masses and volumes.
SC.8.P.8.4:	Classify and compare substances on the basis of characteristic physical properties that can be demonstrated or measured; for example, density, thermal or electrical conductivity, solubility, magnetic properties, melting and boiling points, and know that these properties are independent of the amount of the sample.
SC.8.P.8.5:	Recognize that there are a finite number of elements and that their atoms combine in a multitude of ways to produce compounds that make up all of the living and nonliving things that we encounter.
SC.8.P.8.6:	Recognize that elements are grouped in the periodic table according to similarities of their properties.
SC.8.P.8.7:	Explore the scientific theory of atoms (also known as atomic theory) by recognizing that atoms are the smallest unit of an element and are composed of sub-atomic particles (electrons surrounding a nucleus containing protons and neutrons).
SC.8.P.8.8:	Identify basic examples of and compare and classify the properties of compounds, including acids, bases, and salts.
SC.8.P.8.9:	Distinguish among mixtures (including solutions) and pure substances.
SC.8.P.9.1:	Explore the Law of Conservation of Mass by demonstrating and concluding that mass is conserved when substances undergo physical and chemical changes.
SC.8.P.9.2:	Differentiate between physical changes and chemical changes.
SC.8.P.9.3:	Investigate and describe how temperature influences chemical changes.
MA.K12.MTR.1.1:	Mathematicians who participate in effortful learning both individually and with others: • Analyze the problem in a way that makes sense given the task. • Ask questions that will help with solving the task. • Build perseverance by modifying methods as needed while solving a challenging task. • Stay engaged and maintain a positive mindset when working to solve tasks. • Help and support each other when attempting a new method or approach. **Clarifications:** Teachers who encourage students to participate actively in effortful learning both individually and with others: • Cultivate a community of growth mindset learners. • Foster perseverance in students by choosing tasks that are challenging. • Develop students' ability to analyze and problem solve. • Recognize students' effort when solving challenging problems.
MA.K12.MTR.2.1:	Demonstrate understanding by representing problems in multiple ways. Mathematicians who demonstrate understanding by representing problems in multiple ways: • Build understanding through modeling and using manipulatives. • Represent solutions to problems in multiple ways using objects, drawings, tables, graphs and equations. • Progress from modeling problems with objects and drawings to using algorithms and equations. • Express connections between concepts and representations. • Choose a representation based on the given context or purpose. **Clarifications:** Teachers who encourage students to demonstrate understanding by representing problems in multiple ways: • Help students make connections between concepts and representations. • Provide opportunities for students to use manipulatives when investigating concepts. • Guide students from concrete to pictorial to abstract representations as understanding progresses. • Show students that various representations can have different purposes and can be useful in different situations.
MA.K12.MTR.3.1:	Complete tasks with mathematical fluency. Mathematicians who complete tasks with mathematical fluency: • Select efficient and appropriate methods for solving problems within the given context. • Maintain flexibility and accuracy while performing procedures and mental calculations. • Complete tasks accurately and with confidence. • Adapt procedures to apply them to a new context. • Use feedback to improve efficiency when performing calculations. **Clarifications:** Teachers who encourage students to complete tasks with mathematical fluency: • Provide students with the flexibility to solve problems by selecting a procedure that allows them to solve efficiently and accurately. • Offer multiple opportunities for students to practice efficient and generalizable methods. • Provide opportunities for students to reflect on the method they used and determine if a more efficient method could have been used.
MA.K12.MTR.4.1:	Engage in discussions that reflect on the mathematical thinking of self and others. Mathematicians who engage in discussions that reflect on the mathematical thinking of self and others: • Communicate mathematical ideas, vocabulary and methods effectively. • Analyze the mathematical thinking of others. • Compare the efficiency of a method to those expressed by others. • Recognize errors and suggest how to correctly solve the task. • Justify results by explaining methods and processes. • Construct possible arguments based on evidence. **Clarifications:** Teachers who encourage students to engage in discussions that reflect on the mathematical thinking of self and others:

	• Establish a culture in which students ask questions of the teacher and their peers, and error is an opportunity for learning. • Create opportunities for students to discuss their thinking with peers. • Select, sequence and present student work to advance and deepen understanding of correct and increasingly efficient methods. • Develop students' ability to justify methods and compare their responses to the responses of their peers.
MA.K12.MTR.5.1:	Use patterns and structure to help understand and connect mathematical concepts. Mathematicians who use patterns and structure to help understand and connect mathematical concepts: • Focus on relevant details within a problem. • Create plans and procedures to logically order events, steps or ideas to solve problems. • Decompose a complex problem into manageable parts. • Relate previously learned concepts to new concepts. • Look for similarities among problems. • Connect solutions of problems to more complicated large-scale situations. **Clarifications:** Teachers who encourage students to use patterns and structure to help understand and connect mathematical concepts: • Help students recognize the patterns in the world around them and connect these patterns to mathematical concepts. • Support students to develop generalizations based on the similarities found among problems. • Provide opportunities for students to create plans and procedures to solve problems. • Develop students' ability to construct relationships between their current understanding and more sophisticated ways of thinking.
MA.K12.MTR.6.1:	Assess the reasonableness of solutions. Mathematicians who assess the reasonableness of solutions: • Estimate to discover possible solutions. • Use benchmark quantities to determine if a solution makes sense. • Check calculations when solving problems. • Verify possible solutions by explaining the methods used. • Evaluate results based on the given context. **Clarifications:** Teachers who encourage students to assess the reasonableness of solutions: • Have students estimate or predict solutions prior to solving. • Prompt students to continually ask, "Does this solution make sense? How do you know?" • Reinforce that students check their work as they progress within and after a task. • Strengthen students' ability to verify solutions through justifications.
MA.K12.MTR.7.1:	Apply mathematics to real-world contexts. Mathematicians who apply mathematics to real-world contexts: • Connect mathematical concepts to everyday experiences. • Use models and methods to understand, represent and solve problems. • Perform investigations to gather data or determine if a method is appropriate. • Redesign models and methods to improve accuracy or efficiency. **Clarifications:** Teachers who encourage students to apply mathematics to real-world contexts: • Provide opportunities for students to create models, both concrete and abstract, and perform investigations. • Challenge students to question the accuracy of their models and methods. • Support students as they validate conclusions by comparing them to the given situation. • Indicate how various concepts can be applied to other disciplines.
ELA.K12.EE.1.1:	Cite evidence to explain and justify reasoning. **Clarifications:** K-1 Students include textual evidence in their oral communication with guidance and support from adults. The evidence can consist of details from the text without naming the text. During 1st grade, students learn how to incorporate the evidence in their writing. 2-3 Students include relevant textual evidence in their written and oral communication. Students should name the text when they refer to it. In 3rd grade, students should use a combination of direct and indirect citations. 4-5 Students continue with previous skills and reference comments made by speakers and peers. Students cite texts that they've directly quoted, paraphrased, or used for information. When writing, students will use the form of citation dictated by the instructor or the style guide referenced by the instructor. 6-8 Students continue with previous skills and use a style guide to create a proper citation. 9-12 Students continue with previous skills and should be aware of existing style guides and the ways in which they differ.
ELA.K12.EE.2.1:	Read and comprehend grade-level complex texts proficiently. **Clarifications:** See Text Complexity for grade-level complexity bands and a text complexity rubric.
ELA.K12.EE.3.1:	Make inferences to support comprehension. **Clarifications:** Students will make inferences before the words infer or inference are introduced. Kindergarten students will answer questions like "Why is the girl smiling?" or make predictions about what will happen based on the title page. Students will use the terms and apply them in 2nd grade and beyond.
	Use appropriate collaborative techniques and active listening skills when engaging in discussions in a variety of situations. **Clarifications:** In kindergarten, students learn to listen to one another respectfully.

ELA.K12.EE.4.1:	In grades 1-2, students build upon these skills by justifying what they are thinking. For example: "I think _____ because _____." The collaborative conversations are becoming academic conversations. In grades 3-12, students engage in academic conversations discussing claims and justifying their reasoning, refining and applying skills. Students build on ideas, propel the conversation, and support claims and counterclaims with evidence.
ELA.K12.EE.5.1:	Use the accepted rules governing a specific format to create quality work. **Clarifications:** Students will incorporate skills learned into work products to produce quality work. For students to incorporate these skills appropriately, they must receive instruction. A 3rd grade student creating a poster board display must have instruction in how to effectively present information to do quality work.
ELA.K12.EE.6.1:	Use appropriate voice and tone when speaking or writing. **Clarifications:** In kindergarten and 1st grade, students learn the difference between formal and informal language. For example, the way we talk to our friends differs from the way we speak to adults. In 2nd grade and beyond, students practice appropriate social and academic language to discuss texts.
ELD.K12.ELL.SC.1:	English language learners communicate information, ideas and concepts necessary for academic success in the content area of Science.
ELD.K12.ELL.SI.1:	English language learners communicate for social and instructional purposes within the school setting.

General Course Information and Notes

GENERAL NOTES

Laboratory investigations that include the use of scientific inquiry, research, measurement, problem solving, laboratory apparatus and technologies, experimental procedures, and safety procedures are an integral part of this course. The National Science Teachers Association (NSTA) recommends that at the middle school level, all students should have multiple opportunities every week to explore science laboratory investigations (labs). School laboratory investigations are defined by the National Research Council (NRC) as an experience in the laboratory, classroom, or the field that provides students with opportunities to interact directly with natural phenomena or with data collected by others using tools, materials, data collection techniques, and models (NRC, 2006, p. 3). Laboratory investigations in the middle school classroom should help all students develop a growing understanding of the complexity and ambiguity of empirical work, as well as the skills to calibrate and troubleshoot equipment used to make observations. Learners should understand measurement error; and have the skills to aggregate, interpret, and present the resulting data (NRC 2006, p. 77; NSTA, 2007).

Special Notes:

Instructional Practices
Teaching from a range of complex text is optimized when teachers in all subject areas implement the following strategies on a routine basis:

1. Ensuring wide reading from complex text that varies in length.
2. Making close reading and rereading of texts central to lessons.
3. Emphasizing text-specific complex questions, and cognitively complex tasks, reinforce focus on the text and cultivate independence.
4. Emphasizing students supporting answers based upon evidence from the text.
5. Providing extensive research and writing opportunities (claims and evidence).

Science and Engineering Practices (NRC *Framework for K-12 Science Education, 2010*)

- Asking questions (for science) and defining problems (for engineering).
- Developing and using models.
- Planning and carrying out investigations.
- Analyzing and interpreting data.
- Using mathematics, information and computer technology, and computational thinking.
- Constructing explanations (for science) and designing solutions (for engineering).
- Engaging in argument from evidence.
- Obtaining, evaluating, and communicating information.

Florida's Benchmarks for Excellent Student Thinking (B.E.S.T.) Standards
This course includes Florida's B.E.S.T. ELA Expectations (EE) and Mathematical Thinking and Reasoning Standards (MTRs) for students. Florida educators should intentionally embed these standards within the content and their instruction as applicable. For guidance on the implementation of the EEs and MTRs, please visit cpalms.org/Standards/BEST_Standards.aspx and select the appropriate B.E.S.T. Standards package.

English Language Development ELD Standards Special Notes Section:
Teachers are required to provide listening, speaking, reading and writing instruction that allows English language learners (ELL) to communicate information, ideas and concepts for academic success in the content area of Science. For the given level of English language proficiency and with visual, graphic, or interactive support, students will interact with grade level words, expressions, sentences and discourse to process or produce language necessary for academic success The ELD standard should specify a relevant content area concept or topic of study chosen by curriculum developers and teachers which maximizes an ELL's need for communication and social skills. To access an ELL supporting document which delineates performance definitions and descriptors, please click on the following link: cpalms.org/uploads/docs/standards/eld/SC.pdf

Additional Instructional Resources:
A.V.E. for Success Collection is provided by the Florida Association of School Administrators: fasa.net/4DCGI/cms/review.html?Action=CMS_Document&DocID=139. Please be aware that these resources have not been reviewed by CPALMS and there may be a charge for the use of some of them in this collection.

GENERAL INFORMATION

Course Number: 2003010

Course Path: Section: Grades PreK to 12 Education Courses > **Grade Group:** Grades 6 to 8 Education Courses > **Subject:** Science > **SubSubject:** Physical Sciences >

Abbreviated Title: M/J PHY SCI

Course Length: Year (Y)

Course Attributes:

- Class Size Core Required

Course Level: 2

Course Status: Draft - Course Pending Approval

Grade Level(s): 6,7,8

Educator Certifications

Science (Secondary Grades 7-12)
Middle Grades Integrated Curriculum (Middle Grades 5-9)
Physics (Grades 6-12)
Middle Grades General Science (Middle Grades 5-9)
Chemistry (Grades 6-12)
Earth/Space Science (Grades 6-12)

M/J Physical Science, Advanced (#2003020) 2022 - And Beyond

Course Standards

Use grade appropriate Nature of Science benchmarks (i.e. if this course is offered to seventh grade students, then the SC.7.N benchmarks should be integrated into the course content, and SC.6.N and SC.8.N benchmarks should be omitted from the seventh grade course).

Name	Description
SC.6.P.11.1:	Explore the Law of Conservation of Energy by differentiating between potential and kinetic energy. Identify situations where kinetic energy is transformed into potential energy and vice versa.
SC.6.P.12.1:	Measure and graph distance versus time for an object moving at a constant speed. Interpret this relationship.
SC.6.P.13.1:	Investigate and describe types of forces including contact forces and forces acting at a distance, such as electrical, magnetic, and gravitational.
SC.6.P.13.2:	Explore the Law of Gravity by recognizing that every object exerts gravitational force on every other object and that the force depends on how much mass the objects have and how far apart they are.
SC.6.P.13.3:	Investigate and describe that an unbalanced force acting on an object changes its speed, or direction of motion, or both.
SC.7.N.1.1:	Define a problem from the seventh grade curriculum, use appropriate reference materials to support scientific understanding, plan and carry out scientific investigation of various types, such as systematic observations or experiments, identify variables, collect and organize data, interpret data in charts, tables, and graphics, analyze information, make predictions, and defend conclusions.
SC.7.N.1.2:	Differentiate replication (by others) from repetition (multiple trials).
SC.7.N.1.3:	Distinguish between an experiment (which must involve the identification and control of variables) and other forms of scientific investigation and explain that not all scientific knowledge is derived from experimentation.
SC.7.N.1.4:	Identify test variables (independent variables) and outcome variables (dependent variables) in an experiment.
SC.7.N.1.5:	Describe the methods used in the pursuit of a scientific explanation as seen in different fields of science such as biology, geology, and physics.
SC.7.N.1.6:	Explain that empirical evidence is the cumulative body of observations of a natural phenomenon on which scientific explanations are based.
SC.7.N.1.7:	Explain that scientific knowledge is the result of a great deal of debate and confirmation within the science community.
SC.7.N.2.1:	Identify an instance from the history of science in which scientific knowledge has changed when new evidence or new interpretations are encountered.
SC.7.N.3.1:	Recognize and explain the difference between theories and laws and give several examples of scientific theories and the evidence that supports them.
SC.7.N.3.2:	Identify the benefits and limitations of the use of scientific models.
SC.7.P.10.1:	Illustrate that the sun's energy arrives as radiation with a wide range of wavelengths, including infrared, visible, and ultraviolet, and that white light is made up of a spectrum of many different colors.
SC.7.P.10.2:	Observe and explain that light can be reflected, refracted, and/or absorbed.
SC.7.P.10.3:	Recognize that light waves, sound waves, and other waves move at different speeds in different materials.
SC.7.P.11.1:	Recognize that adding heat to or removing heat from a system may result in a temperature change and possibly a change of state.
SC.7.P.11.2:	Investigate and describe the transformation of energy from one form to another.
SC.7.P.11.3:	Cite evidence to explain that energy cannot be created nor destroyed, only changed from one form to another.
SC.7.P.11.4:	Observe and describe that heat flows in predictable ways, moving from warmer objects to cooler ones until they reach the same temperature.
SC.8.N.1.1:	Define a problem from the eighth grade curriculum using appropriate reference materials to support scientific understanding, plan and carry out scientific investigations of various types, such as systematic observations or experiments, identify variables, collect and organize data, interpret data in charts, tables, and graphics, analyze information, make predictions, and defend conclusions.
SC.8.N.1.2:	Design and conduct a study using repeated trials and replication.
SC.8.N.1.3:	Use phrases such as "results support" or "fail to support" in science, understanding that science does not offer conclusive 'proof' of a knowledge claim.
SC.8.N.1.4:	Explain how hypotheses are valuable if they lead to further investigations, even if they turn out not to be supported by the data.
SC.8.N.1.5:	Analyze the methods used to develop a scientific explanation as seen in different fields of science.
SC.8.N.1.6:	Understand that scientific investigations involve the collection of relevant empirical evidence, the use of logical reasoning, and the application of imagination in devising hypotheses, predictions, explanations and models to make sense of the collected evidence.
SC.8.N.2.1:	Distinguish between scientific and pseudoscientific ideas.
SC.8.N.2.2:	Discuss what characterizes science and its methods.
SC.8.N.3.1:	Select models useful in relating the results of their own investigations.
SC.8.N.3.2:	Explain why theories may be modified but are rarely discarded.
SC.8.N.4.1:	Explain that science is one of the processes that can be used to inform decision making at the community, state, national, and international levels.
SC.8.N.4.2:	Explain how political, social, and economic concerns can affect science, and vice versa.
SC.8.P.8.1:	Explore the scientific theory of atoms (also known as atomic theory) by using models to explain the motion of particles in solids, liquids, and gases.
SC.8.P.8.2:	Differentiate between weight and mass recognizing that weight is the amount of gravitational pull on an object and is distinct from, though proportional to, mass.
SC.8.P.8.3:	Explore and describe the densities of various materials through measurement of their masses and volumes.
SC.8.P.8.4:	Classify and compare substances on the basis of characteristic physical properties that can be demonstrated or measured; for example, density, thermal or electrical conductivity, solubility, magnetic properties, melting and boiling points, and know that these properties are independent of the amount of the sample.
SC.8.P.8.5:	Recognize that there are a finite number of elements and that their atoms combine in a multitude of ways to produce compounds that make up all of the living and nonliving things that we encounter.
SC.8.P.8.6:	Recognize that elements are grouped in the periodic table according to similarities of their properties.
SC.8.P.8.7:	Explore the scientific theory of atoms (also known as atomic theory) by recognizing that atoms are the smallest unit of an element and are composed of sub-atomic particles (electrons surrounding a nucleus containing protons and neutrons).
SC.8.P.8.8:	Identify basic examples of and compare and classify the properties of compounds, including acids, bases, and salts.
SC.8.P.8.9:	Distinguish among mixtures (including solutions) and pure substances.

SC.8.P.9.1:	Explore the Law of Conservation of Mass by demonstrating and concluding that mass is conserved when substances undergo physical and chemical changes.
SC.8.P.9.2:	Differentiate between physical changes and chemical changes.
SC.8.P.9.3:	Investigate and describe how temperature influences chemical changes.
SC.912.P.8.1:	Differentiate among the four states of matter.
SC.912.P.8.2:	Differentiate between physical and chemical properties and physical and chemical changes of matter.
SC.912.P.8.4:	Explore the scientific theory of atoms (also known as atomic theory) by describing the structure of atoms in terms of protons, neutrons and electrons, and differentiate among these particles in terms of their mass, electrical charges and locations within the atom.
SC.912.P.8.5:	Relate properties of atoms and their position in the periodic table to the arrangement of their electrons.
SC.912.P.8.7:	Interpret formula representations of molecules and compounds in terms of composition and structure.
SC.912.P.8.11:	Relate acidity and basicity to hydronium and hydroxyl ion concentration and pH.
SC.912.P.10.1:	Differentiate among the various forms of energy and recognize that they can be transformed from one form to others.
SC.912.P.10.4:	Describe heat as the energy transferred by convection, conduction, and radiation, and explain the connection of heat to change in temperature or states of matter.
SC.912.P.10.5:	Relate temperature to the average molecular kinetic energy.
MA.K12.MTR.1.1:	Mathematicians who participate in effortful learning both individually and with others: • Analyze the problem in a way that makes sense given the task. • Ask questions that will help with solving the task. • Build perseverance by modifying methods as needed while solving a challenging task. • Stay engaged and maintain a positive mindset when working to solve tasks. • Help and support each other when attempting a new method or approach. **Clarifications:** Teachers who encourage students to participate actively in effortful learning both individually and with others: • Cultivate a community of growth mindset learners. • Foster perseverance in students by choosing tasks that are challenging. • Develop students' ability to analyze and problem solve. • Recognize students' effort when solving challenging problems.
MA.K12.MTR.2.1:	Demonstrate understanding by representing problems in multiple ways. Mathematicians who demonstrate understanding by representing problems in multiple ways: • Build understanding through modeling and using manipulatives. • Represent solutions to problems in multiple ways using objects, drawings, tables, graphs and equations. • Progress from modeling problems with objects and drawings to using algorithms and equations. • Express connections between concepts and representations. • Choose a representation based on the given context or purpose. **Clarifications:** Teachers who encourage students to demonstrate understanding by representing problems in multiple ways: • Help students make connections between concepts and representations. • Provide opportunities for students to use manipulatives when investigating concepts. • Guide students from concrete to pictorial to abstract representations as understanding progresses. • Show students that various representations can have different purposes and can be useful in different situations.
MA.K12.MTR.3.1:	Complete tasks with mathematical fluency. Mathematicians who complete tasks with mathematical fluency: • Select efficient and appropriate methods for solving problems within the given context. • Maintain flexibility and accuracy while performing procedures and mental calculations. • Complete tasks accurately and with confidence. • Adapt procedures to apply them to a new context. • Use feedback to improve efficiency when performing calculations. **Clarifications:** Teachers who encourage students to complete tasks with mathematical fluency: • Provide students with the flexibility to solve problems by selecting a procedure that allows them to solve efficiently and accurately. • Offer multiple opportunities for students to practice efficient and generalizable methods. • Provide opportunities for students to reflect on the method they used and determine if a more efficient method could have been used.
MA.K12.MTR.4.1:	Engage in discussions that reflect on the mathematical thinking of self and others. Mathematicians who engage in discussions that reflect on the mathematical thinking of self and others: • Communicate mathematical ideas, vocabulary and methods effectively. • Analyze the mathematical thinking of others. • Compare the efficiency of a method to those expressed by others. • Recognize errors and suggest how to correctly solve the task. • Justify results by explaining methods and processes. • Construct possible arguments based on evidence. **Clarifications:** Teachers who encourage students to engage in discussions that reflect on the mathematical thinking of self and others: • Establish a culture in which students ask questions of the teacher and their peers, and error is an opportunity for learning. • Create opportunities for students to discuss their thinking with peers. • Select, sequence and present student work to advance and deepen understanding of correct and increasingly efficient methods. • Develop students' ability to justify methods and compare their responses to the responses of their peers.
	Use patterns and structure to help understand and connect mathematical concepts.

MA.K12.MTR.5.1:	Mathematicians who use patterns and structure to help understand and connect mathematical concepts: • Focus on relevant details within a problem. • Create plans and procedures to logically order events, steps or ideas to solve problems. • Decompose a complex problem into manageable parts. • Relate previously learned concepts to new concepts. • Look for similarities among problems. • Connect solutions of problems to more complicated large-scale situations. **Clarifications:** Teachers who encourage students to use patterns and structure to help understand and connect mathematical concepts: • Help students recognize the patterns in the world around them and connect these patterns to mathematical concepts. • Support students to develop generalizations based on the similarities found among problems. • Provide opportunities for students to create plans and procedures to solve problems. • Develop students' ability to construct relationships between their current understanding and more sophisticated ways of thinking.
MA.K12.MTR.6.1:	Assess the reasonableness of solutions. Mathematicians who assess the reasonableness of solutions: • Estimate to discover possible solutions. • Use benchmark quantities to determine if a solution makes sense. • Check calculations when solving problems. • Verify possible solutions by explaining the methods used. • Evaluate results based on the given context. **Clarifications:** Teachers who encourage students to assess the reasonableness of solutions: • Have students estimate or predict solutions prior to solving. • Prompt students to continually ask, "Does this solution make sense? How do you know?" • Reinforce that students check their work as they progress within and after a task. • Strengthen students' ability to verify solutions through justifications.
MA.K12.MTR.7.1:	Apply mathematics to real-world contexts. Mathematicians who apply mathematics to real-world contexts: • Connect mathematical concepts to everyday experiences. • Use models and methods to understand, represent and solve problems. • Perform investigations to gather data or determine if a method is appropriate. • Redesign models and methods to improve accuracy or efficiency. **Clarifications:** Teachers who encourage students to apply mathematics to real-world contexts: • Provide opportunities for students to create models, both concrete and abstract, and perform investigations. • Challenge students to question the accuracy of their models and methods. • Support students as they validate conclusions by comparing them to the given situation. • Indicate how various concepts can be applied to other disciplines.
ELA.K12.EE.1.1:	Cite evidence to explain and justify reasoning. **Clarifications:** K-1 Students include textual evidence in their oral communication with guidance and support from adults. The evidence can consist of details from the text without naming the text. During 1st grade, students learn how to incorporate the evidence in their writing. 2-3 Students include relevant textual evidence in their written and oral communication. Students should name the text when they refer to it. In 3rd grade, students should use a combination of direct and indirect citations. 4-5 Students continue with previous skills and reference comments made by speakers and peers. Students cite texts that they've directly quoted, paraphrased, or used for information. When writing, students will use the form of citation dictated by the instructor or the style guide referenced by the instructor. 6-8 Students continue with previous skills and use a style guide to create a proper citation. 9-12 Students continue with previous skills and should be aware of existing style guides and the ways in which they differ.
ELA.K12.EE.2.1:	Read and comprehend grade-level complex texts proficiently. **Clarifications:** See Text Complexity for grade-level complexity bands and a text complexity rubric.
ELA.K12.EE.3.1:	Make inferences to support comprehension. **Clarifications:** Students will make inferences before the words infer or inference are introduced. Kindergarten students will answer questions like "Why is the girl smiling?" or make predictions about what will happen based on the title page. Students will use the terms and apply them in 2nd grade and beyond.
ELA.K12.EE.4.1:	Use appropriate collaborative techniques and active listening skills when engaging in discussions in a variety of situations. **Clarifications:** In kindergarten, students learn to listen to one another respectfully. In grades 1-2, students build upon these skills by justifying what they are thinking. For example: "I think _____ because _____." The collaborative conversations are becoming academic conversations. In grades 3-12, students engage in academic conversations discussing claims and justifying their reasoning, refining and applying skills. Students build on ideas, propel the conversation, and support claims and counterclaims with evidence.
	Use the accepted rules governing a specific format to create quality work.

ELA.K12.EE.5.1:	**Clarifications:** Students will incorporate skills learned into work products to produce quality work. For students to incorporate these skills appropriately, they must receive instruction. A 3rd grade student creating a poster board display must have instruction in how to effectively present information to do quality work.
ELA.K12.EE.6.1:	Use appropriate voice and tone when speaking or writing. **Clarifications:** In kindergarten and 1st grade, students learn the difference between formal and informal language. For example, the way we talk to our friends differs from the way we speak to adults. In 2nd grade and beyond, students practice appropriate social and academic language to discuss texts.
ELD.K12.ELL.SC.1:	English language learners communicate information, ideas and concepts necessary for academic success in the content area of Science.
ELD.K12.ELL.SI.1:	English language learners communicate for social and instructional purposes within the school setting.

General Course Information and Notes

GENERAL NOTES

Laboratory investigations that include the use of scientific inquiry, research, measurement, problem solving, laboratory apparatus and technologies, experimental procedures, and safety procedures are an integral part of this course. The National Science Teachers Association (NSTA) recommends that at the middle school level, all students should have multiple opportunities every week to explore science laboratory investigations (labs). School laboratory investigations are defined by the National Research Council (NRC) as an experience in the laboratory, classroom, or the field that provides students with opportunities to interact directly with natural phenomena or with data collected by others using tools, materials, data collection techniques, and models (NRC, 2006, p. 3). Laboratory investigations in the middle school classroom should help all students develop a growing understanding of the complexity and ambiguity of empirical work, as well as the skills to calibrate and troubleshoot equipment used to make observations. Learners should understand measurement error; and have the skills to aggregate, interpret, and present the resulting data (NRC 2006, p. 77; NSTA, 2007).

Honors and Advanced Level Course Note: Advanced courses require a greater demand on students through increased academic rigor. Academic rigor is obtained through the application, analysis, evaluation, and creation of complex ideas that are often abstract and multi-faceted. Students are challenged to think and collaborate critically on the content they are learning. Honors level rigor will be achieved by increasing text complexity through text selection, focus on high-level qualitative measures, and complexity of task. Instruction will be structured to give students a deeper understanding of conceptual themes and organization within and across disciplines. Academic rigor is more than simply assigning to students a greater quantity of work.

Special Notes:

Instructional Practices
Teaching from a range of complex text is optimized when teachers in all subject areas implement the following strategies on a routine basis:

1. Ensuring wide reading from complex text that varies in length.
2. Making close reading and rereading of texts central to lessons.
3. Emphasizing text-specific complex questions, and cognitively complex tasks, reinforce focus on the text and cultivate independence.
4. Emphasizing students supporting answers based upon evidence from the text.
5. Providing extensive research and writing opportunities (claims and evidence).

Science and Engineering Practices (NRC *Framework for K-12 Science Education, 2010*)

- Asking questions (for science) and defining problems (for engineering).
- Developing and using models.
- Planning and carrying out investigations.
- Analyzing and interpreting data.
- Using mathematics, information and computer technology, and computational thinking.
- Constructing explanations (for science) and designing solutions (for engineering).
- Engaging in argument from evidence.
- Obtaining, evaluating, and communicating information.

Florida's Benchmarks for Excellent Student Thinking (B.E.S.T.) Standards
This course includes Florida's B.E.S.T. ELA Expectations (EE) and Mathematical Thinking and Reasoning Standards (MTRs) for students. Florida educators should intentionally embed these standards within the content and their instruction as applicable. For guidance on the implementation of the EEs and MTRs, please visit cpalms.org/Standards/BEST_Standards.aspx and select the appropriate B.E.S.T. Standards package.

English Language Development ELD Standards Special Notes Section:
Teachers are required to provide listening, speaking, reading and writing instruction that allows English language learners (ELL) to communicate information, ideas and concepts for academic success in the content area of Science. For the given level of English language proficiency and with visual, graphic, or interactive support, students will interact with grade level words, expressions, sentences and discourse to process or produce language necessary for academic success The ELD standard should specify a relevant content area concept or topic of study chosen by curriculum developers and teachers which maximizes an ELL's need for communication and social skills. To access an ELL supporting document which delineates performance definitions and descriptors, please click on the following link: cpalms.org/uploads/docs/standards/eld/SC.pdf

Additional Instructional Resources:
A.V.E. for Success Collection is provided by the Florida Association of School Administrators: fasa.net/4DCGI/cms/review.html?Action=CMS_Document&DocID=139. Please be aware that these resources have not been reviewed by CPALMS and there may be a charge for the use of some of them in this collection.

GENERAL INFORMATION

Course Number: 2003020

Course Path: Section: Grades PreK to 12 Education Courses > **Grade Group:** Grades 6 to 8 Education Courses > **Subject:** Science > **SubSubject:** Physical Sciences >

Abbreviated Title: M/J PHY SCI ADV

Course Length: Year (Y)

Course Attributes:

- Class Size Core Required

Course Level: 3

Course Status: Draft - Course Pending Approval

Grade Level(s): 6,7,8

Educator Certifications

Science (Secondary Grades 7-12)
Middle Grades Integrated Curriculum (Middle Grades 5-9)
Physics (Grades 6-12)
Middle Grades General Science (Middle Grades 5-9)
Chemistry (Grades 6-12)
Earth/Space Science (Grades 6-12)

M/J STEM Physical Science (#2003030) 2022 - And Beyond

Course Standards

Name	Description
SC.6.N.1.2:	Explain why scientific investigations should be replicable.
SC.6.N.1.3:	Explain the difference between an experiment and other types of scientific investigation, and explain the relative benefits and limitations of each.
SC.6.N.1.4:	Discuss, compare, and negotiate methods used, results obtained, and explanations among groups of students conducting the same investigation.
SC.6.N.1.5:	Recognize that science involves creativity, not just in designing experiments, but also in creating explanations that fit evidence.
SC.6.N.2.1:	Distinguish science from other activities involving thought.
SC.6.N.2.2:	Explain that scientific knowledge is durable because it is open to change as new evidence or interpretations are encountered.
SC.6.N.2.3:	Recognize that scientists who make contributions to scientific knowledge come from all kinds of backgrounds and possess varied talents, interests, and goals.
SC.6.N.3.1:	Recognize and explain that a scientific theory is a well-supported and widely accepted explanation of nature and is not simply a claim posed by an individual. Thus, the use of the term theory in science is very different than how it is used in everyday life.
SC.6.N.3.2:	Recognize and explain that a scientific law is a description of a specific relationship under given conditions in the natural world. Thus, scientific laws are different from societal laws.
SC.6.N.3.3:	Give several examples of scientific laws.
SC.6.N.3.4:	Identify the role of models in the context of the sixth grade science benchmarks.
SC.6.P.11.1:	Explore the Law of Conservation of Energy by differentiating between potential and kinetic energy. Identify situations where kinetic energy is transformed into potential energy and vice versa.
SC.6.P.12.1:	Measure and graph distance versus time for an object moving at a constant speed. Interpret this relationship.
SC.6.P.13.1:	Investigate and describe types of forces including contact forces and forces acting at a distance, such as electrical, magnetic, and gravitational.
SC.6.P.13.2:	Explore the Law of Gravity by recognizing that every object exerts gravitational force on every other object and that the force depends on how much mass the objects have and how far apart they are.
SC.6.P.13.3:	Investigate and describe that an unbalanced force acting on an object changes its speed, or direction of motion, or both.
SC.7.N.1.2:	Differentiate replication (by others) from repetition (multiple trials).
SC.7.N.1.3:	Distinguish between an experiment (which must involve the identification and control of variables) and other forms of scientific investigation and explain that not all scientific knowledge is derived from experimentation.
SC.7.N.1.4:	Identify test variables (independent variables) and outcome variables (dependent variables) in an experiment.
SC.7.N.1.5:	Describe the methods used in the pursuit of a scientific explanation as seen in different fields of science such as biology, geology, and physics.
SC.7.N.1.6:	Explain that empirical evidence is the cumulative body of observations of a natural phenomenon on which scientific explanations are based.
SC.7.N.1.7:	Explain that scientific knowledge is the result of a great deal of debate and confirmation within the science community.
SC.7.N.2.1:	Identify an instance from the history of science in which scientific knowledge has changed when new evidence or new interpretations are encountered.
SC.7.N.3.1:	Recognize and explain the difference between theories and laws and give several examples of scientific theories and the evidence that supports them.
SC.7.N.3.2:	Identify the benefits and limitations of the use of scientific models.
SC.7.P.10.1:	Illustrate that the sun's energy arrives as radiation with a wide range of wavelengths, including infrared, visible, and ultraviolet, and that white light is made up of a spectrum of many different colors.
SC.7.P.10.2:	Observe and explain that light can be reflected, refracted, and/or absorbed.
SC.7.P.10.3:	Recognize that light waves, sound waves, and other waves move at different speeds in different materials.
SC.7.P.11.1:	Recognize that adding heat to or removing heat from a system may result in a temperature change and possibly a change of state.
SC.7.P.11.2:	Investigate and describe the transformation of energy from one form to another.
SC.7.P.11.3:	Cite evidence to explain that energy cannot be created nor destroyed, only changed from one form to another.
SC.7.P.11.4:	Observe and describe that heat flows in predictable ways, moving from warmer objects to cooler ones until they reach the same temperature.
SC.8.N.1.2:	Design and conduct a study using repeated trials and replication.
SC.8.N.1.3:	Use phrases such as "results support" or "fail to support" in science, understanding that science does not offer conclusive 'proof' of a knowledge claim.
SC.8.N.1.4:	Explain how hypotheses are valuable if they lead to further investigations, even if they turn out not to be supported by the data.
SC.8.N.1.5:	Analyze the methods used to develop a scientific explanation as seen in different fields of science.
SC.8.N.1.6:	Understand that scientific investigations involve the collection of relevant empirical evidence, the use of logical reasoning, and the application of imagination in devising hypotheses, predictions, explanations and models to make sense of the collected evidence.
SC.8.N.2.1:	Distinguish between scientific and pseudoscientific ideas.
SC.8.N.2.2:	Discuss what characterizes science and its methods.
SC.8.N.3.1:	Select models useful in relating the results of their own investigations.
SC.8.N.3.2:	Explain why theories may be modified but are rarely discarded.
SC.8.N.4.1:	Explain that science is one of the processes that can be used to inform decision making at the community, state, national, and international levels.
SC.8.N.4.2:	Explain how political, social, and economic concerns can affect science, and vice versa.
MA.K12.MTR.1.1:	Mathematicians who participate in effortful learning both individually and with others: • Analyze the problem in a way that makes sense given the task. • Ask questions that will help with solving the task. • Build perseverance by modifying methods as needed while solving a challenging task. • Stay engaged and maintain a positive mindset when working to solve tasks. • Help and support each other when attempting a new method or approach. **Clarifications:** Teachers who encourage students to participate actively in effortful learning both individually and with others: • Cultivate a community of growth mindset learners.

- Foster perseverance in students by choosing tasks that are challenging.
- Develop students' ability to analyze and problem solve.
- Recognize students' effort when solving challenging problems.

MA.K12.MTR.2.1:

Demonstrate understanding by representing problems in multiple ways.
Mathematicians who demonstrate understanding by representing problems in multiple ways:

- Build understanding through modeling and using manipulatives.
- Represent solutions to problems in multiple ways using objects, drawings, tables, graphs and equations.
- Progress from modeling problems with objects and drawings to using algorithms and equations.
- Express connections between concepts and representations.
- Choose a representation based on the given context or purpose.

Clarifications:
Teachers who encourage students to demonstrate understanding by representing problems in multiple ways:

- Help students make connections between concepts and representations.
- Provide opportunities for students to use manipulatives when investigating concepts.
- Guide students from concrete to pictorial to abstract representations as understanding progresses.
- Show students that various representations can have different purposes and can be useful in different situations.

MA.K12.MTR.3.1:

Complete tasks with mathematical fluency.
Mathematicians who complete tasks with mathematical fluency:

- Select efficient and appropriate methods for solving problems within the given context.
- Maintain flexibility and accuracy while performing procedures and mental calculations.
- Complete tasks accurately and with confidence.
- Adapt procedures to apply them to a new context.
- Use feedback to improve efficiency when performing calculations.

Clarifications:
Teachers who encourage students to complete tasks with mathematical fluency:

- Provide students with the flexibility to solve problems by selecting a procedure that allows them to solve efficiently and accurately.
- Offer multiple opportunities for students to practice efficient and generalizable methods.
- Provide opportunities for students to reflect on the method they used and determine if a more efficient method could have been used.

MA.K12.MTR.4.1:

Engage in discussions that reflect on the mathematical thinking of self and others.
Mathematicians who engage in discussions that reflect on the mathematical thinking of self and others:

- Communicate mathematical ideas, vocabulary and methods effectively.
- Analyze the mathematical thinking of others.
- Compare the efficiency of a method to those expressed by others.
- Recognize errors and suggest how to correctly solve the task.
- Justify results by explaining methods and processes.
- Construct possible arguments based on evidence.

Clarifications:
Teachers who encourage students to engage in discussions that reflect on the mathematical thinking of self and others:

- Establish a culture in which students ask questions of the teacher and their peers, and error is an opportunity for learning.
- Create opportunities for students to discuss their thinking with peers.
- Select, sequence and present student work to advance and deepen understanding of correct and increasingly efficient methods.
- Develop students' ability to justify methods and compare their responses to the responses of their peers.

MA.K12.MTR.5.1:

Use patterns and structure to help understand and connect mathematical concepts.
Mathematicians who use patterns and structure to help understand and connect mathematical concepts:

- Focus on relevant details within a problem.
- Create plans and procedures to logically order events, steps or ideas to solve problems.
- Decompose a complex problem into manageable parts.
- Relate previously learned concepts to new concepts.
- Look for similarities among problems.
- Connect solutions of problems to more complicated large-scale situations.

Clarifications:
Teachers who encourage students to use patterns and structure to help understand and connect mathematical concepts:

- Help students recognize the patterns in the world around them and connect these patterns to mathematical concepts.
- Support students to develop generalizations based on the similarities found among problems.
- Provide opportunities for students to create plans and procedures to solve problems.
- Develop students' ability to construct relationships between their current understanding and more sophisticated ways of thinking.

MA.K12.MTR.6.1:

Assess the reasonableness of solutions.
Mathematicians who assess the reasonableness of solutions:

- Estimate to discover possible solutions.
- Use benchmark quantities to determine if a solution makes sense.
- Check calculations when solving problems.
- Verify possible solutions by explaining the methods used.
- Evaluate results based on the given context.

Clarifications:
Teachers who encourage students to assess the reasonableness of solutions:

	• Have students estimate or predict solutions prior to solving. • Prompt students to continually ask, "Does this solution make sense? How do you know?" • Reinforce that students check their work as they progress within and after a task. • Strengthen students' ability to verify solutions through justifications.
MA.K12.MTR.7.1:	Apply mathematics to real-world contexts. Mathematicians who apply mathematics to real-world contexts: • Connect mathematical concepts to everyday experiences. • Use models and methods to understand, represent and solve problems. • Perform investigations to gather data or determine if a method is appropriate. • Redesign models and methods to improve accuracy or efficiency. **Clarifications:** Teachers who encourage students to apply mathematics to real-world contexts: • Provide opportunities for students to create models, both concrete and abstract, and perform investigations. • Challenge students to question the accuracy of their models and methods. • Support students as they validate conclusions by comparing them to the given situation. • Indicate how various concepts can be applied to other disciplines.
ELA.K12.EE.1.1:	Cite evidence to explain and justify reasoning. **Clarifications:** K-1 Students include textual evidence in their oral communication with guidance and support from adults. The evidence can consist of details from the text without naming the text. During 1st grade, students learn how to incorporate the evidence in their writing. 2-3 Students include relevant textual evidence in their written and oral communication. Students should name the text when they refer to it. In 3rd grade, students should use a combination of direct and indirect citations. 4-5 Students continue with previous skills and reference comments made by speakers and peers. Students cite texts that they've directly quoted, paraphrased, or used for information. When writing, students will use the form of citation dictated by the instructor or the style guide referenced by the instructor. 6-8 Students continue with previous skills and use a style guide to create a proper citation. 9-12 Students continue with previous skills and should be aware of existing style guides and the ways in which they differ.
ELA.K12.EE.2.1:	Read and comprehend grade-level complex texts proficiently. **Clarifications:** See Text Complexity for grade-level complexity bands and a text complexity rubric.
ELA.K12.EE.3.1:	Make inferences to support comprehension. **Clarifications:** Students will make inferences before the words infer or inference are introduced. Kindergarten students will answer questions like "Why is the girl smiling?" or make predictions about what will happen based on the title page. Students will use the terms and apply them in 2nd grade and beyond.
ELA.K12.EE.4.1:	Use appropriate collaborative techniques and active listening skills when engaging in discussions in a variety of situations. **Clarifications:** In kindergarten, students learn to listen to one another respectfully. In grades 1-2, students build upon these skills by justifying what they are thinking. For example: "I think _____ because _____." The collaborative conversations are becoming academic conversations. In grades 3-12, students engage in academic conversations discussing claims and justifying their reasoning, refining and applying skills. Students build on ideas, propel the conversation, and support claims and counterclaims with evidence.
ELA.K12.EE.5.1:	Use the accepted rules governing a specific format to create quality work. **Clarifications:** Students will incorporate skills learned into work products to produce quality work. For students to incorporate these skills appropriately, they must receive instruction. A 3rd grade student creating a poster board display must have instruction in how to effectively present information to do quality work.
ELA.K12.EE.6.1:	Use appropriate voice and tone when speaking or writing. **Clarifications:** In kindergarten and 1st grade, students learn the difference between formal and informal language. For example, the way we talk to our friends differs from the way we speak to adults. In 2nd grade and beyond, students practice appropriate social and academic language to discuss texts.
ELD.K12.ELL.SC.1:	English language learners communicate information, ideas and concepts necessary for academic success in the content area of Science.

General Course Information and Notes

GENERAL NOTES

If this course is to be used in a STEM sequence in place of either the comprehensive or subject specific course sequences, teachers should refer to the test item specifications for the 8th grade SSA for information on tested standards which can be found at: fldoe.org/core/fileparse.php/5663/urlt/swsatisG8.pdf.

This course is an integrated Science, Technology, Engineering and Mathematics (STEM) course for middle school students. M/J STEM Physical Science includes an integration of standards from science, mathematics, and english/language arts (ELA) through the application to STEM problem solving using physical science knowledge and science and engineering practices. Physical sciences through applications such as aeronautics, robotics, rocketry, mechanical, electrical, and civil engineering, are emphasized in this course. Laboratory investigations that include the use of scientific inquiry, research, measurement, problem solving, laboratory apparatus and technologies, experimental

procedures, and safety procedures are an integral part of this course. The National Science Teachers Association (NSTA) recommends that at the middle school level, all students should have multiple opportunities every week to explore science laboratory investigations (labs). School laboratory investigations are defined by the National Research Council (NRC) as an experience in the laboratory, classroom, or the field that provides students with opportunities to interact directly with natural phenomena or with data collected by other using tools, materials, data collection techniques, and modeals (NRC, 2006, p. 3). Laboratory investigations in the middle school classroom should help all students develop a growing understanding of the complexity and ambiguity of empirical work, as well as the skills to calibrate and troubleshoot equipment used to make observations. Learners should understand measurement error; and have the skills to aggregate, interpret, and present the resulting data (NRC, 2006, p. 77; NSTA, 2007).

Special Notes:

Instructional Practices

Teaching from a range of complex text is optimized when teachers in all subject areas implement the following strategies on a routine basis:

1. Ensuring wide reading from complex text that varies in length.
2. Making close reading and rereading of texts central to lessons.
3. Emphasizing text-specific complex questions, and cognitively complex tasks, reinforce focus on the text and cultivate independence.
4. Emphasizing students supporting answers based upon evidence from the text.
5. Providing extensive research and writing opportunities (claims and evidence).

Science and Engineering Practices (NRC *Framework for K-12 Science Education, 2010*)

- Asking questions (for science) and defining problems (for engineering).
- Developing and using models.
- Planning and carrying out investigations.
- Analyzing and interpreting data.
- Using mathematics, information and computer technology, and computational thinking.
- Constructing explanations (for science) and designing solutions (for engineering).
- Engaging in argument from evidence.
- Obtaining, evaluating, and communicating information.

ISTE Standards (iste.org/docs/pdfs20-14_ISTE_Standards-S_PDF.pdf) should be incorporated in many contexts throughout the course.

Course Standards

Use grade appropriate Nature of Science benchmarks (i.e., if this course is offered to seventh grade students, then the SC.7.N benchmarks should be integrated into the course content, and SC.6.N and SC.8.N benchmarks should be omitted from the seventh grade course).

Florida's Benchmarks for Excellent Student Thinking (B.E.S.T.) Standards

This course includes Florida's B.E.S.T. ELA Expectations (EE) and Mathematical Thinking and Reasoning Standards (MTRs) for students. Florida educators should intentionally embed these standards within the content and their instruction as applicable. For guidance on the implementation of the EEs and MTRs, please visit cpalms.org/Standards/BEST_Standards.aspx and select the appropriate B.E.S.T. Standards package.

English Language Development ELD Standards Special Notes Section:

Teachers are required to provide listening, speaking, reading and writing instruction that allows English language learners (ELL) to communicate information, ideas and concepts for academic success in the content area of Science. For the given level of English language proficiency and with visual, graphic, or interactive support, students will interact with grade level words, expressions, sentences and discourse to process or produce language necessary for academic success The ELD standard should specify a relevant content area concept or topic of study chosen by curriculum developers and teachers which maximizes an ELL's need for communication and social skills. To access an ELL supporting document which delineates performance definitions and descriptors, please click on the following link: cpalms.org/uploads/docs/standards/eld/SC.pdf.

GENERAL INFORMATION

Course Number: 2003030

Course Path: Section: Grades PreK to 12 Education Courses > **Grade Group:** Grades 6 to 8 Education Courses > **Subject:** Science > **SubSubject:** Physical Sciences >

Abbreviated Title: M/J STEM PHYSIC SCI

Course Length: Year (Y)

Course Attributes:

- Class Size Core Required

Course Type: Core Academic Course

Course Level: 2

Course Status: Draft - Course Pending Approval

Grade Level(s): 6,7,8

Educator Certifications

Middle Grades General Science (Middle Grades 5-9)

Chemistry (Grades 6-12)
Physics (Grades 6-12)
Earth/Space Science (Grades 6-12)
Middle Grades Integrated Curriculum (Middle Grades 5-9)

Physical Science (#2003310) 2022 - And Beyond

Course Standards

Name	Description
SC.912.E.7.1:	Analyze the movement of matter and energy through the different biogeochemical cycles, including water and carbon.
SC.912.L.18.7:	Identify the reactants, products, and basic functions of photosynthesis.
SC.912.L.18.8:	Identify the reactants, products, and basic functions of aerobic and anaerobic cellular respiration.
SC.912.L.18.12:	Discuss the special properties of water that contribute to Earth's suitability as an environment for life: cohesive behavior, ability to moderate temperature, expansion upon freezing, and versatility as a solvent.
SC.912.N.1.1:	Define a problem based on a specific body of knowledge, for example: biology, chemistry, physics, and earth/space science, and do the following: 1. **Pose questions about the natural world,** (Articulate the purpose of the investigation and identify the relevant scientific concepts). 2. **Conduct systematic observations,** (Write procedures that are clear and replicable. Identify observables and examine relationships between test (independent) variable and outcome (dependent) variable. Employ appropriate methods for accurate and consistent observations; conduct and record measurements at appropriate levels of precision. Follow safety guidelines). 3. **Examine books and other sources of information to see what is already known,** 4. **Review what is known in light of empirical evidence,** (Examine whether available empirical evidence can be interpreted in terms of existing knowledge and models, and if not, modify or develop new models). 5. **Plan investigations,** (Design and evaluate a scientific investigation). 6. **Use tools to gather, analyze, and interpret data (this includes the use of measurement in metric and other systems, and also the generation and interpretation of graphical representations of data, including data tables and graphs),** (Collect data or evidence in an organized way. Properly use instruments, equipment, and materials (e.g., scales, probeware, meter sticks, microscopes, computers) including set-up, calibration, technique, maintenance, and storage). 7. **Pose answers, explanations, or descriptions of events,** 8. **Generate explanations that explicate or describe natural phenomena (inferences),** 9. **Use appropriate evidence and reasoning to justify these explanations to others,** 10. **Communicate results of scientific investigations, and** 11. **Evaluate the merits of the explanations produced by others.**
SC.912.N.1.2:	Describe and explain what characterizes science and its methods.
SC.912.N.1.3:	Recognize that the strength or usefulness of a scientific claim is evaluated through scientific argumentation, which depends on critical and logical thinking, and the active consideration of alternative scientific explanations to explain the data presented.
SC.912.N.1.4:	Identify sources of information and assess their reliability according to the strict standards of scientific investigation.
SC.912.N.1.5:	Describe and provide examples of how similar investigations conducted in many parts of the world result in the same outcome.
SC.912.N.1.6:	Describe how scientific inferences are drawn from scientific observations and provide examples from the content being studied.
SC.912.N.1.7:	Recognize the role of creativity in constructing scientific questions, methods and explanations.
SC.912.N.2.1:	Identify what is science, what clearly is not science, and what superficially resembles science (but fails to meet the criteria for science).
SC.912.N.2.2:	Identify which questions can be answered through science and which questions are outside the boundaries of scientific investigation, such as questions addressed by other ways of knowing, such as art, philosophy, and religion.
SC.912.N.2.3:	Identify examples of pseudoscience (such as astrology, phrenology) in society.
SC.912.N.2.4:	Explain that scientific knowledge is both durable and robust and open to change. Scientific knowledge can change because it is often examined and re-examined by new investigations and scientific argumentation. Because of these frequent examinations, scientific knowledge becomes stronger, leading to its durability.
SC.912.N.2.5:	Describe instances in which scientists' varied backgrounds, talents, interests, and goals influence the inferences and thus the explanations that they make about observations of natural phenomena and describe that competing interpretations (explanations) of scientists are a strength of science as they are a source of new, testable ideas that have the potential to add new evidence to support one or another of the explanations.
SC.912.N.3.1:	Explain that a scientific theory is the culmination of many scientific investigations drawing together all the current evidence concerning a substantial range of phenomena; thus, a scientific theory represents the most powerful explanation scientists have to offer.
SC.912.N.3.2:	Describe the role consensus plays in the historical development of a theory in any one of the disciplines of science.
SC.912.N.3.3:	Explain that scientific laws are descriptions of specific relationships under given conditions in nature, but do not offer explanations for those relationships.
SC.912.N.3.4:	Recognize that theories do not become laws, nor do laws become theories; theories are well supported explanations and laws are well supported descriptions.
SC.912.N.3.5:	Describe the function of models in science, and identify the wide range of models used in science.
SC.912.N.4.1:	Explain how scientific knowledge and reasoning provide an empirically-based perspective to inform society's decision making.
SC.912.N.4.2:	Weigh the merits of alternative strategies for solving a specific societal problem by comparing a number of different costs and benefits, such as human, economic, and environmental.
SC.912.P.8.1:	Differentiate among the four states of matter.
SC.912.P.8.2:	Differentiate between physical and chemical properties and physical and chemical changes of matter.
SC.912.P.8.4:	Explore the scientific theory of atoms (also known as atomic theory) by describing the structure of atoms in terms of protons, neutrons and electrons, and differentiate among these particles in terms of their mass, electrical charges and locations within the atom.
SC.912.P.8.5:	Relate properties of atoms and their position in the periodic table to the arrangement of their electrons.
SC.912.P.8.7:	Interpret formula representations of molecules and compounds in terms of composition and structure.
SC.912.P.8.8:	Characterize types of chemical reactions, for example: redox, acid-base, synthesis, and single and double replacement reactions.
SC.912.P.8.11:	Relate acidity and basicity to hydronium and hydroxyl ion concentration and pH.
SC.912.P.10.1:	Differentiate among the various forms of energy and recognize that they can be transformed from one form to others.

SC.912.P.10.3:	Compare and contrast work and power qualitatively and quantitatively.
SC.912.P.10.4:	Describe heat as the energy transferred by convection, conduction, and radiation, and explain the connection of heat to change in temperature or states of matter.
SC.912.P.10.5:	Relate temperature to the average molecular kinetic energy.
SC.912.P.10.7:	Distinguish between endothermic and exothermic chemical processes.
SC.912.P.10.10:	Compare the magnitude and range of the four fundamental forces (gravitational, electromagnetic, weak nuclear, strong nuclear).
SC.912.P.10.12:	Differentiate between chemical and nuclear reactions.
SC.912.P.10.14:	Differentiate among conductors, semiconductors, and insulators.
SC.912.P.10.15:	Investigate and explain the relationships among current, voltage, resistance, and power.
SC.912.P.10.18:	Explore the theory of electromagnetism by comparing and contrasting the different parts of the electromagnetic spectrum in terms of wavelength, frequency, and energy, and relate them to phenomena and applications.
SC.912.P.10.21:	Qualitatively describe the shift in frequency in sound or electromagnetic waves due to the relative motion of a source or a receiver.
SC.912.P.12.2:	Analyze the motion of an object in terms of its position, velocity, and acceleration (with respect to a frame of reference) as functions of time.
SC.912.P.12.3:	Interpret and apply Newton's three laws of motion.
SC.912.P.12.4:	Describe how the gravitational force between two objects depends on their masses and the distance between them.
SC.912.P.12.7:	Recognize that nothing travels faster than the speed of light in vacuum which is the same for all observers no matter how they or the light source are moving.
SC.912.P.12.10:	Interpret the behavior of ideal gases in terms of kinetic molecular theory.
SC.912.P.12.11:	Describe phase transitions in terms of kinetic molecular theory.
SC.912.P.12.12:	Explain how various factors, such as concentration, temperature, and presence of a catalyst affect the rate of a chemical reaction.
MA.K12.MTR.1.1:	Mathematicians who participate in effortful learning both individually and with others: • Analyze the problem in a way that makes sense given the task. • Ask questions that will help with solving the task. • Build perseverance by modifying methods as needed while solving a challenging task. • Stay engaged and maintain a positive mindset when working to solve tasks. • Help and support each other when attempting a new method or approach. **Clarifications:** Teachers who encourage students to participate actively in effortful learning both individually and with others: • Cultivate a community of growth mindset learners. • Foster perseverance in students by choosing tasks that are challenging. • Develop students' ability to analyze and problem solve. • Recognize students' effort when solving challenging problems.
MA.K12.MTR.2.1:	Demonstrate understanding by representing problems in multiple ways. Mathematicians who demonstrate understanding by representing problems in multiple ways: • Build understanding through modeling and using manipulatives. • Represent solutions to problems in multiple ways using objects, drawings, tables, graphs and equations. • Progress from modeling problems with objects and drawings to using algorithms and equations. • Express connections between concepts and representations. • Choose a representation based on the given context or purpose. **Clarifications:** Teachers who encourage students to demonstrate understanding by representing problems in multiple ways: • Help students make connections between concepts and representations. • Provide opportunities for students to use manipulatives when investigating concepts. • Guide students from concrete to pictorial to abstract representations as understanding progresses. • Show students that various representations can have different purposes and can be useful in different situations.
MA.K12.MTR.3.1:	Complete tasks with mathematical fluency. Mathematicians who complete tasks with mathematical fluency: • Select efficient and appropriate methods for solving problems within the given context. • Maintain flexibility and accuracy while performing procedures and mental calculations. • Complete tasks accurately and with confidence. • Adapt procedures to apply them to a new context. • Use feedback to improve efficiency when performing calculations. **Clarifications:** Teachers who encourage students to complete tasks with mathematical fluency: • Provide students with the flexibility to solve problems by selecting a procedure that allows them to solve efficiently and accurately. • Offer multiple opportunities for students to practice efficient and generalizable methods. • Provide opportunities for students to reflect on the method they used and determine if a more efficient method could have been used.
MA.K12.MTR.4.1:	Engage in discussions that reflect on the mathematical thinking of self and others. Mathematicians who engage in discussions that reflect on the mathematical thinking of self and others: • Communicate mathematical ideas, vocabulary and methods effectively. • Analyze the mathematical thinking of others. • Compare the efficiency of a method to those expressed by others. • Recognize errors and suggest how to correctly solve the task. • Justify results by explaining methods and processes. • Construct possible arguments based on evidence. **Clarifications:** Teachers who encourage students to engage in discussions that reflect on the mathematical thinking of self and others:

	• Establish a culture in which students ask questions of the teacher and their peers, and error is an opportunity for learning. • Create opportunities for students to discuss their thinking with peers. • Select, sequence and present student work to advance and deepen understanding of correct and increasingly efficient methods. • Develop students' ability to justify methods and compare their responses to the responses of their peers.
MA.K12.MTR.5.1:	Use patterns and structure to help understand and connect mathematical concepts. Mathematicians who use patterns and structure to help understand and connect mathematical concepts: • Focus on relevant details within a problem. • Create plans and procedures to logically order events, steps or ideas to solve problems. • Decompose a complex problem into manageable parts. • Relate previously learned concepts to new concepts. • Look for similarities among problems. • Connect solutions of problems to more complicated large-scale situations. **Clarifications:** Teachers who encourage students to use patterns and structure to help understand and connect mathematical concepts: • Help students recognize the patterns in the world around them and connect these patterns to mathematical concepts. • Support students to develop generalizations based on the similarities found among problems. • Provide opportunities for students to create plans and procedures to solve problems. • Develop students' ability to construct relationships between their current understanding and more sophisticated ways of thinking.
MA.K12.MTR.6.1:	Assess the reasonableness of solutions. Mathematicians who assess the reasonableness of solutions: • Estimate to discover possible solutions. • Use benchmark quantities to determine if a solution makes sense. • Check calculations when solving problems. • Verify possible solutions by explaining the methods used. • Evaluate results based on the given context. **Clarifications:** Teachers who encourage students to assess the reasonableness of solutions: • Have students estimate or predict solutions prior to solving. • Prompt students to continually ask, "Does this solution make sense? How do you know?" • Reinforce that students check their work as they progress within and after a task. • Strengthen students' ability to verify solutions through justifications.
MA.K12.MTR.7.1:	Apply mathematics to real-world contexts. Mathematicians who apply mathematics to real-world contexts: • Connect mathematical concepts to everyday experiences. • Use models and methods to understand, represent and solve problems. • Perform investigations to gather data or determine if a method is appropriate. • Redesign models and methods to improve accuracy or efficiency. **Clarifications:** Teachers who encourage students to apply mathematics to real-world contexts: • Provide opportunities for students to create models, both concrete and abstract, and perform investigations. • Challenge students to question the accuracy of their models and methods. • Support students as they validate conclusions by comparing them to the given situation. • Indicate how various concepts can be applied to other disciplines.
ELA.K12.EE.1.1:	Cite evidence to explain and justify reasoning. **Clarifications:** K-1 Students include textual evidence in their oral communication with guidance and support from adults. The evidence can consist of details from the text without naming the text. During 1st grade, students learn how to incorporate the evidence in their writing. 2-3 Students include relevant textual evidence in their written and oral communication. Students should name the text when they refer to it. In 3rd grade, students should use a combination of direct and indirect citations. 4-5 Students continue with previous skills and reference comments made by speakers and peers. Students cite texts that they've directly quoted, paraphrased, or used for information. When writing, students will use the form of citation dictated by the instructor or the style guide referenced by the instructor. 6-8 Students continue with previous skills and use a style guide to create a proper citation. 9-12 Students continue with previous skills and should be aware of existing style guides and the ways in which they differ.
ELA.K12.EE.2.1:	Read and comprehend grade-level complex texts proficiently. **Clarifications:** See Text Complexity for grade-level complexity bands and a text complexity rubric.
ELA.K12.EE.3.1:	Make inferences to support comprehension. **Clarifications:** Students will make inferences before the words infer or inference are introduced. Kindergarten students will answer questions like "Why is the girl smiling?" or make predictions about what will happen based on the title page. Students will use the terms and apply them in 2nd grade and beyond.
	Use appropriate collaborative techniques and active listening skills when engaging in discussions in a variety of situations. **Clarifications:** In kindergarten, students learn to listen to one another respectfully.

ELA.K12.EE.4.1:	In grades 1-2, students build upon these skills by justifying what they are thinking. For example: "I think _____ because _____." The collaborative conversations are becoming academic conversations. In grades 3-12, students engage in academic conversations discussing claims and justifying their reasoning, refining and applying skills. Students build on ideas, propel the conversation, and support claims and counterclaims with evidence.
ELA.K12.EE.5.1:	Use the accepted rules governing a specific format to create quality work. **Clarifications:** Students will incorporate skills learned into work products to produce quality work. For students to incorporate these skills appropriately, they must receive instruction. A 3rd grade student creating a poster board display must have instruction in how to effectively present information to do quality work.
ELA.K12.EE.6.1:	Use appropriate voice and tone when speaking or writing. **Clarifications:** In kindergarten and 1st grade, students learn the difference between formal and informal language. For example, the way we talk to our friends differs from the way we speak to adults. In 2nd grade and beyond, students practice appropriate social and academic language to discuss texts.
ELD.K12.ELL.SC.1:	English language learners communicate information, ideas and concepts necessary for academic success in the content area of Science.
ELD.K12.ELL.SI.1:	English language learners communicate for social and instructional purposes within the school setting.

General Course Information and Notes

GENERAL NOTES

Laboratory investigations that include the use of scientific inquiry, research, measurement, problem solving, laboratory apparatus and technologies, experimental procedures, and safety procedures are an integral part of this course. The National Science Teachers Association (NSTA) recommends that at the high school level, all students should be in the science lab or field, collecting data every week. School laboratory investigations (labs) are defined by the National Research Council (NRC) as an experience in the laboratory, classroom, or the field that provides students with opportunities to interact directly with natural phenomena or with data collected by others using tools, materials, data collection techniques, and models (NRC, 2006, p. 3). Laboratory investigations in the high school classroom should help all students develop a growing understanding of the complexity and ambiguity of empirical work, as well as the skills to calibrate and troubleshoot equipment used to make observations. Learners should understand measurement error; and have the skills to aggregate, interpret, and present the resulting data (National Research Council, 2006, p.77; NSTA, 2007).

Special Notes:

Instructional Practices: Teaching from a range of complex text is optimized when teachers in all subject areas implement the following strategies on a routine basis:

1. Ensuring wide reading from complex text that varies in length.
2. Making close reading and rereading of texts central to lessons.
3. Emphasizing text-specific complex questions, and cognitively complex tasks, reinforce focus on the text and cultivate independence.
4. Emphasizing students supporting answers based upon evidence from the text.
5. Providing extensive research and writing opportunities (claims and evidence).

Science and Engineering Practices (NRC *Framework for K-12 Science Education, 2010*)

- Asking questions (for science) and defining problems (for engineering).
- Developing and using models.
- Planning and carrying out investigations.
- Analyzing and interpreting data.
- Using mathematics, information and computer technology, and computational thinking.
- Constructing explanations (for science) and designing solutions (for engineering).
- Engaging in argument from evidence.
- Obtaining, evaluating, and communicating information.

Florida's Benchmarks for Excellent Student Thinking (B.E.S.T.) Standards
This course includes Florida's B.E.S.T. ELA Expectations (EE) and Mathematical Thinking and Reasoning Standards (MTRs) for students. Florida educators should intentionally embed these standards within the content and their instruction as applicable. For guidance on the implementation of the EEs and MTRs, please visit cpalms.org/Standards/BEST_Standards.aspx and select the appropriate B.E.S.T. Standards package.

English Language Development ELD Standards Special Notes Section:
Teachers are required to provide listening, speaking, reading and writing instruction that allows English language learners (ELL) to communicate information, ideas and concepts for academic success in the content area of Science. For the given level of English language proficiency and with visual, graphic, or interactive support, students will interact with grade level words, expressions, sentences and discourse to process or produce language necessary for academic success The ELD standard should specify a relevant content area concept or topic of study chosen by curriculum developers and teachers which maximizes an ELL's need for communication and social skills. To access an ELL supporting document which delineates performance definitions and descriptors, please click on the following link: cpalms.org/uploads/docs/standards/eld/SC.pdf

Additional Instructional Resources:
A.V.E. for Success Collection is provided by the Florida Association of School Administrators: fasa.net/4DCGI/cms/review.html?Action=CMS_Document&DocID=139. Please be aware that these resources have not been reviewed by CPALMS and there may be a charge for the use of some of them in this collection.

GENERAL INFORMATION

Course Number: 2003310

Course Path: Section: Grades PreK to 12 Education Courses > **Grade Group:** Grades 9 to 12 and Adult Education Courses > **Subject:** Science > **SubSubject:** Physical Sciences >

Abbreviated Title: PHY SCI

Number of Credits: One (1) credit

Course Length: Year (Y)

Course Type: Core Academic Course

Course Level: 2

Course Status: Draft - Course Pending Approval

Grade Level(s): 9,10,11,12

Graduation Requirement: Equally Rigorous Science

Educator Certifications

Science (Secondary Grades 7-12)
Earth/Space Science (Grades 6-12)
Physics (Grades 6-12)
Chemistry (Grades 6-12)
Middle Grades General Science (Middle Grades 5-9)

Physical Science Honors (#2003320) 2022 - And Beyond

Course Standards

Name	Description
SC.912.E.7.1:	Analyze the movement of matter and energy through the different biogeochemical cycles, including water and carbon.
SC.912.L.18.7:	Identify the reactants, products, and basic functions of photosynthesis.
SC.912.L.18.8:	Identify the reactants, products, and basic functions of aerobic and anaerobic cellular respiration.
SC.912.L.18.12:	Discuss the special properties of water that contribute to Earth's suitability as an environment for life: cohesive behavior, ability to moderate temperature, expansion upon freezing, and versatility as a solvent.
SC.912.N.1.1:	Define a problem based on a specific body of knowledge, for example: biology, chemistry, physics, and earth/space science, and do the following: 1. **Pose questions about the natural world,** (Articulate the purpose of the investigation and identify the relevant scientific concepts). 2. **Conduct systematic observations,** (Write procedures that are clear and replicable. Identify observables and examine relationships between test (independent) variable and outcome (dependent) variable. Employ appropriate methods for accurate and consistent observations; conduct and record measurements at appropriate levels of precision. Follow safety guidelines). 3. **Examine books and other sources of information to see what is already known,** 4. **Review what is known in light of empirical evidence,** (Examine whether available empirical evidence can be interpreted in terms of existing knowledge and models, and if not, modify or develop new models). 5. **Plan investigations,** (Design and evaluate a scientific investigation). 6. **Use tools to gather, analyze, and interpret data (this includes the use of measurement in metric and other systems, and also the generation and interpretation of graphical representations of data, including data tables and graphs),** (Collect data or evidence in an organized way. Properly use instruments, equipment, and materials (e.g., scales, probeware, meter sticks, microscopes, computers) including set-up, calibration, technique, maintenance, and storage). 7. **Pose answers, explanations, or descriptions of events,** 8. **Generate explanations that explicate or describe natural phenomena (inferences),** 9. **Use appropriate evidence and reasoning to justify these explanations to others,** 10. **Communicate results of scientific investigations, and** 11. **Evaluate the merits of the explanations produced by others.**
SC.912.N.1.2:	Describe and explain what characterizes science and its methods.
SC.912.N.1.3:	Recognize that the strength or usefulness of a scientific claim is evaluated through scientific argumentation, which depends on critical and logical thinking, and the active consideration of alternative scientific explanations to explain the data presented.
SC.912.N.1.4:	Identify sources of information and assess their reliability according to the strict standards of scientific investigation.
SC.912.N.1.5:	Describe and provide examples of how similar investigations conducted in many parts of the world result in the same outcome.
SC.912.N.1.6:	Describe how scientific inferences are drawn from scientific observations and provide examples from the content being studied.
SC.912.N.1.7:	Recognize the role of creativity in constructing scientific questions, methods and explanations.
SC.912.N.2.1:	Identify what is science, what clearly is not science, and what superficially resembles science (but fails to meet the criteria for science).
SC.912.N.2.2:	Identify which questions can be answered through science and which questions are outside the boundaries of scientific investigation, such as questions addressed by other ways of knowing, such as art, philosophy, and religion.
SC.912.N.2.3:	Identify examples of pseudoscience (such as astrology, phrenology) in society.
SC.912.N.2.4:	Explain that scientific knowledge is both durable and robust and open to change. Scientific knowledge can change because it is often examined and re-examined by new investigations and scientific argumentation. Because of these frequent examinations, scientific knowledge becomes stronger, leading to its durability.
SC.912.N.2.5:	Describe instances in which scientists' varied backgrounds, talents, interests, and goals influence the inferences and thus the explanations that they make about observations of natural phenomena and describe that competing interpretations (explanations) of scientists are a strength of science as they are a source of new, testable ideas that have the potential to add new evidence to support one or another of the explanations.
SC.912.N.3.1:	Explain that a scientific theory is the culmination of many scientific investigations drawing together all the current evidence concerning a substantial range of phenomena; thus, a scientific theory represents the most powerful explanation scientists have to offer.
SC.912.N.3.2:	Describe the role consensus plays in the historical development of a theory in any one of the disciplines of science.
SC.912.N.3.3:	Explain that scientific laws are descriptions of specific relationships under given conditions in nature, but do not offer explanations for those relationships.
SC.912.N.3.4:	Recognize that theories do not become laws, nor do laws become theories; theories are well supported explanations and laws are well supported descriptions.
SC.912.N.3.5:	Describe the function of models in science, and identify the wide range of models used in science.
SC.912.N.4.1:	Explain how scientific knowledge and reasoning provide an empirically-based perspective to inform society's decision making.
SC.912.N.4.2:	Weigh the merits of alternative strategies for solving a specific societal problem by comparing a number of different costs and benefits, such as human, economic, and environmental.
SC.912.P.8.1:	Differentiate among the four states of matter.
SC.912.P.8.2:	Differentiate between physical and chemical properties and physical and chemical changes of matter.
SC.912.P.8.3:	Explore the scientific theory of atoms (also known as atomic theory) by describing changes in the atomic model over time and why those changes were necessitated by experimental evidence.
SC.912.P.8.4:	Explore the scientific theory of atoms (also known as atomic theory) by describing the structure of atoms in terms of protons, neutrons and electrons, and differentiate among these particles in terms of their mass, electrical charges and locations within the atom.
SC.912.P.8.5:	Relate properties of atoms and their position in the periodic table to the arrangement of their electrons.
SC.912.P.8.7:	Interpret formula representations of molecules and compounds in terms of composition and structure.
SC.912.P.8.8:	Characterize types of chemical reactions, for example: redox, acid-base, synthesis, and single and double replacement reactions.
SC.912.P.8.11:	Relate acidity and basicity to hydronium and hydroxyl ion concentration and pH.

SC.912.P.10.1:	Differentiate among the various forms of energy and recognize that they can be transformed from one form to others.
SC.912.P.10.2:	Explore the Law of Conservation of Energy by differentiating among open, closed, and isolated systems and explain that the total energy in an isolated system is a conserved quantity.
SC.912.P.10.3:	Compare and contrast work and power qualitatively and quantitatively.
SC.912.P.10.4:	Describe heat as the energy transferred by convection, conduction, and radiation, and explain the connection of heat to change in temperature or states of matter.
SC.912.P.10.5:	Relate temperature to the average molecular kinetic energy.
SC.912.P.10.6:	Create and interpret potential energy diagrams, for example: chemical reactions, orbits around a central body, motion of a pendulum.
SC.912.P.10.7:	Distinguish between endothermic and exothermic chemical processes.
SC.912.P.10.10:	Compare the magnitude and range of the four fundamental forces (gravitational, electromagnetic, weak nuclear, strong nuclear).
SC.912.P.10.11:	Explain and compare nuclear reactions (radioactive decay, fission and fusion), the energy changes associated with them and their associated safety issues.
SC.912.P.10.12:	Differentiate between chemical and nuclear reactions.
SC.912.P.10.14:	Differentiate among conductors, semiconductors, and insulators.
SC.912.P.10.15:	Investigate and explain the relationships among current, voltage, resistance, and power.
SC.912.P.10.18:	Explore the theory of electromagnetism by comparing and contrasting the different parts of the electromagnetic spectrum in terms of wavelength, frequency, and energy, and relate them to phenomena and applications.
SC.912.P.10.21:	Qualitatively describe the shift in frequency in sound or electromagnetic waves due to the relative motion of a source or a receiver.
SC.912.P.12.1:	Distinguish between scalar and vector quantities and assess which should be used to describe an event.
SC.912.P.12.2:	Analyze the motion of an object in terms of its position, velocity, and acceleration (with respect to a frame of reference) as functions of time.
SC.912.P.12.3:	Interpret and apply Newton's three laws of motion.
SC.912.P.12.4:	Describe how the gravitational force between two objects depends on their masses and the distance between them.
SC.912.P.12.5:	Apply the law of conservation of linear momentum to interactions, such as collisions between objects.
SC.912.P.12.6:	Qualitatively apply the concept of angular momentum.
SC.912.P.12.7:	Recognize that nothing travels faster than the speed of light in vacuum which is the same for all observers no matter how they or the light source are moving.
SC.912.P.12.10:	Interpret the behavior of ideal gases in terms of kinetic molecular theory.
SC.912.P.12.11:	Describe phase transitions in terms of kinetic molecular theory.
SC.912.P.12.12:	Explain how various factors, such as concentration, temperature, and presence of a catalyst affect the rate of a chemical reaction.
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	Engage in discussions that reflect on the mathematical thinking of self and others. Mathematicians who engage in discussions that reflect on the mathematical thinking of self and others:

MA.K12.MTR.4.1:	• Communicate mathematical ideas, vocabulary and methods effectively. • Analyze the mathematical thinking of others. • Compare the efficiency of a method to those expressed by others. • Recognize errors and suggest how to correctly solve the task. • Justify results by explaining methods and processes. • Construct possible arguments based on evidence. **Clarifications:** Teachers who encourage students to engage in discussions that reflect on the mathematical thinking of self and others: • Establish a culture in which students ask questions of the teacher and their peers, and error is an opportunity for learning. • Create opportunities for students to discuss their thinking with peers. • Select, sequence and present student work to advance and deepen understanding of correct and increasingly efficient methods. • Develop students' ability to justify methods and compare their responses to the responses of their peers.
MA.K12.MTR.5.1:	Use patterns and structure to help understand and connect mathematical concepts. Mathematicians who use patterns and structure to help understand and connect mathematical concepts: • Focus on relevant details within a problem. • Create plans and procedures to logically order events, steps or ideas to solve problems. • Decompose a complex problem into manageable parts. • Relate previously learned concepts to new concepts. • Look for similarities among problems. • Connect solutions of problems to more complicated large-scale situations. **Clarifications:** Teachers who encourage students to use patterns and structure to help understand and connect mathematical concepts: • Help students recognize the patterns in the world around them and connect these patterns to mathematical concepts. • Support students to develop generalizations based on the similarities found among problems. • Provide opportunities for students to create plans and procedures to solve problems. • Develop students' ability to construct relationships between their current understanding and more sophisticated ways of thinking.
MA.K12.MTR.6.1:	Assess the reasonableness of solutions. Mathematicians who assess the reasonableness of solutions: • Estimate to discover possible solutions. • Use benchmark quantities to determine if a solution makes sense. • Check calculations when solving problems. • Verify possible solutions by explaining the methods used. • Evaluate results based on the given context. **Clarifications:** Teachers who encourage students to assess the reasonableness of solutions: • Have students estimate or predict solutions prior to solving. • Prompt students to continually ask, "Does this solution make sense? How do you know?" • Reinforce that students check their work as they progress within and after a task. • Strengthen students' ability to verify solutions through justifications.
MA.K12.MTR.7.1:	Apply mathematics to real-world contexts. Mathematicians who apply mathematics to real-world contexts: • Connect mathematical concepts to everyday experiences. • Use models and methods to understand, represent and solve problems. • Perform investigations to gather data or determine if a method is appropriate. • Redesign models and methods to improve accuracy or efficiency. **Clarifications:** Teachers who encourage students to apply mathematics to real-world contexts: • Provide opportunities for students to create models, both concrete and abstract, and perform investigations. • Challenge students to question the accuracy of their models and methods. • Support students as they validate conclusions by comparing them to the given situation. • Indicate how various concepts can be applied to other disciplines.
ELA.K12.EE.1.1:	Cite evidence to explain and justify reasoning. **Clarifications:** K-1 Students include textual evidence in their oral communication with guidance and support from adults. The evidence can consist of details from the text without naming the text. During 1st grade, students learn how to incorporate the evidence in their writing. 2-3 Students include relevant textual evidence in their written and oral communication. Students should name the text when they refer to it. In 3rd grade, students should use a combination of direct and indirect citations. 4-5 Students continue with previous skills and reference comments made by speakers and peers. Students cite texts that they've directly quoted, paraphrased, or used for information. When writing, students will use the form of citation dictated by the instructor or the style guide referenced by the instructor. 6-8 Students continue with previous skills and use a style guide to create a proper citation. 9-12 Students continue with previous skills and should be aware of existing style guides and the ways in which they differ.
ELA.K12.EE.2.1:	Read and comprehend grade-level complex texts proficiently. **Clarifications:** See Text Complexity for grade-level complexity bands and a text complexity rubric.

ELA.K12.EE.3.1:	Make inferences to support comprehension. **Clarifications:** Students will make inferences before the words infer or inference are introduced. Kindergarten students will answer questions like "Why is the girl smiling?" or make predictions about what will happen based on the title page. Students will use the terms and apply them in 2nd grade and beyond.
ELA.K12.EE.4.1:	Use appropriate collaborative techniques and active listening skills when engaging in discussions in a variety of situations. **Clarifications:** In kindergarten, students learn to listen to one another respectfully. In grades 1-2, students build upon these skills by justifying what they are thinking. For example: "I think _____ because _____." The collaborative conversations are becoming academic conversations. In grades 3-12, students engage in academic conversations discussing claims and justifying their reasoning, refining and applying skills. Students build on ideas, propel the conversation, and support claims and counterclaims with evidence.
ELA.K12.EE.5.1:	Use the accepted rules governing a specific format to create quality work. **Clarifications:** Students will incorporate skills learned into work products to produce quality work. For students to incorporate these skills appropriately, they must receive instruction. A 3rd grade student creating a poster board display must have instruction in how to effectively present information to do quality work.
ELA.K12.EE.6.1:	Use appropriate voice and tone when speaking or writing. **Clarifications:** In kindergarten and 1st grade, students learn the difference between formal and informal language. For example, the way we talk to our friends differs from the way we speak to adults. In 2nd grade and beyond, students practice appropriate social and academic language to discuss texts.
ELD.K12.ELL.SC.1:	English language learners communicate information, ideas and concepts necessary for academic success in the content area of Science.
ELD.K12.ELL.SI.1:	English language learners communicate for social and instructional purposes within the school setting.

General Course Information and Notes

GENERAL NOTES

While the content focus of this course is consistent with the Physical Science course, students will explore these concepts in greater depth. In general, the academic pace and rigor will be greatly increased for honors level course work. Laboratory investigations that include the use of scientific inquiry, research, measurement, problem solving, laboratory apparatus and technologies, experimental procedures, and safety procedures are an integral part of this course. The National Science Teachers Association (NSTA) recommends that at the high school level, all students should be in the science lab or field, collecting data every week. School laboratory investigations (labs) are defined by the National Research Council (NRC) as an experience in the laboratory, classroom, or the field that provides students with opportunities to interact directly with natural phenomena or with data collected by others using tools, materials, data collection techniques, and models (NRC, 2006, p. 3). Laboratory investigations in the high school classroom should help all students develop a growing understanding of the complexity and ambiguity of empirical work, as well as the skills to calibrate and troubleshoot equipment used to make observations. Learners should understand measurement error; and have the skills to aggregate, interpret, and present the resulting data (National Research Council, 2006, p.77; NSTA, 2007).

Special Notes:

Instructional Practices: Teaching from a range of complex text is optimized when teachers in all subject areas implement the following strategies on a routine basis:

1. Ensuring wide reading from complex text that varies in length.
2. Making close reading and rereading of texts central to lessons.
3. Emphasizing text-specific complex questions, and cognitively complex tasks, reinforce focus on the text and cultivate independence.
4. Emphasizing students supporting answers based upon evidence from the text.
5. Providing extensive research and writing opportunities (claims and evidence).

Science and Engineering Practices (NRC *Framework for K-12 Science Education, 2010*)

- Asking questions (for science) and defining problems (for engineering).
- Developing and using models.
- Planning and carrying out investigations.
- Analyzing and interpreting data.
- Using mathematics, information and computer technology, and computational thinking.
- Constructing explanations (for science) and designing solutions (for engineering).
- Engaging in argument from evidence.
- Obtaining, evaluating, and communicating information.

Honors and Advanced Level Course Note: Advanced courses require a greater demand on students through increased academic rigor. Academic rigor is obtained through the application, analysis, evaluation, and creation of complex ideas that are often abstract and multi-faceted. Students are challenged to think and collaborate critically on the content they are learning. Honors level rigor will be achieved by increasing text complexity through text selection, focus on high-level qualitative measures, and complexity of task. Instruction will be structured to give students a deeper understanding of conceptual themes and organization within and across disciplines. Academic rigor is more than simply assigning to students a greater quantity of work.

Florida's Benchmarks for Excellent Student Thinking (B.E.S.T.) Standards

This course includes Florida's B.E.S.T. ELA Expectations (EE) and Mathematical Thinking and Reasoning Standards (MTRs) for students. Florida educators should intentionally embed these standards within the content and their instruction as applicable. For guidance on the implementation of the EEs and MTRs, please visit cpalms.org/Standards/BEST_Standards.aspx and select the appropriate B.E.S.T. Standards package.

English Language Development ELD Standards Special Notes Section:
Teachers are required to provide listening, speaking, reading and writing instruction that allows English language learners (ELL) to communicate information, ideas and concepts for academic success in the content area of Science. For the given level of English language proficiency and with visual, graphic, or interactive support, students will interact with grade level words, expressions, sentences and discourse to process or produce language necessary for academic success The ELD standard should specify a relevant content area concept or topic of study chosen by curriculum developers and teachers which maximizes an ELL's need for communication and social skills. To access an ELL supporting document which delineates performance definitions and descriptors, please click on the following link: cpalms.org/uploads/docs/standards/eld/SC.pdf

GENERAL INFORMATION

Course Number: 2003320

Course Path: Section: Grades PreK to 12 Education Courses > **Grade Group:** Grades 9 to 12 and Adult Education Courses > **Subject:** Science > **SubSubject:** Physical Sciences >

Abbreviated Title: PHY SCI HON

Number of Credits: One (1) credit

Course Length: Year (Y)

Course Attributes:

- Honors

Course Type: Core Academic Course

Course Level: 3

Course Status: Draft - Course Pending Approval

Grade Level(s): 9,10,11,12

Graduation Requirement: Equally Rigorous Science

Educator Certifications

Science (Secondary Grades 7-12)
Earth/Space Science (Grades 6-12)
Physics (Grades 6-12)
Chemistry (Grades 6-12)
Middle Grades General Science (Middle Grades 5-9)

Chemistry 1 (#2003340) 2022 - And Beyond

Course Standards

Name	Description
SC.912.L.18.12:	Discuss the special properties of water that contribute to Earth's suitability as an environment for life: cohesive behavior, ability to moderate temperature, expansion upon freezing, and versatility as a solvent.
SC.912.N.1.1:	Define a problem based on a specific body of knowledge, for example: biology, chemistry, physics, and earth/space science, and do the following: 1. **Pose questions about the natural world,** (Articulate the purpose of the investigation and identify the relevant scientific concepts). 2. **Conduct systematic observations,** (Write procedures that are clear and replicable. Identify observables and examine relationships between test (independent) variable and outcome (dependent) variable. Employ appropriate methods for accurate and consistent observations; conduct and record measurements at appropriate levels of precision. Follow safety guidelines). 3. **Examine books and other sources of information to see what is already known,** 4. **Review what is known in light of empirical evidence,** (Examine whether available empirical evidence can be interpreted in terms of existing knowledge and models, and if not, modify or develop new models). 5. **Plan investigations,** (Design and evaluate a scientific investigation). 6. **Use tools to gather, analyze, and interpret data (this includes the use of measurement in metric and other systems, and also the generation and interpretation of graphical representations of data, including data tables and graphs),** (Collect data or evidence in an organized way. Properly use instruments, equipment, and materials (e.g., scales, probeware, meter sticks, microscopes, computers) including set-up, calibration, technique, maintenance, and storage). 7. **Pose answers, explanations, or descriptions of events,** 8. **Generate explanations that explicate or describe natural phenomena (inferences),** 9. **Use appropriate evidence and reasoning to justify these explanations to others,** 10. **Communicate results of scientific investigations, and** 11. **Evaluate the merits of the explanations produced by others.**
SC.912.N.1.2:	Describe and explain what characterizes science and its methods.
SC.912.N.1.4:	Identify sources of information and assess their reliability according to the strict standards of scientific investigation.
SC.912.N.1.5:	Describe and provide examples of how similar investigations conducted in many parts of the world result in the same outcome.
SC.912.N.1.6:	Describe how scientific inferences are drawn from scientific observations and provide examples from the content being studied.
SC.912.N.1.7:	Recognize the role of creativity in constructing scientific questions, methods and explanations.
SC.912.N.2.2:	Identify which questions can be answered through science and which questions are outside the boundaries of scientific investigation, such as questions addressed by other ways of knowing, such as art, philosophy, and religion.
SC.912.N.2.4:	Explain that scientific knowledge is both durable and robust and open to change. Scientific knowledge can change because it is often examined and re-examined by new investigations and scientific argumentation. Because of these frequent examinations, scientific knowledge becomes stronger, leading to its durability.
SC.912.N.2.5:	Describe instances in which scientists' varied backgrounds, talents, interests, and goals influence the inferences and thus the explanations that they make about observations of natural phenomena and describe that competing interpretations (explanations) of scientists are a strength of science as they are a source of new, testable ideas that have the potential to add new evidence to support one or another of the explanations.
SC.912.N.3.2:	Describe the role consensus plays in the historical development of a theory in any one of the disciplines of science.
SC.912.N.3.3:	Explain that scientific laws are descriptions of specific relationships under given conditions in nature, but do not offer explanations for those relationships.
SC.912.N.3.5:	Describe the function of models in science, and identify the wide range of models used in science.
SC.912.N.4.1:	Explain how scientific knowledge and reasoning provide an empirically-based perspective to inform society's decision making.
SC.912.P.8.1:	Differentiate among the four states of matter.
SC.912.P.8.2:	Differentiate between physical and chemical properties and physical and chemical changes of matter.
SC.912.P.8.3:	Explore the scientific theory of atoms (also known as atomic theory) by describing changes in the atomic model over time and why those changes were necessitated by experimental evidence.
SC.912.P.8.4:	Explore the scientific theory of atoms (also known as atomic theory) by describing the structure of atoms in terms of protons, neutrons and electrons, and differentiate among these particles in terms of their mass, electrical charges and locations within the atom.
SC.912.P.8.5:	Relate properties of atoms and their position in the periodic table to the arrangement of their electrons.
SC.912.P.8.6:	Distinguish between bonding forces holding compounds together and other attractive forces, including hydrogen bonding and van der Waals forces.
SC.912.P.8.7:	Interpret formula representations of molecules and compounds in terms of composition and structure.
SC.912.P.8.8:	Characterize types of chemical reactions, for example: redox, acid-base, synthesis, and single and double replacement reactions.
SC.912.P.8.9:	Apply the mole concept and the law of conservation of mass to calculate quantities of chemicals participating in reactions.
SC.912.P.8.11:	Relate acidity and basicity to hydronium and hydroxyl ion concentration and pH.
SC.912.P.10.1:	Differentiate among the various forms of energy and recognize that they can be transformed from one form to others.
SC.912.P.10.5:	Relate temperature to the average molecular kinetic energy.
SC.912.P.10.6:	Create and interpret potential energy diagrams, for example: chemical reactions, orbits around a central body, motion of a pendulum.
SC.912.P.10.7:	Distinguish between endothermic and exothermic chemical processes.
SC.912.P.10.9:	Describe the quantization of energy at the atomic level.
SC.912.P.10.12:	Differentiate between chemical and nuclear reactions.
SC.912.P.10.18:	Explore the theory of electromagnetism by comparing and contrasting the different parts of the electromagnetic spectrum in terms of wavelength, frequency, and energy, and relate them to phenomena and applications.
SC.912.P.12.10:	Interpret the behavior of ideal gases in terms of kinetic molecular theory.
SC.912.P.12.11:	Describe phase transitions in terms of kinetic molecular theory.

SC.912.P.12.12:	Explain how various factors, such as concentration, temperature, and presence of a catalyst affect the rate of a chemical reaction.
SC.912.P.12.13:	Explain the concept of dynamic equilibrium in terms of reversible processes occurring at the same rates.
MA.K12.MTR.1.1:	Mathematicians who participate in effortful learning both individually and with others: • Analyze the problem in a way that makes sense given the task. • Ask questions that will help with solving the task. • Build perseverance by modifying methods as needed while solving a challenging task. • Stay engaged and maintain a positive mindset when working to solve tasks. • Help and support each other when attempting a new method or approach. **Clarifications:** Teachers who encourage students to participate actively in effortful learning both individually and with others: • Cultivate a community of growth mindset learners. • Foster perseverance in students by choosing tasks that are challenging. • Develop students' ability to analyze and problem solve. • Recognize students' effort when solving challenging problems.
MA.K12.MTR.2.1:	Demonstrate understanding by representing problems in multiple ways. Mathematicians who demonstrate understanding by representing problems in multiple ways: • Build understanding through modeling and using manipulatives. • Represent solutions to problems in multiple ways using objects, drawings, tables, graphs and equations. • Progress from modeling problems with objects and drawings to using algorithms and equations. • Express connections between concepts and representations. • Choose a representation based on the given context or purpose. **Clarifications:** Teachers who encourage students to demonstrate understanding by representing problems in multiple ways: • Help students make connections between concepts and representations. • Provide opportunities for students to use manipulatives when investigating concepts. • Guide students from concrete to pictorial to abstract representations as understanding progresses. • Show students that various representations can have different purposes and can be useful in different situations.
MA.K12.MTR.3.1:	Complete tasks with mathematical fluency. Mathematicians who complete tasks with mathematical fluency: • Select efficient and appropriate methods for solving problems within the given context. • Maintain flexibility and accuracy while performing procedures and mental calculations. • Complete tasks accurately and with confidence. • Adapt procedures to apply them to a new context. • Use feedback to improve efficiency when performing calculations. **Clarifications:** Teachers who encourage students to complete tasks with mathematical fluency: • Provide students with the flexibility to solve problems by selecting a procedure that allows them to solve efficiently and accurately. • Offer multiple opportunities for students to practice efficient and generalizable methods. • Provide opportunities for students to reflect on the method they used and determine if a more efficient method could have been used.
MA.K12.MTR.4.1:	Engage in discussions that reflect on the mathematical thinking of self and others. Mathematicians who engage in discussions that reflect on the mathematical thinking of self and others: • Communicate mathematical ideas, vocabulary and methods effectively. • Analyze the mathematical thinking of others. • Compare the efficiency of a method to those expressed by others. • Recognize errors and suggest how to correctly solve the task. • Justify results by explaining methods and processes. • Construct possible arguments based on evidence. **Clarifications:** Teachers who encourage students to engage in discussions that reflect on the mathematical thinking of self and others: • Establish a culture in which students ask questions of the teacher and their peers, and error is an opportunity for learning. • Create opportunities for students to discuss their thinking with peers. • Select, sequence and present student work to advance and deepen understanding of correct and increasingly efficient methods. • Develop students' ability to justify methods and compare their responses to the responses of their peers.
MA.K12.MTR.5.1:	Use patterns and structure to help understand and connect mathematical concepts. Mathematicians who use patterns and structure to help understand and connect mathematical concepts: • Focus on relevant details within a problem. • Create plans and procedures to logically order events, steps or ideas to solve problems. • Decompose a complex problem into manageable parts. • Relate previously learned concepts to new concepts. • Look for similarities among problems. • Connect solutions of problems to more complicated large-scale situations. **Clarifications:** Teachers who encourage students to use patterns and structure to help understand and connect mathematical concepts: • Help students recognize the patterns in the world around them and connect these patterns to mathematical concepts. • Support students to develop generalizations based on the similarities found among problems. • Provide opportunities for students to create plans and procedures to solve problems.

	• Develop students' ability to construct relationships between their current understanding and more sophisticated ways of thinking.
MA.K12.MTR.6.1:	Assess the reasonableness of solutions. Mathematicians who assess the reasonableness of solutions: • Estimate to discover possible solutions. • Use benchmark quantities to determine if a solution makes sense. • Check calculations when solving problems. • Verify possible solutions by explaining the methods used. • Evaluate results based on the given context. **Clarifications:** Teachers who encourage students to assess the reasonableness of solutions: • Have students estimate or predict solutions prior to solving. • Prompt students to continually ask, "Does this solution make sense? How do you know?" • Reinforce that students check their work as they progress within and after a task. • Strengthen students' ability to verify solutions through justifications.
MA.K12.MTR.7.1:	Apply mathematics to real-world contexts. Mathematicians who apply mathematics to real-world contexts: • Connect mathematical concepts to everyday experiences. • Use models and methods to understand, represent and solve problems. • Perform investigations to gather data or determine if a method is appropriate. • Redesign models and methods to improve accuracy or efficiency. **Clarifications:** Teachers who encourage students to apply mathematics to real-world contexts: • Provide opportunities for students to create models, both concrete and abstract, and perform investigations. • Challenge students to question the accuracy of their models and methods. • Support students as they validate conclusions by comparing them to the given situation. • Indicate how various concepts can be applied to other disciplines.
ELA.K12.EE.1.1:	Cite evidence to explain and justify reasoning. **Clarifications:** K-1 Students include textual evidence in their oral communication with guidance and support from adults. The evidence can consist of details from the text without naming the text. During 1st grade, students learn how to incorporate the evidence in their writing. 2-3 Students include relevant textual evidence in their written and oral communication. Students should name the text when they refer to it. In 3rd grade, students should use a combination of direct and indirect citations. 4-5 Students continue with previous skills and reference comments made by speakers and peers. Students cite texts that they've directly quoted, paraphrased, or used for information. When writing, students will use the form of citation dictated by the instructor or the style guide referenced by the instructor. 6-8 Students continue with previous skills and use a style guide to create a proper citation. 9-12 Students continue with previous skills and should be aware of existing style guides and the ways in which they differ.
ELA.K12.EE.2.1:	Read and comprehend grade-level complex texts proficiently. **Clarifications:** See Text Complexity for grade-level complexity bands and a text complexity rubric.
ELA.K12.EE.3.1:	Make inferences to support comprehension. **Clarifications:** Students will make inferences before the words infer or inference are introduced. Kindergarten students will answer questions like "Why is the girl smiling?" or make predictions about what will happen based on the title page. Students will use the terms and apply them in 2nd grade and beyond.
ELA.K12.EE.4.1:	Use appropriate collaborative techniques and active listening skills when engaging in discussions in a variety of situations. **Clarifications:** In kindergarten, students learn to listen to one another respectfully. In grades 1-2, students build upon these skills by justifying what they are thinking. For example: "I think _____ because _____." The collaborative conversations are becoming academic conversations. In grades 3-12, students engage in academic conversations discussing claims and justifying their reasoning, refining and applying skills. Students build on ideas, propel the conversation, and support claims and counterclaims with evidence.
ELA.K12.EE.5.1:	Use the accepted rules governing a specific format to create quality work. **Clarifications:** Students will incorporate skills learned into work products to produce quality work. For students to incorporate these skills appropriately, they must receive instruction. A 3rd grade student creating a poster board display must have instruction in how to effectively present information to do quality work.
ELA.K12.EE.6.1:	Use appropriate voice and tone when speaking or writing. **Clarifications:** In kindergarten and 1st grade, students learn the difference between formal and informal language. For example, the way we talk to our friends differs from the way we speak to adults. In 2nd grade and beyond, students practice appropriate social and academic language to discuss texts.
ELD.K12.ELL.SC.1:	English language learners communicate information, ideas and concepts necessary for academic success in the content area of Science.
ELD.K12.ELL.SI.1:	English language learners communicate for social and instructional purposes within the school setting.

GENERAL NOTES

Laboratory investigations that include the use of scientific inquiry, research, measurement, problem solving, laboratory apparatus and technologies, experimental procedures, and safety procedures are an integral part of this course. The National Science Teachers Association (NSTA) recommends that at the high school level, all students should be in the science lab or field, collecting data every week. School laboratory investigations (labs) are defined by the National Research Council (NRC) as an experience in the laboratory, classroom, or the field that provides students with opportunities to interact directly with natural phenomena or with data collected by others using tools, materials, data collection techniques, and models (NRC, 2006, p. 3). Laboratory investigations in the high school classroom should help all students develop a growing understanding of the complexity and ambiguity of empirical work, as well as the skills to calibrate and troubleshoot equipment used to make observations. Learners should understand measurement error; and have the skills to aggregate, interpret, and present the resulting data (National Research Council, 2006, p.77; NSTA, 2007).

Special Notes:

Instructional Practices
Teaching from a range of complex text is optimized when teachers in all subject areas implement the following strategies on a routine basis:

1. Ensuring wide reading from complex text that varies in length.
2. Making close reading and rereading of texts central to lessons.
3. Emphasizing text-specific complex questions, and cognitively complex tasks, reinforce focus on the text and cultivate independence.
4. Emphasizing students supporting answers based upon evidence from the text.
5. Providing extensive research and writing opportunities (claims and evidence).

Science and Engineering Practices (NRC *Framework for K-12 Science Education, 2010*)

- Asking questions (for science) and defining problems (for engineering).
- Developing and using models.
- Planning and carrying out investigations.
- Analyzing and interpreting data.
- Using mathematics, information and computer technology, and computational thinking.
- Constructing explanations (for science) and designing solutions (for engineering).
- Engaging in argument from evidence.
- Obtaining, evaluating, and communicating information.

Florida's Benchmarks for Excellent Student Thinking (B.E.S.T.) Standards
This course includes Florida's B.E.S.T. ELA Expectations (EE) and Mathematical Thinking and Reasoning Standards (MTRs) for students. Florida educators should intentionally embed these standards within the content and their instruction as applicable. For guidance on the implementation of the EEs and MTRs, please visit cpalms.org/Standards/BEST_Standards.aspx and select the appropriate B.E.S.T. Standards package.

English Language Development ELD Standards Special Notes Section:
Teachers are required to provide listening, speaking, reading and writing instruction that allows English language learners (ELL) to communicate information, ideas and concepts for academic success in the content area of Science. For the given level of English language proficiency and with visual, graphic, or interactive support, students will interact with grade level words, expressions, sentences and discourse to process or produce language necessary for academic success The ELD standard should specify a relevant content area concept or topic of study chosen by curriculum developers and teachers which maximizes an ELL's need for communication and social skills. To access an ELL supporting document which delineates performance definitions and descriptors, please click on the following link: cpalms.org/uploads/docs/standards/eld/SC.pdf

Additional Instructional Resources:
A.V.E. for Success Collection is provided by the Florida Association of School Administrators: fasa.net/4DCGI/cms/review.html?Action=CMS_Document&DocID=139. Please be aware that these resources have not been reviewed by CPALMS and there may be a charge for the use of some of them in this collection.

GENERAL INFORMATION

Course Number: 2003340

Course Path: Section: Grades PreK to 12 Education Courses > **Grade Group:** Grades 9 to 12 and Adult Education Courses > **Subject:** Science > **SubSubject:** Chemistry > **Abbreviated Title:** CHEM 1

Number of Credits: One (1) credit

Course Length: Year (Y)

Course Type: Core Academic Course

Course Level: 2

Course Status: Draft - Course Pending Approval

Grade Level(s): 9,10,11,12

Graduation Requirement: Equally Rigorous Science

Educator Certifications

Science (Secondary Grades 7-12)
Chemistry (Grades 6-12)

Equivalent Courses

2003350-Chemistry 1 Honors
2003800-Florida's Preinternational Baccalaureate Chemistry 1

Chemistry 1 for Credit Recovery (#2003345) 2022 - And Beyond

Course Standards

Name	Description
SC.912.L.18.12:	Discuss the special properties of water that contribute to Earth's suitability as an environment for life: cohesive behavior, ability to moderate temperature, expansion upon freezing, and versatility as a solvent.
SC.912.N.1.1:	Define a problem based on a specific body of knowledge, for example: biology, chemistry, physics, and earth/space science, and do the following: 1. **Pose questions about the natural world,** (Articulate the purpose of the investigation and identify the relevant scientific concepts). 2. **Conduct systematic observations,** (Write procedures that are clear and replicable. Identify observables and examine relationships between test (independent) variable and outcome (dependent) variable. Employ appropriate methods for accurate and consistent observations; conduct and record measurements at appropriate levels of precision. Follow safety guidelines). 3. **Examine books and other sources of information to see what is already known,** 4. **Review what is known in light of empirical evidence,** (Examine whether available empirical evidence can be interpreted in terms of existing knowledge and models, and if not, modify or develop new models). 5. **Plan investigations,** (Design and evaluate a scientific investigation). 6. **Use tools to gather, analyze, and interpret data (this includes the use of measurement in metric and other systems, and also the generation and interpretation of graphical representations of data, including data tables and graphs),** (Collect data or evidence in an organized way. Properly use instruments, equipment, and materials (e.g., scales, probeware, meter sticks, microscopes, computers) including set-up, calibration, technique, maintenance, and storage). 7. **Pose answers, explanations, or descriptions of events,** 8. **Generate explanations that explicate or describe natural phenomena (inferences),** 9. **Use appropriate evidence and reasoning to justify these explanations to others,** 10. **Communicate results of scientific investigations, and** 11. **Evaluate the merits of the explanations produced by others.**
SC.912.N.1.2:	Describe and explain what characterizes science and its methods.
SC.912.N.1.4:	Identify sources of information and assess their reliability according to the strict standards of scientific investigation.
SC.912.N.1.5:	Describe and provide examples of how similar investigations conducted in many parts of the world result in the same outcome.
SC.912.N.1.6:	Describe how scientific inferences are drawn from scientific observations and provide examples from the content being studied.
SC.912.N.1.7:	Recognize the role of creativity in constructing scientific questions, methods and explanations.
SC.912.N.2.2:	Identify which questions can be answered through science and which questions are outside the boundaries of scientific investigation, such as questions addressed by other ways of knowing, such as art, philosophy, and religion.
SC.912.N.2.4:	Explain that scientific knowledge is both durable and robust and open to change. Scientific knowledge can change because it is often examined and re-examined by new investigations and scientific argumentation. Because of these frequent examinations, scientific knowledge becomes stronger, leading to its durability.
SC.912.N.2.5:	Describe instances in which scientists' varied backgrounds, talents, interests, and goals influence the inferences and thus the explanations that they make about observations of natural phenomena and describe that competing interpretations (explanations) of scientists are a strength of science as they are a source of new, testable ideas that have the potential to add new evidence to support one or another of the explanations.
SC.912.N.3.2:	Describe the role consensus plays in the historical development of a theory in any one of the disciplines of science.
SC.912.N.3.3:	Explain that scientific laws are descriptions of specific relationships under given conditions in nature, but do not offer explanations for those relationships.
SC.912.N.3.5:	Describe the function of models in science, and identify the wide range of models used in science.
SC.912.N.4.1:	Explain how scientific knowledge and reasoning provide an empirically-based perspective to inform society's decision making.
SC.912.P.8.1:	Differentiate among the four states of matter.
SC.912.P.8.2:	Differentiate between physical and chemical properties and physical and chemical changes of matter.
SC.912.P.8.3:	Explore the scientific theory of atoms (also known as atomic theory) by describing changes in the atomic model over time and why those changes were necessitated by experimental evidence.
SC.912.P.8.4:	Explore the scientific theory of atoms (also known as atomic theory) by describing the structure of atoms in terms of protons, neutrons and electrons, and differentiate among these particles in terms of their mass, electrical charges and locations within the atom.
SC.912.P.8.5:	Relate properties of atoms and their position in the periodic table to the arrangement of their electrons.
SC.912.P.8.6:	Distinguish between bonding forces holding compounds together and other attractive forces, including hydrogen bonding and van der Waals forces.
SC.912.P.8.7:	Interpret formula representations of molecules and compounds in terms of composition and structure.
SC.912.P.8.8:	Characterize types of chemical reactions, for example: redox, acid-base, synthesis, and single and double replacement reactions.
SC.912.P.8.9:	Apply the mole concept and the law of conservation of mass to calculate quantities of chemicals participating in reactions.
SC.912.P.8.11:	Relate acidity and basicity to hydronium and hydroxyl ion concentration and pH.
SC.912.P.10.1:	Differentiate among the various forms of energy and recognize that they can be transformed from one form to others.
SC.912.P.10.5:	Relate temperature to the average molecular kinetic energy.
SC.912.P.10.6:	Create and interpret potential energy diagrams, for example: chemical reactions, orbits around a central body, motion of a pendulum.
SC.912.P.10.7:	Distinguish between endothermic and exothermic chemical processes.
SC.912.P.10.9:	Describe the quantization of energy at the atomic level.
SC.912.P.10.12:	Differentiate between chemical and nuclear reactions.
SC.912.P.10.18:	Explore the theory of electromagnetism by comparing and contrasting the different parts of the electromagnetic spectrum in terms of wavelength, frequency, and energy, and relate them to phenomena and applications.
SC.912.P.12.10:	Interpret the behavior of ideal gases in terms of kinetic molecular theory.
SC.912.P.12.11:	Describe phase transitions in terms of kinetic molecular theory.

SC.912.P.12.12:	Explain how various factors, such as concentration, temperature, and presence of a catalyst affect the rate of a chemical reaction.
SC.912.P.12.13:	Explain the concept of dynamic equilibrium in terms of reversible processes occurring at the same rates.
MA.K12.MTR.1.1:	Mathematicians who participate in effortful learning both individually and with others: • Analyze the problem in a way that makes sense given the task. • Ask questions that will help with solving the task. • Build perseverance by modifying methods as needed while solving a challenging task. • Stay engaged and maintain a positive mindset when working to solve tasks. • Help and support each other when attempting a new method or approach. **Clarifications:** Teachers who encourage students to participate actively in effortful learning both individually and with others: • Cultivate a community of growth mindset learners. • Foster perseverance in students by choosing tasks that are challenging. • Develop students' ability to analyze and problem solve. • Recognize students' effort when solving challenging problems.
MA.K12.MTR.2.1:	Demonstrate understanding by representing problems in multiple ways. Mathematicians who demonstrate understanding by representing problems in multiple ways: • Build understanding through modeling and using manipulatives. • Represent solutions to problems in multiple ways using objects, drawings, tables, graphs and equations. • Progress from modeling problems with objects and drawings to using algorithms and equations. • Express connections between concepts and representations. • Choose a representation based on the given context or purpose. **Clarifications:** Teachers who encourage students to demonstrate understanding by representing problems in multiple ways: • Help students make connections between concepts and representations. • Provide opportunities for students to use manipulatives when investigating concepts. • Guide students from concrete to pictorial to abstract representations as understanding progresses. • Show students that various representations can have different purposes and can be useful in different situations.
MA.K12.MTR.3.1:	Complete tasks with mathematical fluency. Mathematicians who complete tasks with mathematical fluency: • Select efficient and appropriate methods for solving problems within the given context. • Maintain flexibility and accuracy while performing procedures and mental calculations. • Complete tasks accurately and with confidence. • Adapt procedures to apply them to a new context. • Use feedback to improve efficiency when performing calculations. **Clarifications:** Teachers who encourage students to complete tasks with mathematical fluency: • Provide students with the flexibility to solve problems by selecting a procedure that allows them to solve efficiently and accurately. • Offer multiple opportunities for students to practice efficient and generalizable methods. • Provide opportunities for students to reflect on the method they used and determine if a more efficient method could have been used.
MA.K12.MTR.4.1:	Engage in discussions that reflect on the mathematical thinking of self and others. Mathematicians who engage in discussions that reflect on the mathematical thinking of self and others: • Communicate mathematical ideas, vocabulary and methods effectively. • Analyze the mathematical thinking of others. • Compare the efficiency of a method to those expressed by others. • Recognize errors and suggest how to correctly solve the task. • Justify results by explaining methods and processes. • Construct possible arguments based on evidence. **Clarifications:** Teachers who encourage students to engage in discussions that reflect on the mathematical thinking of self and others: • Establish a culture in which students ask questions of the teacher and their peers, and error is an opportunity for learning. • Create opportunities for students to discuss their thinking with peers. • Select, sequence and present student work to advance and deepen understanding of correct and increasingly efficient methods. • Develop students' ability to justify methods and compare their responses to the responses of their peers.
MA.K12.MTR.5.1:	Use patterns and structure to help understand and connect mathematical concepts. Mathematicians who use patterns and structure to help understand and connect mathematical concepts: • Focus on relevant details within a problem. • Create plans and procedures to logically order events, steps or ideas to solve problems. • Decompose a complex problem into manageable parts. • Relate previously learned concepts to new concepts. • Look for similarities among problems. • Connect solutions of problems to more complicated large-scale situations. **Clarifications:** Teachers who encourage students to use patterns and structure to help understand and connect mathematical concepts: • Help students recognize the patterns in the world around them and connect these patterns to mathematical concepts. • Support students to develop generalizations based on the similarities found among problems. • Provide opportunities for students to create plans and procedures to solve problems.

	• Develop students' ability to construct relationships between their current understanding and more sophisticated ways of thinking.
MA.K12.MTR.6.1:	Assess the reasonableness of solutions. Mathematicians who assess the reasonableness of solutions: • Estimate to discover possible solutions. • Use benchmark quantities to determine if a solution makes sense. • Check calculations when solving problems. • Verify possible solutions by explaining the methods used. • Evaluate results based on the given context. **Clarifications:** Teachers who encourage students to assess the reasonableness of solutions: • Have students estimate or predict solutions prior to solving. • Prompt students to continually ask, "Does this solution make sense? How do you know?" • Reinforce that students check their work as they progress within and after a task. • Strengthen students' ability to verify solutions through justifications.
MA.K12.MTR.7.1:	Apply mathematics to real-world contexts. Mathematicians who apply mathematics to real-world contexts: • Connect mathematical concepts to everyday experiences. • Use models and methods to understand, represent and solve problems. • Perform investigations to gather data or determine if a method is appropriate. • Redesign models and methods to improve accuracy or efficiency. **Clarifications:** Teachers who encourage students to apply mathematics to real-world contexts: • Provide opportunities for students to create models, both concrete and abstract, and perform investigations. • Challenge students to question the accuracy of their models and methods. • Support students as they validate conclusions by comparing them to the given situation. • Indicate how various concepts can be applied to other disciplines.
ELA.K12.EE.1.1:	Cite evidence to explain and justify reasoning. **Clarifications:** K-1 Students include textual evidence in their oral communication with guidance and support from adults. The evidence can consist of details from the text without naming the text. During 1st grade, students learn how to incorporate the evidence in their writing. 2-3 Students include relevant textual evidence in their written and oral communication. Students should name the text when they refer to it. In 3rd grade, students should use a combination of direct and indirect citations. 4-5 Students continue with previous skills and reference comments made by speakers and peers. Students cite texts that they've directly quoted, paraphrased, or used for information. When writing, students will use the form of citation dictated by the instructor or the style guide referenced by the instructor. 6-8 Students continue with previous skills and use a style guide to create a proper citation. 9-12 Students continue with previous skills and should be aware of existing style guides and the ways in which they differ.
ELA.K12.EE.2.1:	Read and comprehend grade-level complex texts proficiently. **Clarifications:** See Text Complexity for grade-level complexity bands and a text complexity rubric.
ELA.K12.EE.3.1:	Make inferences to support comprehension. **Clarifications:** Students will make inferences before the words infer or inference are introduced. Kindergarten students will answer questions like "Why is the girl smiling?" or make predictions about what will happen based on the title page. Students will use the terms and apply them in 2nd grade and beyond.
ELA.K12.EE.4.1:	Use appropriate collaborative techniques and active listening skills when engaging in discussions in a variety of situations. **Clarifications:** In kindergarten, students learn to listen to one another respectfully. In grades 1-2, students build upon these skills by justifying what they are thinking. For example: "I think _____ because _____." The collaborative conversations are becoming academic conversations. In grades 3-12, students engage in academic conversations discussing claims and justifying their reasoning, refining and applying skills. Students build on ideas, propel the conversation, and support claims and counterclaims with evidence.
ELA.K12.EE.5.1:	Use the accepted rules governing a specific format to create quality work. **Clarifications:** Students will incorporate skills learned into work products to produce quality work. For students to incorporate these skills appropriately, they must receive instruction. A 3rd grade student creating a poster board display must have instruction in how to effectively present information to do quality work.
ELA.K12.EE.6.1:	Use appropriate voice and tone when speaking or writing. **Clarifications:** In kindergarten and 1st grade, students learn the difference between formal and informal language. For example, the way we talk to our friends differs from the way we speak to adults. In 2nd grade and beyond, students practice appropriate social and academic language to discuss texts.
ELD.K12.ELL.SC.1:	English language learners communicate information, ideas and concepts necessary for academic success in the content area of Science.
ELD.K12.ELL.SI.1:	English language learners communicate for social and instructional purposes within the school setting.

GENERAL NOTES

Laboratory investigations that include the use of scientific inquiry, research, measurement, problem solving, laboratory apparatus and technologies, experimental procedures, and safety procedures are an integral part of this course. The National Science Teachers Association (NSTA) recommends that at the high school level, all students should be in the science lab or field, collecting data every week. School laboratory investigations (labs) are defined by the National Research Council (NRC) as an experience in the laboratory, classroom, or the field that provides students with opportunities to interact directly with natural phenomena or with data collected by others using tools, materials, data collection techniques, and models (NRC, 2006, p. 3). Laboratory investigations in the high school classroom should help all students develop a growing understanding of the complexity and ambiguity of empirical work, as well as the skills to calibrate and troubleshoot equipment used to make observations. Learners should understand measurement error; and have the skills to aggregate, interpret, and present the resulting data (National Research Council, 2006, p.77; NSTA, 2007).

Special Notes: *Credit Recovery courses are credit bearing courses with specific content requirements defined by Next Generation Sunshine State Standards and/or Florida Standards. Students enrolled in a Credit Recovery course must have previously attempted the corresponding course (and/or End-of-Course assessment) since the course requirements for the Credit Recovery course are exactly the same as the previously attempted corresponding course. For example, Geometry (1206310) and Geometry for Credit Recovery (1206315) have identical content requirements. It is important to note that Credit Recovery courses are not bound by Section 1003.436(1)(a), Florida Statutes, requiring a minimum of 135 hours of bona fide instruction (120 hours in a school/district implementing block scheduling) in a designed course of study that contains student performance standards, since the students have previously attempted successful completion of the corresponding course. Additionally, Credit Recovery courses should ONLY be used for credit recovery, grade forgiveness, or remediation for students needing to prepare for an End-of-Course assessment retake.*

Instructional Practices
Teaching from a range of complex text is optimized when teachers in all subject areas implement the following strategies on a routine basis:

1. Ensuring wide reading from complex text that varies in length.
2. Making close reading and rereading of texts central to lessons.
3. Emphasizing text-specific complex questions, and cognitively complex tasks, reinforce focus on the text and cultivate independence.
4. Emphasizing students supporting answers based upon evidence from the text.
5. Providing extensive research and writing opportunities (claims and evidence).

Science and Engineering Practices (NRC *Framework for K-12 Science Education, 2010*)

- Asking questions (for science) and defining problems (for engineering).
- Developing and using models.
- Planning and carrying out investigations.
- Analyzing and interpreting data.
- Using mathematics, information and computer technology, and computational thinking.
- Constructing explanations (for science) and designing solutions (for engineering).
- Engaging in argument from evidence.
- Obtaining, evaluating, and communicating information.

Florida's Benchmarks for Excellent Student Thinking (B.E.S.T.) Standards
This course includes Florida's B.E.S.T. ELA Expectations (EE) and Mathematical Thinking and Reasoning Standards (MTRs) for students. Florida educators should intentionally embed these standards within the content and their instruction as applicable. For guidance on the implementation of the EEs and MTRs, please visit cpalms.org/Standards/BEST_Standards.aspx and select the appropriate B.E.S.T. Standards package.

English Language Development ELD Standards Special Notes Section:
Teachers are required to provide listening, speaking, reading and writing instruction that allows English language learners (ELL) to communicate information, ideas and concepts for academic success in the content area of Science. For the given level of English language proficiency and with visual, graphic, or interactive support, students will interact with grade level words, expressions, sentences and discourse to process or produce language necessary for academic success The ELD standard should specify a relevant content area concept or topic of study chosen by curriculum developers and teachers which maximizes an ELL's need for communication and social skills. To access an ELL supporting document which delineates performance definitions and descriptors, please click on the following link: cpalms.org/uploads/docs/standards/eld/SC.pdf

GENERAL INFORMATION

Course Number: 2003345

Course Path: Section: Grades PreK to 12 Education Courses > **Grade Group:** Grades 9 to 12 and Adult Education Courses > **Subject:** Science > **SubSubject:** Chemistry > **Abbreviated Title:** CHEM 1 CR

Number of Credits: One (1) credit

Course Length: Credit Recovery (R)

Course Type: Credit Recovery

Course Level: 2

Course Status: Draft - Course Pending Approval

Grade Level(s): 9,10,11,12

Educator Certifications

Science (Secondary Grades 7-12)
Chemistry (Grades 6-12)

Chemistry 1 Honors (#2003350) 2022 - And Beyond

Course Standards

Name	Description
SC.912.L.17.15:	Discuss the effects of technology on environmental quality.
SC.912.L.17.19:	Describe how different natural resources are produced and how their rates of use and renewal limit availability.
SC.912.L.18.12:	Discuss the special properties of water that contribute to Earth's suitability as an environment for life: cohesive behavior, ability to moderate temperature, expansion upon freezing, and versatility as a solvent.
SC.912.N.1.1:	Define a problem based on a specific body of knowledge, for example: biology, chemistry, physics, and earth/space science, and do the following: 1. **Pose questions about the natural world,** (Articulate the purpose of the investigation and identify the relevant scientific concepts). 2. **Conduct systematic observations,** (Write procedures that are clear and replicable. Identify observables and examine relationships between test (independent) variable and outcome (dependent) variable. Employ appropriate methods for accurate and consistent observations; conduct and record measurements at appropriate levels of precision. Follow safety guidelines). 3. **Examine books and other sources of information to see what is already known,** 4. **Review what is known in light of empirical evidence,** (Examine whether available empirical evidence can be interpreted in terms of existing knowledge and models, and if not, modify or develop new models). 5. **Plan investigations,** (Design and evaluate a scientific investigation). 6. **Use tools to gather, analyze, and interpret data (this includes the use of measurement in metric and other systems, and also the generation and interpretation of graphical representations of data, including data tables and graphs),** (Collect data or evidence in an organized way. Properly use instruments, equipment, and materials (e.g., scales, probeware, meter sticks, microscopes, computers) including set-up, calibration, technique, maintenance, and storage). 7. **Pose answers, explanations, or descriptions of events,** 8. **Generate explanations that explicate or describe natural phenomena (inferences),** 9. **Use appropriate evidence and reasoning to justify these explanations to others,** 10. **Communicate results of scientific investigations, and** 11. **Evaluate the merits of the explanations produced by others.**
SC.912.N.1.2:	Describe and explain what characterizes science and its methods.
SC.912.N.1.4:	Identify sources of information and assess their reliability according to the strict standards of scientific investigation.
SC.912.N.1.5:	Describe and provide examples of how similar investigations conducted in many parts of the world result in the same outcome.
SC.912.N.1.6:	Describe how scientific inferences are drawn from scientific observations and provide examples from the content being studied.
SC.912.N.1.7:	Recognize the role of creativity in constructing scientific questions, methods and explanations.
SC.912.N.2.2:	Identify which questions can be answered through science and which questions are outside the boundaries of scientific investigation, such as questions addressed by other ways of knowing, such as art, philosophy, and religion.
SC.912.N.2.3:	Identify examples of pseudoscience (such as astrology, phrenology) in society.
SC.912.N.2.4:	Explain that scientific knowledge is both durable and robust and open to change. Scientific knowledge can change because it is often examined and re-examined by new investigations and scientific argumentation. Because of these frequent examinations, scientific knowledge becomes stronger, leading to its durability.
SC.912.N.2.5:	Describe instances in which scientists' varied backgrounds, talents, interests, and goals influence the inferences and thus the explanations that they make about observations of natural phenomena and describe that competing interpretations (explanations) of scientists are a strength of science as they are a source of new, testable ideas that have the potential to add new evidence to support one or another of the explanations.
SC.912.N.3.1:	Explain that a scientific theory is the culmination of many scientific investigations drawing together all the current evidence concerning a substantial range of phenomena; thus, a scientific theory represents the most powerful explanation scientists have to offer.
SC.912.N.3.2:	Describe the role consensus plays in the historical development of a theory in any one of the disciplines of science.
SC.912.N.3.3:	Explain that scientific laws are descriptions of specific relationships under given conditions in nature, but do not offer explanations for those relationships.
SC.912.N.3.5:	Describe the function of models in science, and identify the wide range of models used in science.
SC.912.N.4.1:	Explain how scientific knowledge and reasoning provide an empirically-based perspective to inform society's decision making.
SC.912.N.4.2:	Weigh the merits of alternative strategies for solving a specific societal problem by comparing a number of different costs and benefits, such as human, economic, and environmental.
SC.912.P.8.1:	Differentiate among the four states of matter.
SC.912.P.8.2:	Differentiate between physical and chemical properties and physical and chemical changes of matter.
SC.912.P.8.3:	Explore the scientific theory of atoms (also known as atomic theory) by describing changes in the atomic model over time and why those changes were necessitated by experimental evidence.
SC.912.P.8.4:	Explore the scientific theory of atoms (also known as atomic theory) by describing the structure of atoms in terms of protons, neutrons and electrons, and differentiate among these particles in terms of their mass, electrical charges and locations within the atom.
SC.912.P.8.5:	Relate properties of atoms and their position in the periodic table to the arrangement of their electrons.
SC.912.P.8.6:	Distinguish between bonding forces holding compounds together and other attractive forces, including hydrogen bonding and van der Waals forces.
SC.912.P.8.7:	Interpret formula representations of molecules and compounds in terms of composition and structure.
SC.912.P.8.8:	Characterize types of chemical reactions, for example: redox, acid-base, synthesis, and single and double replacement reactions.
SC.912.P.8.9:	Apply the mole concept and the law of conservation of mass to calculate quantities of chemicals participating in reactions.
SC.912.P.8.10:	Describe oxidation-reduction reactions in living and non-living systems.
SC.912.P.8.11:	Relate acidity and basicity to hydronium and hydroxyl ion concentration and pH.
SC.912.P.8.12:	Describe the properties of the carbon atom that make the diversity of carbon compounds possible.
SC.912.P.8.13:	Identify selected functional groups and relate how they contribute to properties of carbon compounds.

SC.912.P.10.1:	Differentiate among the various forms of energy and recognize that they can be transformed from one form to others.
SC.912.P.10.2:	Explore the Law of Conservation of Energy by differentiating among open, closed, and isolated systems and explain that the total energy in an isolated system is a conserved quantity.
SC.912.P.10.5:	Relate temperature to the average molecular kinetic energy.
SC.912.P.10.6:	Create and interpret potential energy diagrams, for example: chemical reactions, orbits around a central body, motion of a pendulum.
SC.912.P.10.7:	Distinguish between endothermic and exothermic chemical processes.
SC.912.P.10.8:	Explain entropy's role in determining the efficiency of processes that convert energy to work.
SC.912.P.10.9:	Describe the quantization of energy at the atomic level.
SC.912.P.10.10:	Compare the magnitude and range of the four fundamental forces (gravitational, electromagnetic, weak nuclear, strong nuclear).
SC.912.P.10.11:	Explain and compare nuclear reactions (radioactive decay, fission and fusion), the energy changes associated with them and their associated safety issues.
SC.912.P.10.12:	Differentiate between chemical and nuclear reactions.
SC.912.P.10.18:	Explore the theory of electromagnetism by comparing and contrasting the different parts of the electromagnetic spectrum in terms of wavelength, frequency, and energy, and relate them to phenomena and applications.
SC.912.P.12.10:	Interpret the behavior of ideal gases in terms of kinetic molecular theory.
SC.912.P.12.11:	Describe phase transitions in terms of kinetic molecular theory.
SC.912.P.12.12:	Explain how various factors, such as concentration, temperature, and presence of a catalyst affect the rate of a chemical reaction.
SC.912.P.12.13:	Explain the concept of dynamic equilibrium in terms of reversible processes occurring at the same rates.
MA.K12.MTR.1.1:	Mathematicians who participate in effortful learning both individually and with others: • Analyze the problem in a way that makes sense given the task. • Ask questions that will help with solving the task. • Build perseverance by modifying methods as needed while solving a challenging task. • Stay engaged and maintain a positive mindset when working to solve tasks. • Help and support each other when attempting a new method or approach. **Clarifications:** Teachers who encourage students to participate actively in effortful learning both individually and with others: • Cultivate a community of growth mindset learners. • Foster perseverance in students by choosing tasks that are challenging. • Develop students' ability to analyze and problem solve. • Recognize students' effort when solving challenging problems.
MA.K12.MTR.2.1:	Demonstrate understanding by representing problems in multiple ways. Mathematicians who demonstrate understanding by representing problems in multiple ways: • Build understanding through modeling and using manipulatives. • Represent solutions to problems in multiple ways using objects, drawings, tables, graphs and equations. • Progress from modeling problems with objects and drawings to using algorithms and equations. • Express connections between concepts and representations. • Choose a representation based on the given context or purpose. **Clarifications:** Teachers who encourage students to demonstrate understanding by representing problems in multiple ways: • Help students make connections between concepts and representations. • Provide opportunities for students to use manipulatives when investigating concepts. • Guide students from concrete to pictorial to abstract representations as understanding progresses. • Show students that various representations can have different purposes and can be useful in different situations.
MA.K12.MTR.3.1:	Complete tasks with mathematical fluency. Mathematicians who complete tasks with mathematical fluency: • Select efficient and appropriate methods for solving problems within the given context. • Maintain flexibility and accuracy while performing procedures and mental calculations. • Complete tasks accurately and with confidence. • Adapt procedures to apply them to a new context. • Use feedback to improve efficiency when performing calculations. **Clarifications:** Teachers who encourage students to complete tasks with mathematical fluency: • Provide students with the flexibility to solve problems by selecting a procedure that allows them to solve efficiently and accurately. • Offer multiple opportunities for students to practice efficient and generalizable methods. • Provide opportunities for students to reflect on the method they used and determine if a more efficient method could have been used.
MA.K12.MTR.4.1:	Engage in discussions that reflect on the mathematical thinking of self and others. Mathematicians who engage in discussions that reflect on the mathematical thinking of self and others: • Communicate mathematical ideas, vocabulary and methods effectively. • Analyze the mathematical thinking of others. • Compare the efficiency of a method to those expressed by others. • Recognize errors and suggest how to correctly solve the task. • Justify results by explaining methods and processes. • Construct possible arguments based on evidence. **Clarifications:** Teachers who encourage students to engage in discussions that reflect on the mathematical thinking of self and others: • Establish a culture in which students ask questions of the teacher and their peers, and error is an opportunity for learning. • Create opportunities for students to discuss their thinking with peers.

	• Select, sequence and present student work to advance and deepen understanding of correct and increasingly efficient methods. • Develop students' ability to justify methods and compare their responses to the responses of their peers.
MA.K12.MTR.5.1:	Use patterns and structure to help understand and connect mathematical concepts. Mathematicians who use patterns and structure to help understand and connect mathematical concepts: • Focus on relevant details within a problem. • Create plans and procedures to logically order events, steps or ideas to solve problems. • Decompose a complex problem into manageable parts. • Relate previously learned concepts to new concepts. • Look for similarities among problems. • Connect solutions of problems to more complicated large-scale situations. **Clarifications:** Teachers who encourage students to use patterns and structure to help understand and connect mathematical concepts: • Help students recognize the patterns in the world around them and connect these patterns to mathematical concepts. • Support students to develop generalizations based on the similarities found among problems. • Provide opportunities for students to create plans and procedures to solve problems. • Develop students' ability to construct relationships between their current understanding and more sophisticated ways of thinking.
MA.K12.MTR.6.1:	Assess the reasonableness of solutions. Mathematicians who assess the reasonableness of solutions: • Estimate to discover possible solutions. • Use benchmark quantities to determine if a solution makes sense. • Check calculations when solving problems. • Verify possible solutions by explaining the methods used. • Evaluate results based on the given context. **Clarifications:** Teachers who encourage students to assess the reasonableness of solutions: • Have students estimate or predict solutions prior to solving. • Prompt students to continually ask, "Does this solution make sense? How do you know?" • Reinforce that students check their work as they progress within and after a task. • Strengthen students' ability to verify solutions through justifications.
MA.K12.MTR.7.1:	Apply mathematics to real-world contexts. Mathematicians who apply mathematics to real-world contexts: • Connect mathematical concepts to everyday experiences. • Use models and methods to understand, represent and solve problems. • Perform investigations to gather data or determine if a method is appropriate. • Redesign models and methods to improve accuracy or efficiency. **Clarifications:** Teachers who encourage students to apply mathematics to real-world contexts: • Provide opportunities for students to create models, both concrete and abstract, and perform investigations. • Challenge students to question the accuracy of their models and methods. • Support students as they validate conclusions by comparing them to the given situation. • Indicate how various concepts can be applied to other disciplines.
ELA.K12.EE.1.1:	Cite evidence to explain and justify reasoning. **Clarifications:** K-1 Students include textual evidence in their oral communication with guidance and support from adults. The evidence can consist of details from the text without naming the text. During 1st grade, students learn how to incorporate the evidence in their writing. 2-3 Students include relevant textual evidence in their written and oral communication. Students should name the text when they refer to it. In 3rd grade, students should use a combination of direct and indirect citations. 4-5 Students continue with previous skills and reference comments made by speakers and peers. Students cite texts that they've directly quoted, paraphrased, or used for information. When writing, students will use the form of citation dictated by the instructor or the style guide referenced by the instructor. 6-8 Students continue with previous skills and use a style guide to create a proper citation. 9-12 Students continue with previous skills and should be aware of existing style guides and the ways in which they differ.
ELA.K12.EE.2.1:	Read and comprehend grade-level complex texts proficiently. **Clarifications:** See Text Complexity for grade-level complexity bands and a text complexity rubric.
ELA.K12.EE.3.1:	Make inferences to support comprehension. **Clarifications:** Students will make inferences before the words infer or inference are introduced. Kindergarten students will answer questions like "Why is the girl smiling?" or make predictions about what will happen based on the title page. Students will use the terms and apply them in 2nd grade and beyond.
ELA.K12.EE.4.1:	Use appropriate collaborative techniques and active listening skills when engaging in discussions in a variety of situations. **Clarifications:** In kindergarten, students learn to listen to one another respectfully. In grades 1-2, students build upon these skills by justifying what they are thinking. For example: "I think _____ because _____." The collaborative conversations are becoming academic conversations.

	In grades 3-12, students engage in academic conversations discussing claims and justifying their reasoning, refining and applying skills. Students build on ideas, propel the conversation, and support claims and counterclaims with evidence.
ELA.K12.EE.5.1:	Use the accepted rules governing a specific format to create quality work. **Clarifications:** Students will incorporate skills learned into work products to produce quality work. For students to incorporate these skills appropriately, they must receive instruction. A 3rd grade student creating a poster board display must have instruction in how to effectively present information to do quality work.
ELA.K12.EE.6.1:	Use appropriate voice and tone when speaking or writing. **Clarifications:** In kindergarten and 1st grade, students learn the difference between formal and informal language. For example, the way we talk to our friends differs from the way we speak to adults. In 2nd grade and beyond, students practice appropriate social and academic language to discuss texts.
ELD.K12.ELL.SC.1:	English language learners communicate information, ideas and concepts necessary for academic success in the content area of Science.
ELD.K12.ELL.SI.1:	English language learners communicate for social and instructional purposes within the school setting.

General Course Information and Notes

GENERAL NOTES

While the content focus of this course is consistent with the Chemistry I course, students will explore these concepts in greater depth. In general, the academic pace and rigor will be greatly increased for honors level course work. Laboratory investigations that include the use of scientific inquiry, research, measurement, problem solving, laboratory apparatus and technologies, experimental procedures, and safety procedures are an integral part of this course. The National Science Teachers Association (NSTA) recommends that at the high school level, all students should be in the science lab or field, collecting data every week. School laboratory investigations (labs) are defined by the National Research Council (NRC) as an experience in the laboratory, classroom, or the field that provides students with opportunities to interact directly with natural phenomena or with data collected by others using tools, materials, data collection techniques, and models (NRC, 2006, p. 3). Laboratory investigations in the high school classroom should help all students develop a growing understanding of the complexity and ambiguity of empirical work, as well as the skills to calibrate and troubleshoot equipment used to make observations. Learners should understand measurement error; and have the skills to aggregate, interpret, and present the resulting data (National Research Council, 2006, p.77; NSTA, 2007).

Special Notes:

Instructional Practices:
Teaching from a range of complex text is optimized when teachers in all subject areas implement the following strategies on a routine basis:

1. Ensuring wide reading from complex text that varies in length.
2. Making close reading and rereading of texts central to lessons.
3. Emphasizing text-specific complex questions, and cognitively complex tasks, reinforce focus on the text and cultivate independence.
4. Emphasizing students supporting answers based upon evidence from the text.
5. Providing extensive research and writing opportunities (claims and evidence).

Science and Engineering Practices (NRC *Framework for K-12 Science Education, 2010*)

- Asking questions (for science) and defining problems (for engineering).
- Developing and using models.
- Planning and carrying out investigations.
- Analyzing and interpreting data.
- Using mathematics, information and computer technology, and computational thinking.
- Constructing explanations (for science) and designing solutions (for engineering).
- Engaging in argument from evidence.
- Obtaining, evaluating, and communicating information.

Honors and Advanced Level Course Note: Advanced courses require a greater demand on students through increased academic rigor. Academic rigor is obtained through the application, analysis, evaluation, and creation of complex ideas that are often abstract and multi-faceted. Students are challenged to think and collaborate critically on the content they are learning. Honors level rigor will be achieved by increasing text complexity through text selection, focus on high-level qualitative measures, and complexity of task. Instruction will be structured to give students a deeper understanding of conceptual themes and organization within and across disciplines. Academic rigor is more than simply assigning to students a greater quantity of work.

Florida's Benchmarks for Excellent Student Thinking (B.E.S.T.) Standards
This course includes Florida's B.E.S.T. ELA Expectations (EE) and Mathematical Thinking and Reasoning Standards (MTRs) for students. Florida educators should intentionally embed these standards within the content and their instruction as applicable. For guidance on the implementation of the EEs and MTRs, please visit cpalms.org/Standards/BEST_Standards.aspx and select the appropriate B.E.S.T. Standards package.

English Language Development ELD Standards Special Notes Section:
Teachers are required to provide listening, speaking, reading and writing instruction that allows English language learners (ELL) to communicate information, ideas and concepts for academic success in the content area of Science. For the given level of English language proficiency and with visual, graphic, or interactive support, students will interact with grade level words, expressions, sentences and discourse to process or produce language necessary for academic success The ELD standard should specify a relevant content area concept or topic of study chosen by curriculum developers and teachers which maximizes an ELL's need for communication and social skills. To access an ELL supporting document which delineates performance definitions and descriptors, please click on the following link: cpalms.org/uploads/docs/standards/eld/SC.pdf

Additional Instructional Resources:

A.V.E. for Success Collection is provided by the Florida Association of School Administrators: fasa.net/4DCGI/cms/review.html?Action=CMS_Document&DocID=139. Please be aware that these resources have not been reviewed by CPALMS and there may be a charge for the use of some of them in this collection.

GENERAL INFORMATION

Course Number: 2003350

Course Path: Section: Grades PreK to 12 Education Courses > **Grade Group:** Grades 9 to 12 and Adult Education Courses > **Subject:** Science > **SubSubject:** Chemistry >

Abbreviated Title: CHEM 1 HON

Number of Credits: One (1) credit

Course Length: Year (Y)

Course Attributes:

- Honors

Course Type: Core Academic Course

Course Level: 3

Course Status: Draft - Course Pending Approval

Grade Level(s): 9,10,11,12

Graduation Requirement: Equally Rigorous Science

Educator Certifications

Science (Secondary Grades 7-12)
Chemistry (Grades 6-12)

Equivalent Courses

2003340-Chemistry 1
2003800-Florida's Preinternational Baccalaureate Chemistry 1

Chemistry 2 Honors (#2003360) 2022 - And Beyond

Course Standards

Name	Description
SC.912.L.17.17:	Assess the effectiveness of innovative methods of protecting the environment.
SC.912.L.17.19:	Describe how different natural resources are produced and how their rates of use and renewal limit availability.
SC.912.L.17.20:	Predict the impact of individuals on environmental systems and examine how human lifestyles affect sustainability.
SC.912.L.18.1:	Describe the basic molecular structures and primary functions of the four major categories of biological macromolecules.
SC.912.L.18.2:	Describe the important structural characteristics of monosaccharides, disaccharides, and polysaccharides and explain the functions of carbohydrates in living things.
SC.912.L.18.3:	Describe the structures of fatty acids, triglycerides, phospholipids, and steroids. Explain the functions of lipids in living organisms. Identify some reactions that fatty acids undergo. Relate the structure and function of cell membranes.
SC.912.L.18.4:	Describe the structures of proteins and amino acids. Explain the functions of proteins in living organisms. Identify some reactions that amino acids undergo. Relate the structure and function of enzymes.
SC.912.L.18.11:	Explain the role of enzymes as catalysts that lower the activation energy of biochemical reactions. Identify factors, such as pH and temperature, and their effect on enzyme activity.
SC.912.L.18.12:	Discuss the special properties of water that contribute to Earth's suitability as an environment for life: cohesive behavior, ability to moderate temperature, expansion upon freezing, and versatility as a solvent.
SC.912.N.1.1:	Define a problem based on a specific body of knowledge, for example: biology, chemistry, physics, and earth/space science, and do the following: 1. **Pose questions about the natural world,** (Articulate the purpose of the investigation and identify the relevant scientific concepts). 2. **Conduct systematic observations,** (Write procedures that are clear and replicable. Identify observables and examine relationships between test (independent) variable and outcome (dependent) variable. Employ appropriate methods for accurate and consistent observations; conduct and record measurements at appropriate levels of precision. Follow safety guidelines). 3. **Examine books and other sources of information to see what is already known,** 4. **Review what is known in light of empirical evidence,** (Examine whether available empirical evidence can be interpreted in terms of existing knowledge and models, and if not, modify or develop new models). 5. **Plan investigations,** (Design and evaluate a scientific investigation). 6. **Use tools to gather, analyze, and interpret data (this includes the use of measurement in metric and other systems, and also the generation and interpretation of graphical representations of data, including data tables and graphs),** (Collect data or evidence in an organized way. Properly use instruments, equipment, and materials (e.g., scales, probeware, meter sticks, microscopes, computers) including set-up, calibration, technique, maintenance, and storage). 7. **Pose answers, explanations, or descriptions of events,** 8. **Generate explanations that explicate or describe natural phenomena (inferences),** 9. **Use appropriate evidence and reasoning to justify these explanations to others,** 10. **Communicate results of scientific investigations, and** 11. **Evaluate the merits of the explanations produced by others.**
SC.912.N.1.2:	Describe and explain what characterizes science and its methods.
SC.912.N.1.3:	Recognize that the strength or usefulness of a scientific claim is evaluated through scientific argumentation, which depends on critical and logical thinking, and the active consideration of alternative scientific explanations to explain the data presented.
SC.912.N.1.4:	Identify sources of information and assess their reliability according to the strict standards of scientific investigation.
SC.912.N.1.5:	Describe and provide examples of how similar investigations conducted in many parts of the world result in the same outcome.
SC.912.N.1.6:	Describe how scientific inferences are drawn from scientific observations and provide examples from the content being studied.
SC.912.N.1.7:	Recognize the role of creativity in constructing scientific questions, methods and explanations.
SC.912.N.2.1:	Identify what is science, what clearly is not science, and what superficially resembles science (but fails to meet the criteria for science).
SC.912.N.2.2:	Identify which questions can be answered through science and which questions are outside the boundaries of scientific investigation, such as questions addressed by other ways of knowing, such as art, philosophy, and religion.
SC.912.N.2.3:	Identify examples of pseudoscience (such as astrology, phrenology) in society.
SC.912.N.2.4:	Explain that scientific knowledge is both durable and robust and open to change. Scientific knowledge can change because it is often examined and re-examined by new investigations and scientific argumentation. Because of these frequent examinations, scientific knowledge becomes stronger, leading to its durability.
SC.912.N.2.5:	Describe instances in which scientists' varied backgrounds, talents, interests, and goals influence the inferences and thus the explanations that they make about observations of natural phenomena and describe that competing interpretations (explanations) of scientists are a strength of science as they are a source of new, testable ideas that have the potential to add new evidence to support one or another of the explanations.
SC.912.N.3.1:	Explain that a scientific theory is the culmination of many scientific investigations drawing together all the current evidence concerning a substantial range of phenomena; thus, a scientific theory represents the most powerful explanation scientists have to offer.
SC.912.N.3.2:	Describe the role consensus plays in the historical development of a theory in any one of the disciplines of science.
SC.912.N.3.3:	Explain that scientific laws are descriptions of specific relationships under given conditions in nature, but do not offer explanations for those relationships.
SC.912.N.3.4:	Recognize that theories do not become laws, nor do laws become theories; theories are well supported explanations and laws are well supported descriptions.
SC.912.N.3.5:	Describe the function of models in science, and identify the wide range of models used in science.
SC.912.N.4.1:	Explain how scientific knowledge and reasoning provide an empirically-based perspective to inform society's decision making.
SC.912.N.4.2:	Weigh the merits of alternative strategies for solving a specific societal problem by comparing a number of different costs and benefits, such as human, economic, and environmental.
SC.912.P.8.10:	Describe oxidation-reduction reactions in living and non-living systems.

SC.912.P.8.12:	Describe the properties of the carbon atom that make the diversity of carbon compounds possible.
SC.912.P.8.13:	Identify selected functional groups and relate how they contribute to properties of carbon compounds.
SC.912.P.10.6:	Create and interpret potential energy diagrams, for example: chemical reactions, orbits around a central body, motion of a pendulum.
SC.912.P.10.8:	Explain entropy's role in determining the efficiency of processes that convert energy to work.
MA.K12.MTR.1.1:	Mathematicians who participate in effortful learning both individually and with others: • Analyze the problem in a way that makes sense given the task. • Ask questions that will help with solving the task. • Build perseverance by modifying methods as needed while solving a challenging task. • Stay engaged and maintain a positive mindset when working to solve tasks. • Help and support each other when attempting a new method or approach. **Clarifications:** Teachers who encourage students to participate actively in effortful learning both individually and with others: • Cultivate a community of growth mindset learners. • Foster perseverance in students by choosing tasks that are challenging. • Develop students' ability to analyze and problem solve. • Recognize students' effort when solving challenging problems.
MA.K12.MTR.2.1:	Demonstrate understanding by representing problems in multiple ways. Mathematicians who demonstrate understanding by representing problems in multiple ways: • Build understanding through modeling and using manipulatives. • Represent solutions to problems in multiple ways using objects, drawings, tables, graphs and equations. • Progress from modeling problems with objects and drawings to using algorithms and equations. • Express connections between concepts and representations. • Choose a representation based on the given context or purpose. **Clarifications:** Teachers who encourage students to demonstrate understanding by representing problems in multiple ways: • Help students make connections between concepts and representations. • Provide opportunities for students to use manipulatives when investigating concepts. • Guide students from concrete to pictorial to abstract representations as understanding progresses. • Show students that various representations can have different purposes and can be useful in different situations.
MA.K12.MTR.3.1:	Complete tasks with mathematical fluency. Mathematicians who complete tasks with mathematical fluency: • Select efficient and appropriate methods for solving problems within the given context. • Maintain flexibility and accuracy while performing procedures and mental calculations. • Complete tasks accurately and with confidence. • Adapt procedures to apply them to a new context. • Use feedback to improve efficiency when performing calculations. **Clarifications:** Teachers who encourage students to complete tasks with mathematical fluency: • Provide students with the flexibility to solve problems by selecting a procedure that allows them to solve efficiently and accurately. • Offer multiple opportunities for students to practice efficient and generalizable methods. • Provide opportunities for students to reflect on the method they used and determine if a more efficient method could have been used.
MA.K12.MTR.4.1:	Engage in discussions that reflect on the mathematical thinking of self and others. Mathematicians who engage in discussions that reflect on the mathematical thinking of self and others: • Communicate mathematical ideas, vocabulary and methods effectively. • Analyze the mathematical thinking of others. • Compare the efficiency of a method to those expressed by others. • Recognize errors and suggest how to correctly solve the task. • Justify results by explaining methods and processes. • Construct possible arguments based on evidence. **Clarifications:** Teachers who encourage students to engage in discussions that reflect on the mathematical thinking of self and others: • Establish a culture in which students ask questions of the teacher and their peers, and error is an opportunity for learning. • Create opportunities for students to discuss their thinking with peers. • Select, sequence and present student work to advance and deepen understanding of correct and increasingly efficient methods. • Develop students' ability to justify methods and compare their responses to the responses of their peers.
MA.K12.MTR.5.1:	Use patterns and structure to help understand and connect mathematical concepts. Mathematicians who use patterns and structure to help understand and connect mathematical concepts: • Focus on relevant details within a problem. • Create plans and procedures to logically order events, steps or ideas to solve problems. • Decompose a complex problem into manageable parts. • Relate previously learned concepts to new concepts. • Look for similarities among problems. • Connect solutions of problems to more complicated large-scale situations. **Clarifications:** Teachers who encourage students to use patterns and structure to help understand and connect mathematical concepts: • Help students recognize the patterns in the world around them and connect these patterns to mathematical concepts.

	• Support students to develop generalizations based on the similarities found among problems. • Provide opportunities for students to create plans and procedures to solve problems. • Develop students' ability to construct relationships between their current understanding and more sophisticated ways of thinking.
MA.K12.MTR.6.1:	Assess the reasonableness of solutions. Mathematicians who assess the reasonableness of solutions: • Estimate to discover possible solutions. • Use benchmark quantities to determine if a solution makes sense. • Check calculations when solving problems. • Verify possible solutions by explaining the methods used. • Evaluate results based on the given context. **Clarifications:** Teachers who encourage students to assess the reasonableness of solutions: • Have students estimate or predict solutions prior to solving. • Prompt students to continually ask, "Does this solution make sense? How do you know?" • Reinforce that students check their work as they progress within and after a task. • Strengthen students' ability to verify solutions through justifications.
MA.K12.MTR.7.1:	Apply mathematics to real-world contexts. Mathematicians who apply mathematics to real-world contexts: • Connect mathematical concepts to everyday experiences. • Use models and methods to understand, represent and solve problems. • Perform investigations to gather data or determine if a method is appropriate. • Redesign models and methods to improve accuracy or efficiency. **Clarifications:** Teachers who encourage students to apply mathematics to real-world contexts: • Provide opportunities for students to create models, both concrete and abstract, and perform investigations. • Challenge students to question the accuracy of their models and methods. • Support students as they validate conclusions by comparing them to the given situation. • Indicate how various concepts can be applied to other disciplines.
ELA.K12.EE.1.1:	Cite evidence to explain and justify reasoning. **Clarifications:** K-1 Students include textual evidence in their oral communication with guidance and support from adults. The evidence can consist of details from the text without naming the text. During 1st grade, students learn how to incorporate the evidence in their writing. 2-3 Students include relevant textual evidence in their written and oral communication. Students should name the text when they refer to it. In 3rd grade, students should use a combination of direct and indirect citations. 4-5 Students continue with previous skills and reference comments made by speakers and peers. Students cite texts that they've directly quoted, paraphrased, or used for information. When writing, students will use the form of citation dictated by the instructor or the style guide referenced by the instructor. 6-8 Students continue with previous skills and use a style guide to create a proper citation. 9-12 Students continue with previous skills and should be aware of existing style guides and the ways in which they differ.
ELA.K12.EE.2.1:	Read and comprehend grade-level complex texts proficiently. **Clarifications:** See Text Complexity for grade-level complexity bands and a text complexity rubric.
ELA.K12.EE.3.1:	Make inferences to support comprehension. **Clarifications:** Students will make inferences before the words infer or inference are introduced. Kindergarten students will answer questions like "Why is the girl smiling?" or make predictions about what will happen based on the title page. Students will use the terms and apply them in 2nd grade and beyond.
ELA.K12.EE.4.1:	Use appropriate collaborative techniques and active listening skills when engaging in discussions in a variety of situations. **Clarifications:** In kindergarten, students learn to listen to one another respectfully. In grades 1-2, students build upon these skills by justifying what they are thinking. For example: "I think _____ because _____." The collaborative conversations are becoming academic conversations. In grades 3-12, students engage in academic conversations discussing claims and justifying their reasoning, refining and applying skills. Students build on ideas, propel the conversation, and support claims and counterclaims with evidence.
ELA.K12.EE.5.1:	Use the accepted rules governing a specific format to create quality work. **Clarifications:** Students will incorporate skills learned into work products to produce quality work. For students to incorporate these skills appropriately, they must receive instruction. A 3rd grade student creating a poster board display must have instruction in how to effectively present information to do quality work.
ELA.K12.EE.6.1:	Use appropriate voice and tone when speaking or writing. **Clarifications:** In kindergarten and 1st grade, students learn the difference between formal and informal language. For example, the way we talk to our friends differs from the way we speak to adults. In 2nd grade and beyond, students practice appropriate social and academic language to discuss texts.
ELD.K12.ELL.SC.1:	English language learners communicate information, ideas and concepts necessary for academic success in the content area of Science.
ELD.K12.ELL.SI.1:	English language learners communicate for social and instructional purposes within the school setting.

General Course Information and Notes

GENERAL NOTES

Laboratory investigations that include the use of scientific inquiry, research, measurement, problem solving, laboratory apparatus and technologies, experimental procedures, and safety procedures are an integral part of this course. The National Science Teachers Association (NSTA) recommends that at the high school level, all students should be in the science lab or field, collecting data every week. School laboratory investigations (labs) are defined by the National Research Council (NRC) as an experience in the laboratory, classroom, or the field that provides students with opportunities to interact directly with natural phenomena or with data collected by others using tools, materials, data collection techniques, and models (NRC, 2006, p. 3). Laboratory investigations in the high school classroom should help all students develop a growing understanding of the complexity and ambiguity of empirical work, as well as the skills to calibrate and troubleshoot equipment used to make observations. Learners should understand measurement error; and have the skills to aggregate, interpret, and present the resulting data (National Research Council, 2006, p.77; NSTA, 2007).

Special Notes:

Instructional Practices: Teaching from a range of complex text is optimized when teachers in all subject areas implement the following strategies on a routine basis:

1. Ensuring wide reading from complex text that varies in length.
2. Making close reading and rereading of texts central to lessons.
3. Emphasizing text-specific complex questions, and cognitively complex tasks, reinforce focus on the text and cultivate independence.
4. Emphasizing students supporting answers based upon evidence from the text.
5. Providing extensive research and writing opportunities (claims and evidence).

Science and Engineering Practices (NRC *Framework for K-12 Science Education, 2010*)

- Asking questions (for science) and defining problems (for engineering).
- Developing and using models.
- Planning and carrying out investigations.
- Analyzing and interpreting data.
- Using mathematics, information and computer technology, and computational thinking.
- Constructing explanations (for science) and designing solutions (for engineering).
- Engaging in argument from evidence.
- Obtaining, evaluating, and communicating information.

Honors and Advanced Level Course Note: Advanced courses require a greater demand on students through increased academic rigor. Academic rigor is obtained through the application, analysis, evaluation, and creation of complex ideas that are often abstract and multi-faceted. Students are challenged to think and collaborate critically on the content they are learning. Honors level rigor will be achieved by increasing text complexity through text selection, focus on high-level qualitative measures, and complexity of task. Instruction will be structured to give students a deeper understanding of conceptual themes and organization within and across disciplines. Academic rigor is more than simply assigning to students a greater quantity of work.

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English Language Development ELD Standards Special Notes Section:
Teachers are required to provide listening, speaking, reading and writing instruction that allows English language learners (ELL) to communicate information, ideas and concepts for academic success in the content area of Science. For the given level of English language proficiency and with visual, graphic, or interactive support, students will interact with grade level words, expressions, sentences and discourse to process or produce language necessary for academic success The ELD standard should specify a relevant content area concept or topic of study chosen by curriculum developers and teachers which maximizes an ELL's need for communication and social skills. To access an ELL supporting document which delineates performance definitions and descriptors, please click on the following link: cpalms.org/uploads/docs/standards/eld/SC.pdf

GENERAL INFORMATION

Course Number: 2003360

Course Path: Section: Grades PreK to 12 Education Courses > **Grade Group:** Grades 9 to 12 and Adult Education Courses > **Subject:** Science > **SubSubject:** Chemistry >
Abbreviated Title: CHEM 2 HON

Number of Credits: One (1) credit

Course Length: Year (Y)

Course Attributes:
- Honors

Course Type: Core Academic Course

Course Level: 3

Course Status: Draft - Course Pending Approval

Grade Level(s): 9,10,11,12

Graduation Requirement: Equally Rigorous Science

Educator Certifications

Science (Secondary Grades 7-12)
Chemistry (Grades 6-12)

Equivalent Courses

2003820-Chemistry 3-International Baccalaureate

Physics 1 (#2003380) 2022 - And Beyond

Course Standards

Name	Description
SC.912.E.5.2:	Identify patterns in the organization and distribution of matter in the universe and the forces that determine them.
SC.912.E.5.6:	Develop logical connections through physical principles, including Kepler's and Newton's Laws about the relationships and the effects of Earth, Moon, and Sun on each other.
SC.912.N.1.1:	Define a problem based on a specific body of knowledge, for example: biology, chemistry, physics, and earth/space science, and do the following: 1. **Pose questions about the natural world,** (Articulate the purpose of the investigation and identify the relevant scientific concepts). 2. **Conduct systematic observations,** (Write procedures that are clear and replicable. Identify observables and examine relationships between test (independent) variable and outcome (dependent) variable. Employ appropriate methods for accurate and consistent observations; conduct and record measurements at appropriate levels of precision. Follow safety guidelines). 3. **Examine books and other sources of information to see what is already known,** 4. **Review what is known in light of empirical evidence,** (Examine whether available empirical evidence can be interpreted in terms of existing knowledge and models, and if not, modify or develop new models). 5. **Plan investigations,** (Design and evaluate a scientific investigation). 6. **Use tools to gather, analyze, and interpret data (this includes the use of measurement in metric and other systems, and also the generation and interpretation of graphical representations of data, including data tables and graphs),** (Collect data or evidence in an organized way. Properly use instruments, equipment, and materials (e.g., scales, probeware, meter sticks, microscopes, computers) including set-up, calibration, technique, maintenance, and storage). 7. **Pose answers, explanations, or descriptions of events,** 8. **Generate explanations that explicate or describe natural phenomena (inferences),** 9. **Use appropriate evidence and reasoning to justify these explanations to others,** 10. **Communicate results of scientific investigations, and** 11. **Evaluate the merits of the explanations produced by others.**
SC.912.N.1.2:	Describe and explain what characterizes science and its methods.
SC.912.N.1.5:	Describe and provide examples of how similar investigations conducted in many parts of the world result in the same outcome.
SC.912.N.1.6:	Describe how scientific inferences are drawn from scientific observations and provide examples from the content being studied.
SC.912.N.1.7:	Recognize the role of creativity in constructing scientific questions, methods and explanations.
SC.912.N.2.2:	Identify which questions can be answered through science and which questions are outside the boundaries of scientific investigation, such as questions addressed by other ways of knowing, such as art, philosophy, and religion.
SC.912.N.2.4:	Explain that scientific knowledge is both durable and robust and open to change. Scientific knowledge can change because it is often examined and re-examined by new investigations and scientific argumentation. Because of these frequent examinations, scientific knowledge becomes stronger, leading to its durability.
SC.912.N.2.5:	Describe instances in which scientists' varied backgrounds, talents, interests, and goals influence the inferences and thus the explanations that they make about observations of natural phenomena and describe that competing interpretations (explanations) of scientists are a strength of science as they are a source of new, testable ideas that have the potential to add new evidence to support one or another of the explanations.
SC.912.N.3.2:	Describe the role consensus plays in the historical development of a theory in any one of the disciplines of science.
SC.912.N.3.3:	Explain that scientific laws are descriptions of specific relationships under given conditions in nature, but do not offer explanations for those relationships.
SC.912.N.3.4:	Recognize that theories do not become laws, nor do laws become theories; theories are well supported explanations and laws are well supported descriptions.
SC.912.N.3.5:	Describe the function of models in science, and identify the wide range of models used in science.
SC.912.N.4.1:	Explain how scientific knowledge and reasoning provide an empirically-based perspective to inform society's decision making.
SC.912.P.8.1:	Differentiate among the four states of matter.
SC.912.P.8.3:	Explore the scientific theory of atoms (also known as atomic theory) by describing changes in the atomic model over time and why those changes were necessitated by experimental evidence.
SC.912.P.10.1:	Differentiate among the various forms of energy and recognize that they can be transformed from one form to others.
SC.912.P.10.2:	Explore the Law of Conservation of Energy by differentiating among open, closed, and isolated systems and explain that the total energy in an isolated system is a conserved quantity.
SC.912.P.10.3:	Compare and contrast work and power qualitatively and quantitatively.
SC.912.P.10.4:	Describe heat as the energy transferred by convection, conduction, and radiation, and explain the connection of heat to change in temperature or states of matter.
SC.912.P.10.5:	Relate temperature to the average molecular kinetic energy.
SC.912.P.10.10:	Compare the magnitude and range of the four fundamental forces (gravitational, electromagnetic, weak nuclear, strong nuclear).
SC.912.P.10.13:	Relate the configuration of static charges to the electric field, electric force, electric potential, and electric potential energy.
SC.912.P.10.14:	Differentiate among conductors, semiconductors, and insulators.
SC.912.P.10.15:	Investigate and explain the relationships among current, voltage, resistance, and power.
SC.912.P.10.18:	Explore the theory of electromagnetism by comparing and contrasting the different parts of the electromagnetic spectrum in terms of wavelength, frequency, and energy, and relate them to phenomena and applications.
SC.912.P.10.20:	Describe the measurable properties of waves and explain the relationships among them and how these properties change when the wave moves from one medium to another.
SC.912.P.10.21:	Qualitatively describe the shift in frequency in sound or electromagnetic waves due to the relative motion of a source or a receiver.
SC.912.P.10.22:	Construct ray diagrams and use thin lens and mirror equations to locate the images formed by lenses and mirrors.
SC.912.P.12.1:	Distinguish between scalar and vector quantities and assess which should be used to describe an event.

SC.912.P.12.2:	Analyze the motion of an object in terms of its position, velocity, and acceleration (with respect to a frame of reference) as functions of time.
SC.912.P.12.3:	Interpret and apply Newton's three laws of motion.
SC.912.P.12.4:	Describe how the gravitational force between two objects depends on their masses and the distance between them.
SC.912.P.12.5:	Apply the law of conservation of linear momentum to interactions, such as collisions between objects.
SC.912.P.12.7:	Recognize that nothing travels faster than the speed of light in vacuum which is the same for all observers no matter how they or the light source are moving.
SC.912.P.12.9:	Recognize that time, length, and energy depend on the frame of reference.
MA.K12.MTR.1.1:	Mathematicians who participate in effortful learning both individually and with others: • Analyze the problem in a way that makes sense given the task. • Ask questions that will help with solving the task. • Build perseverance by modifying methods as needed while solving a challenging task. • Stay engaged and maintain a positive mindset when working to solve tasks. • Help and support each other when attempting a new method or approach. **Clarifications:** Teachers who encourage students to participate actively in effortful learning both individually and with others: • Cultivate a community of growth mindset learners. • Foster perseverance in students by choosing tasks that are challenging. • Develop students' ability to analyze and problem solve. • Recognize students' effort when solving challenging problems.
MA.K12.MTR.2.1:	Demonstrate understanding by representing problems in multiple ways. Mathematicians who demonstrate understanding by representing problems in multiple ways: • Build understanding through modeling and using manipulatives. • Represent solutions to problems in multiple ways using objects, drawings, tables, graphs and equations. • Progress from modeling problems with objects and drawings to using algorithms and equations. • Express connections between concepts and representations. • Choose a representation based on the given context or purpose. **Clarifications:** Teachers who encourage students to demonstrate understanding by representing problems in multiple ways: • Help students make connections between concepts and representations. • Provide opportunities for students to use manipulatives when investigating concepts. • Guide students from concrete to pictorial to abstract representations as understanding progresses. • Show students that various representations can have different purposes and can be useful in different situations.
MA.K12.MTR.3.1:	Complete tasks with mathematical fluency. Mathematicians who complete tasks with mathematical fluency: • Select efficient and appropriate methods for solving problems within the given context. • Maintain flexibility and accuracy while performing procedures and mental calculations. • Complete tasks accurately and with confidence. • Adapt procedures to apply them to a new context. • Use feedback to improve efficiency when performing calculations. **Clarifications:** Teachers who encourage students to complete tasks with mathematical fluency: • Provide students with the flexibility to solve problems by selecting a procedure that allows them to solve efficiently and accurately. • Offer multiple opportunities for students to practice efficient and generalizable methods. • Provide opportunities for students to reflect on the method they used and determine if a more efficient method could have been used.
MA.K12.MTR.4.1:	Engage in discussions that reflect on the mathematical thinking of self and others. Mathematicians who engage in discussions that reflect on the mathematical thinking of self and others: • Communicate mathematical ideas, vocabulary and methods effectively. • Analyze the mathematical thinking of others. • Compare the efficiency of a method to those expressed by others. • Recognize errors and suggest how to correctly solve the task. • Justify results by explaining methods and processes. • Construct possible arguments based on evidence. **Clarifications:** Teachers who encourage students to engage in discussions that reflect on the mathematical thinking of self and others: • Establish a culture in which students ask questions of the teacher and their peers, and error is an opportunity for learning. • Create opportunities for students to discuss their thinking with peers. • Select, sequence and present student work to advance and deepen understanding of correct and increasingly efficient methods. • Develop students' ability to justify methods and compare their responses to the responses of their peers.
MA.K12.MTR.5.1:	Use patterns and structure to help understand and connect mathematical concepts. Mathematicians who use patterns and structure to help understand and connect mathematical concepts: • Focus on relevant details within a problem. • Create plans and procedures to logically order events, steps or ideas to solve problems. • Decompose a complex problem into manageable parts. • Relate previously learned concepts to new concepts. • Look for similarities among problems. • Connect solutions of problems to more complicated large-scale situations.

	Clarifications: Teachers who encourage students to use patterns and structure to help understand and connect mathematical concepts: • Help students recognize the patterns in the world around them and connect these patterns to mathematical concepts. • Support students to develop generalizations based on the similarities found among problems. • Provide opportunities for students to create plans and procedures to solve problems. • Develop students' ability to construct relationships between their current understanding and more sophisticated ways of thinking.
MA.K12.MTR.6.1:	Assess the reasonableness of solutions. Mathematicians who assess the reasonableness of solutions: • Estimate to discover possible solutions. • Use benchmark quantities to determine if a solution makes sense. • Check calculations when solving problems. • Verify possible solutions by explaining the methods used. • Evaluate results based on the given context. **Clarifications:** Teachers who encourage students to assess the reasonableness of solutions: • Have students estimate or predict solutions prior to solving. • Prompt students to continually ask, "Does this solution make sense? How do you know?" • Reinforce that students check their work as they progress within and after a task. • Strengthen students' ability to verify solutions through justifications.
MA.K12.MTR.7.1:	Apply mathematics to real-world contexts. Mathematicians who apply mathematics to real-world contexts: • Connect mathematical concepts to everyday experiences. • Use models and methods to understand, represent and solve problems. • Perform investigations to gather data or determine if a method is appropriate. • Redesign models and methods to improve accuracy or efficiency. **Clarifications:** Teachers who encourage students to apply mathematics to real-world contexts: • Provide opportunities for students to create models, both concrete and abstract, and perform investigations. • Challenge students to question the accuracy of their models and methods. • Support students as they validate conclusions by comparing them to the given situation. • Indicate how various concepts can be applied to other disciplines.
ELA.K12.EE.1.1:	Cite evidence to explain and justify reasoning. **Clarifications:** K-1 Students include textual evidence in their oral communication with guidance and support from adults. The evidence can consist of details from the text without naming the text. During 1st grade, students learn how to incorporate the evidence in their writing. 2-3 Students include relevant textual evidence in their written and oral communication. Students should name the text when they refer to it. In 3rd grade, students should use a combination of direct and indirect citations. 4-5 Students continue with previous skills and reference comments made by speakers and peers. Students cite texts that they've directly quoted, paraphrased, or used for information. When writing, students will use the form of citation dictated by the instructor or the style guide referenced by the instructor. 6-8 Students continue with previous skills and use a style guide to create a proper citation. 9-12 Students continue with previous skills and should be aware of existing style guides and the ways in which they differ.
ELA.K12.EE.2.1:	Read and comprehend grade-level complex texts proficiently. **Clarifications:** See Text Complexity for grade-level complexity bands and a text complexity rubric.
ELA.K12.EE.3.1:	Make inferences to support comprehension. **Clarifications:** Students will make inferences before the words infer or inference are introduced. Kindergarten students will answer questions like "Why is the girl smiling?" or make predictions about what will happen based on the title page. Students will use the terms and apply them in 2nd grade and beyond.
ELA.K12.EE.4.1:	Use appropriate collaborative techniques and active listening skills when engaging in discussions in a variety of situations. **Clarifications:** In kindergarten, students learn to listen to one another respectfully. In grades 1-2, students build upon these skills by justifying what they are thinking. For example: "I think _____ because _____." The collaborative conversations are becoming academic conversations. In grades 3-12, students engage in academic conversations discussing claims and justifying their reasoning, refining and applying skills. Students build on ideas, propel the conversation, and support claims and counterclaims with evidence.
ELA.K12.EE.5.1:	Use the accepted rules governing a specific format to create quality work. **Clarifications:** Students will incorporate skills learned into work products to produce quality work. For students to incorporate these skills appropriately, they must receive instruction. A 3rd grade student creating a poster board display must have instruction in how to effectively present information to do quality work.
ELA.K12.EE.6.1:	Use appropriate voice and tone when speaking or writing. **Clarifications:** In kindergarten and 1st grade, students learn the difference between formal and informal language. For example, the way we talk to our friends

	differs from the way we speak to adults. In 2nd grade and beyond, students practice appropriate social and academic language to discuss texts.
ELD.K12.ELL.SC.1:	English language learners communicate information, ideas and concepts necessary for academic success in the content area of Science.
ELD.K12.ELL.SI.1:	English language learners communicate for social and instructional purposes within the school setting.

General Course Information and Notes

GENERAL NOTES

Laboratory investigations that include the use of scientific inquiry, research, measurement, problem solving, laboratory apparatus and technologies, experimental procedures, and safety procedures are an integral part of this course. The National Science Teachers Association (NSTA) recommends that at the high school level, all students should be in the science lab or field, collecting data every week. School laboratory investigations (labs) are defined by the National Research Council (NRC) as an experience in the laboratory, classroom, or the field that provides students with opportunities to interact directly with natural phenomena or with data collected by others using tools, materials, data collection techniques, and models (NRC, 2006, p. 3). Laboratory investigations in the high school classroom should help all students develop a growing understanding of the complexity and ambiguity of empirical work, as well as the skills to calibrate and troubleshoot equipment used to make observations. Learners should understand measurement error; and have the skills to aggregate, interpret, and present the resulting data (National Research Council, 2006, p.77; NSTA, 2007).

Special Notes:

Instructional Practices:

Teaching from a range of complex text is optimized when teachers in all subject areas implement the following strategies on a routine basis:

1. Ensuring wide reading from complex text that varies in length.
2. Making close reading and rereading of texts central to lessons.
3. Emphasizing text-specific complex questions, and cognitively complex tasks, reinforce focus on the text and cultivate independence.
4. Emphasizing students supporting answers based upon evidence from the text.
5. Providing extensive research and writing opportunities (claims and evidence).

Science and Engineering Practices (NRC *Framework for K-12 Science Education, 2010*)

- Asking questions (for science) and defining problems (for engineering).
- Developing and using models.
- Planning and carrying out investigations.
- Analyzing and interpreting data.
- Using mathematics, information and computer technology, and computational thinking.
- Constructing explanations (for science) and designing solutions (for engineering).
- Engaging in argument from evidence.
- Obtaining, evaluating, and communicating information.

Florida's Benchmarks for Excellent Student Thinking (B.E.S.T.) Standards
This course includes Florida's B.E.S.T. ELA Expectations (EE) and Mathematical Thinking and Reasoning Standards (MTRs) for students. Florida educators should intentionally embed these standards within the content and their instruction as applicable. For guidance on the implementation of the EEs and MTRs, please visit cpalms.org/Standards/BEST_Standards.aspx and select the appropriate B.E.S.T. Standards package.

English Language Development ELD Standards Special Notes Section:
Teachers are required to provide listening, speaking, reading and writing instruction that allows English language learners (ELL) to communicate information, ideas and concepts for academic success in the content area of Science. For the given level of English language proficiency and with visual, graphic, or interactive support, students will interact with grade level words, expressions, sentences and discourse to process or produce language necessary for academic success The ELD standard should specify a relevant content area concept or topic of study chosen by curriculum developers and teachers which maximizes an ELL's need for communication and social skills. To access an ELL supporting document which delineates performance definitions and descriptors, please click on the following link: cpalms.org/uploads/docs/standards/eld/SC.pdf

Additional Instructional Resources:
A.V.E. for Success Collection is provided by the Florida Association of School Administrators: fasa.net/4DCGI/cms/review.html?Action=CMS_Document&DocID=139. Please be aware that these resources have not been reviewed by CPALMS and there may be a charge for the use of some of them in this collection.

GENERAL INFORMATION

Course Number: 2003380

Course Path: Section: Grades PreK to 12 Education Courses > **Grade Group:** Grades 9 to 12 and Adult Education Courses > **Subject:** Science > **SubSubject:** Physical Sciences > **Abbreviated Title:** PHYS 1

Number of Credits: One (1) credit

Course Length: Year (Y)

Course Type: Core Academic Course

Course Level: 2

Course Status: Draft - Course Pending Approval

Grade Level(s): 9,10,11,12

Graduation Requirement: Equally Rigorous Science

Educator Certifications

Science (Secondary Grades 7-12)
Physics (Grades 6-12)

Physics 1 Honors (#2003390) 2022 - And Beyond

Course Standards

Name	Description
SC.912.E.5.2:	Identify patterns in the organization and distribution of matter in the universe and the forces that determine them.
SC.912.E.5.6:	Develop logical connections through physical principles, including Kepler's and Newton's Laws about the relationships and the effects of Earth, Moon, and Sun on each other.
SC.912.E.5.8:	Connect the concepts of radiation and the electromagnetic spectrum to the use of historical and newly-developed observational tools.
SC.912.L.18.12:	Discuss the special properties of water that contribute to Earth's suitability as an environment for life: cohesive behavior, ability to moderate temperature, expansion upon freezing, and versatility as a solvent.
SC.912.N.1.1:	Define a problem based on a specific body of knowledge, for example: biology, chemistry, physics, and earth/space science, and do the following: 1. **Pose questions about the natural world,** (Articulate the purpose of the investigation and identify the relevant scientific concepts). 2. **Conduct systematic observations,** (Write procedures that are clear and replicable. Identify observables and examine relationships between test (independent) variable and outcome (dependent) variable. Employ appropriate methods for accurate and consistent observations; conduct and record measurements at appropriate levels of precision. Follow safety guidelines). 3. **Examine books and other sources of information to see what is already known,** 4. **Review what is known in light of empirical evidence,** (Examine whether available empirical evidence can be interpreted in terms of existing knowledge and models, and if not, modify or develop new models). 5. **Plan investigations,** (Design and evaluate a scientific investigation). 6. **Use tools to gather, analyze, and interpret data (this includes the use of measurement in metric and other systems, and also the generation and interpretation of graphical representations of data, including data tables and graphs),** (Collect data or evidence in an organized way. Properly use instruments, equipment, and materials (e.g., scales, probeware, meter sticks, microscopes, computers) including set-up, calibration, technique, maintenance, and storage). 7. **Pose answers, explanations, or descriptions of events,** 8. **Generate explanations that explicate or describe natural phenomena (inferences),** 9. **Use appropriate evidence and reasoning to justify these explanations to others,** 10. **Communicate results of scientific investigations, and** 11. **Evaluate the merits of the explanations produced by others.**
SC.912.N.1.2:	Describe and explain what characterizes science and its methods.
SC.912.N.1.5:	Describe and provide examples of how similar investigations conducted in many parts of the world result in the same outcome.
SC.912.N.1.6:	Describe how scientific inferences are drawn from scientific observations and provide examples from the content being studied.
SC.912.N.1.7:	Recognize the role of creativity in constructing scientific questions, methods and explanations.
SC.912.N.2.2:	Identify which questions can be answered through science and which questions are outside the boundaries of scientific investigation, such as questions addressed by other ways of knowing, such as art, philosophy, and religion.
SC.912.N.2.3:	Identify examples of pseudoscience (such as astrology, phrenology) in society.
SC.912.N.2.4:	Explain that scientific knowledge is both durable and robust and open to change. Scientific knowledge can change because it is often examined and re-examined by new investigations and scientific argumentation. Because of these frequent examinations, scientific knowledge becomes stronger, leading to its durability.
SC.912.N.2.5:	Describe instances in which scientists' varied backgrounds, talents, interests, and goals influence the inferences and thus the explanations that they make about observations of natural phenomena and describe that competing interpretations (explanations) of scientists are a strength of science as they are a source of new, testable ideas that have the potential to add new evidence to support one or another of the explanations.
SC.912.N.3.1:	Explain that a scientific theory is the culmination of many scientific investigations drawing together all the current evidence concerning a substantial range of phenomena; thus, a scientific theory represents the most powerful explanation scientists have to offer.
SC.912.N.3.2:	Describe the role consensus plays in the historical development of a theory in any one of the disciplines of science.
SC.912.N.3.3:	Explain that scientific laws are descriptions of specific relationships under given conditions in nature, but do not offer explanations for those relationships.
SC.912.N.3.4:	Recognize that theories do not become laws, nor do laws become theories; theories are well supported explanations and laws are well supported descriptions.
SC.912.N.3.5:	Describe the function of models in science, and identify the wide range of models used in science.
SC.912.N.4.1:	Explain how scientific knowledge and reasoning provide an empirically-based perspective to inform society's decision making.
SC.912.P.8.1:	Differentiate among the four states of matter.
SC.912.P.8.3:	Explore the scientific theory of atoms (also known as atomic theory) by describing changes in the atomic model over time and why those changes were necessitated by experimental evidence.
SC.912.P.8.4:	Explore the scientific theory of atoms (also known as atomic theory) by describing the structure of atoms in terms of protons, neutrons and electrons, and differentiate among these particles in terms of their mass, electrical charges and locations within the atom.
SC.912.P.10.1:	Differentiate among the various forms of energy and recognize that they can be transformed from one form to others.
SC.912.P.10.2:	Explore the Law of Conservation of Energy by differentiating among open, closed, and isolated systems and explain that the total energy in an isolated system is a conserved quantity.
SC.912.P.10.3:	Compare and contrast work and power qualitatively and quantitatively.
SC.912.P.10.4:	Describe heat as the energy transferred by convection, conduction, and radiation, and explain the connection of heat to change in temperature or states of matter.
SC.912.P.10.5:	Relate temperature to the average molecular kinetic energy.
SC.912.P.10.6:	Create and interpret potential energy diagrams, for example: chemical reactions, orbits around a central body, motion of a pendulum.
SC.912.P.10.7:	Distinguish between endothermic and exothermic chemical processes.
SC.912.P.10.8:	Explain entropy's role in determining the efficiency of processes that convert energy to work.

SC.912.P.10.10:	Compare the magnitude and range of the four fundamental forces (gravitational, electromagnetic, weak nuclear, strong nuclear).
SC.912.P.10.13:	Relate the configuration of static charges to the electric field, electric force, electric potential, and electric potential energy.
SC.912.P.10.14:	Differentiate among conductors, semiconductors, and insulators.
SC.912.P.10.15:	Investigate and explain the relationships among current, voltage, resistance, and power.
SC.912.P.10.16:	Explain the relationship between moving charges and magnetic fields, as well as changing magnetic fields and electric fields, and their application to modern technologies.
SC.912.P.10.17:	Explore the theory of electromagnetism by explaining electromagnetic waves in terms of oscillating electric and magnetic fields.
SC.912.P.10.18:	Explore the theory of electromagnetism by comparing and contrasting the different parts of the electromagnetic spectrum in terms of wavelength, frequency, and energy, and relate them to phenomena and applications.
SC.912.P.10.20:	Describe the measurable properties of waves and explain the relationships among them and how these properties change when the wave moves from one medium to another.
SC.912.P.10.21:	Qualitatively describe the shift in frequency in sound or electromagnetic waves due to the relative motion of a source or a receiver.
SC.912.P.10.22:	Construct ray diagrams and use thin lens and mirror equations to locate the images formed by lenses and mirrors.
SC.912.P.12.1:	Distinguish between scalar and vector quantities and assess which should be used to describe an event.
SC.912.P.12.2:	Analyze the motion of an object in terms of its position, velocity, and acceleration (with respect to a frame of reference) as functions of time.
SC.912.P.12.3:	Interpret and apply Newton's three laws of motion.
SC.912.P.12.4:	Describe how the gravitational force between two objects depends on their masses and the distance between them.
SC.912.P.12.5:	Apply the law of conservation of linear momentum to interactions, such as collisions between objects.
SC.912.P.12.6:	Qualitatively apply the concept of angular momentum.
SC.912.P.12.7:	Recognize that nothing travels faster than the speed of light in vacuum which is the same for all observers no matter how they or the light source are moving.
SC.912.P.12.8:	Recognize that Newton's Laws are a limiting case of Einstein's Special Theory of Relativity at speeds that are much smaller than the speed of light.
SC.912.P.12.9:	Recognize that time, length, and energy depend on the frame of reference.
MA.K12.MTR.1.1:	Mathematicians who participate in effortful learning both individually and with others: • Analyze the problem in a way that makes sense given the task. • Ask questions that will help with solving the task. • Build perseverance by modifying methods as needed while solving a challenging task. • Stay engaged and maintain a positive mindset when working to solve tasks. • Help and support each other when attempting a new method or approach. **Clarifications:** Teachers who encourage students to participate actively in effortful learning both individually and with others: • Cultivate a community of growth mindset learners. • Foster perseverance in students by choosing tasks that are challenging. • Develop students' ability to analyze and problem solve. • Recognize students' effort when solving challenging problems.
MA.K12.MTR.2.1:	Demonstrate understanding by representing problems in multiple ways. Mathematicians who demonstrate understanding by representing problems in multiple ways: • Build understanding through modeling and using manipulatives. • Represent solutions to problems in multiple ways using objects, drawings, tables, graphs and equations. • Progress from modeling problems with objects and drawings to using algorithms and equations. • Express connections between concepts and representations. • Choose a representation based on the given context or purpose. **Clarifications:** Teachers who encourage students to demonstrate understanding by representing problems in multiple ways: • Help students make connections between concepts and representations. • Provide opportunities for students to use manipulatives when investigating concepts. • Guide students from concrete to pictorial to abstract representations as understanding progresses. • Show students that various representations can have different purposes and can be useful in different situations.
MA.K12.MTR.3.1:	Complete tasks with mathematical fluency. Mathematicians who complete tasks with mathematical fluency: • Select efficient and appropriate methods for solving problems within the given context. • Maintain flexibility and accuracy while performing procedures and mental calculations. • Complete tasks accurately and with confidence. • Adapt procedures to apply them to a new context. • Use feedback to improve efficiency when performing calculations. **Clarifications:** Teachers who encourage students to complete tasks with mathematical fluency: • Provide students with the flexibility to solve problems by selecting a procedure that allows them to solve efficiently and accurately. • Offer multiple opportunities for students to practice efficient and generalizable methods. • Provide opportunities for students to reflect on the method they used and determine if a more efficient method could have been used.
	Engage in discussions that reflect on the mathematical thinking of self and others. Mathematicians who engage in discussions that reflect on the mathematical thinking of self and others: • Communicate mathematical ideas, vocabulary and methods effectively. • Analyze the mathematical thinking of others. • Compare the efficiency of a method to those expressed by others. • Recognize errors and suggest how to correctly solve the task.

MA.K12.MTR.4.1:	• Justify results by explaining methods and processes. • Construct possible arguments based on evidence. **Clarifications:** Teachers who encourage students to engage in discussions that reflect on the mathematical thinking of self and others: • Establish a culture in which students ask questions of the teacher and their peers, and error is an opportunity for learning. • Create opportunities for students to discuss their thinking with peers. • Select, sequence and present student work to advance and deepen understanding of correct and increasingly efficient methods. • Develop students' ability to justify methods and compare their responses to the responses of their peers.
MA.K12.MTR.5.1:	Use patterns and structure to help understand and connect mathematical concepts. Mathematicians who use patterns and structure to help understand and connect mathematical concepts: • Focus on relevant details within a problem. • Create plans and procedures to logically order events, steps or ideas to solve problems. • Decompose a complex problem into manageable parts. • Relate previously learned concepts to new concepts. • Look for similarities among problems. • Connect solutions of problems to more complicated large-scale situations. **Clarifications:** Teachers who encourage students to use patterns and structure to help understand and connect mathematical concepts: • Help students recognize the patterns in the world around them and connect these patterns to mathematical concepts. • Support students to develop generalizations based on the similarities found among problems. • Provide opportunities for students to create plans and procedures to solve problems. • Develop students' ability to construct relationships between their current understanding and more sophisticated ways of thinking.
MA.K12.MTR.6.1:	Assess the reasonableness of solutions. Mathematicians who assess the reasonableness of solutions: • Estimate to discover possible solutions. • Use benchmark quantities to determine if a solution makes sense. • Check calculations when solving problems. • Verify possible solutions by explaining the methods used. • Evaluate results based on the given context. **Clarifications:** Teachers who encourage students to assess the reasonableness of solutions: • Have students estimate or predict solutions prior to solving. • Prompt students to continually ask, "Does this solution make sense? How do you know?" • Reinforce that students check their work as they progress within and after a task. • Strengthen students' ability to verify solutions through justifications.
MA.K12.MTR.7.1:	Apply mathematics to real-world contexts. Mathematicians who apply mathematics to real-world contexts: • Connect mathematical concepts to everyday experiences. • Use models and methods to understand, represent and solve problems. • Perform investigations to gather data or determine if a method is appropriate. • Redesign models and methods to improve accuracy or efficiency. **Clarifications:** Teachers who encourage students to apply mathematics to real-world contexts: • Provide opportunities for students to create models, both concrete and abstract, and perform investigations. • Challenge students to question the accuracy of their models and methods. • Support students as they validate conclusions by comparing them to the given situation. • Indicate how various concepts can be applied to other disciplines.
ELA.K12.EE.1.1:	Cite evidence to explain and justify reasoning. **Clarifications:** K-1 Students include textual evidence in their oral communication with guidance and support from adults. The evidence can consist of details from the text without naming the text. During 1st grade, students learn how to incorporate the evidence in their writing. 2-3 Students include relevant textual evidence in their written and oral communication. Students should name the text when they refer to it. In 3rd grade, students should use a combination of direct and indirect citations. 4-5 Students continue with previous skills and reference comments made by speakers and peers. Students cite texts that they've directly quoted, paraphrased, or used for information. When writing, students will use the form of citation dictated by the instructor or the style guide referenced by the instructor. 6-8 Students continue with previous skills and use a style guide to create a proper citation. 9-12 Students continue with previous skills and should be aware of existing style guides and the ways in which they differ.
ELA.K12.EE.2.1:	Read and comprehend grade-level complex texts proficiently. **Clarifications:** See Text Complexity for grade-level complexity bands and a text complexity rubric.
ELA.K12.EE.3.1:	Make inferences to support comprehension. **Clarifications:** Students will make inferences before the words infer or inference are introduced. Kindergarten students will answer questions like "Why is the girl smiling?" or make predictions about what will happen based on the title page. Students will use the terms and apply them in 2nd grade and beyond.

ELA.K12.EE.4.1:	Use appropriate collaborative techniques and active listening skills when engaging in discussions in a variety of situations. **Clarifications:** In kindergarten, students learn to listen to one another respectfully. In grades 1-2, students build upon these skills by justifying what they are thinking. For example: "I think _____ because _____." The collaborative conversations are becoming academic conversations. In grades 3-12, students engage in academic conversations discussing claims and justifying their reasoning, refining and applying skills. Students build on ideas, propel the conversation, and support claims and counterclaims with evidence.
ELA.K12.EE.5.1:	Use the accepted rules governing a specific format to create quality work. **Clarifications:** Students will incorporate skills learned into work products to produce quality work. For students to incorporate these skills appropriately, they must receive instruction. A 3rd grade student creating a poster board display must have instruction in how to effectively present information to do quality work.
ELA.K12.EE.6.1:	Use appropriate voice and tone when speaking or writing. **Clarifications:** In kindergarten and 1st grade, students learn the difference between formal and informal language. For example, the way we talk to our friends differs from the way we speak to adults. In 2nd grade and beyond, students practice appropriate social and academic language to discuss texts.
ELD.K12.ELL.SC.1:	English language learners communicate information, ideas and concepts necessary for academic success in the content area of Science.
ELD.K12.ELL.SI.1:	English language learners communicate for social and instructional purposes within the school setting.

General Course Information and Notes

GENERAL NOTES

While the content focus of this course is consistent with the Physics I course, students will explore these concepts in greater depth. In general, the academic pace and rigor will be greatly increased for honors level course work. Laboratory investigations that include the use of scientific inquiry, research, measurement, problem solving, laboratory apparatus and technologies, experimental procedures, and safety procedures are an integral part of this course. The National Science Teachers Association (NSTA) recommends that at the high school level, all students should be in the science lab or field, collecting data every week. School laboratory investigations (labs) are defined by the National Research Council (NRC) as an experience in the laboratory, classroom, or the field that provides students with opportunities to interact directly with natural phenomena or with data collected by others using tools, materials, data collection techniques, and models (NRC, 2006, p. 3). Laboratory investigations in the high school classroom should help all students develop a growing understanding of the complexity and ambiguity of empirical work, as well as the skills to calibrate and troubleshoot equipment used to make observations. Learners should understand measurement error; and have the skills to aggregate, interpret, and present the resulting data (National Research Council, 2006, p.77; NSTA, 2007).

Special Notes:
Instructional Practices
Teaching from a range of complex text is optimized when teachers in all subject areas implement the following strategies on a routine basis:

1. Ensuring wide reading from complex text that varies in length.
2. Making close reading and rereading of texts central to lessons.
3. Emphasizing text-specific complex questions, and cognitively complex tasks, reinforce focus on the text and cultivate independence.
4. Emphasizing students supporting answers based upon evidence from the text.
5. Providing extensive research and writing opportunities (claims and evidence).

Science and Engineering Practices (NRC *Framework for K-12 Science Education, 2010*)

- Asking questions (for science) and defining problems (for engineering).
- Developing and using models.
- Planning and carrying out investigations.
- Analyzing and interpreting data.
- Using mathematics, information and computer technology, and computational thinking.
- Constructing explanations (for science) and designing solutions (for engineering).
- Engaging in argument from evidence.
- Obtaining, evaluating, and communicating information.

Honors and Advanced Level Course Note: Advanced courses require a greater demand on students through increased academic rigor. Academic rigor is obtained through the application, analysis, evaluation, and creation of complex ideas that are often abstract and multi-faceted. Students are challenged to think and collaborate critically on the content they are learning. Honors level rigor will be achieved by increasing text complexity through text selection, focus on high-level qualitative measures, and complexity of task. Instruction will be structured to give students a deeper understanding of conceptual themes and organization within and across disciplines. Academic rigor is more than simply assigning to students a greater quantity of work.

Florida's Benchmarks for Excellent Student Thinking (B.E.S.T.) Standards
This course includes Florida's B.E.S.T. ELA Expectations (EE) and Mathematical Thinking and Reasoning Standards (MTRs) for students. Florida educators should intentionally embed these standards within the content and their instruction as applicable. For guidance on the implementation of the EEs and MTRs, please visit cpalms.org/Standards/BEST_Standards.aspx and select the appropriate B.E.S.T. Standards package.

English Language Development ELD Standards Special Notes Section:
Teachers are required to provide listening, speaking, reading and writing instruction that allows English language learners (ELL) to communicate information, ideas and concepts

for academic success in the content area of Science. For the given level of English language proficiency and with visual, graphic, or interactive support, students will interact with grade level words, expressions, sentences and discourse to process or produce language necessary for academic success The ELD standard should specify a relevant content area concept or topic of study chosen by curriculum developers and teachers which maximizes an ELL's need for communication and social skills. To access an ELL supporting document which delineates performance definitions and descriptors, please click on the following link: cpalms.org/uploads/docs/standards/eld/SC.pdf

Additional Instructional Resources:
A.V.E. for Success Collection is provided by the Florida Association of School Administrators: fasa.net/4DCGI/cms/review.html?Action=CMS_Document&DocID=139. Please be aware that these resources have not been reviewed by CPALMS and there may be a charge for the use of some of them in this collection.

GENERAL INFORMATION

Course Number: 2003390

Course Path: Section: Grades PreK to 12 Education Courses > **Grade Group:** Grades 9 to 12 and Adult Education Courses > **Subject:** Science > **SubSubject:** Physical Sciences >

Abbreviated Title: PHYS 1 HON

Number of Credits: One (1) credit

Course Length: Year (Y)

Course Attributes:

- Honors

Course Type: Core Academic Course

Course Level: 3

Course Status: Draft - Course Pending Approval

Grade Level(s): 9,10,11,12

Graduation Requirement: Equally Rigorous Science

Educator Certifications

Science (Secondary Grades 7-12)
Physics (Grades 6-12)

Physics 2 Honors (#2003410) 2022 - And Beyond

Course Standards

Name	Description
SC.912.E.5.7:	Relate the history of and explain the justification for future space exploration and continuing technology development.
SC.912.E.5.8:	Connect the concepts of radiation and the electromagnetic spectrum to the use of historical and newly-developed observational tools.
SC.912.E.5.9:	Analyze the broad effects of space exploration on the economy and culture of Florida.
SC.912.E.5.10:	Describe and apply the coordinate system used to locate objects in the sky.
SC.912.E.5.11:	Distinguish the various methods of measuring astronomical distances and apply each in appropriate situations.
SC.912.E.6.6:	Analyze past, present, and potential future consequences to the environment resulting from various energy production technologies.
SC.912.E.7.7:	Identify, analyze, and relate the internal (Earth system) and external (astronomical) conditions that contribute to global climate change.
SC.912.L.15.2:	Discuss the use of molecular clocks to estimate how long ago various groups of organisms diverged evolutionarily from one another.
SC.912.L.16.10:	Evaluate the impact of biotechnology on the individual, society and the environment, including medical and ethical issues.
SC.912.L.17.11:	Evaluate the costs and benefits of renewable and nonrenewable resources, such as water, energy, fossil fuels, wildlife, and forests.
SC.912.L.17.15:	Discuss the effects of technology on environmental quality.
SC.912.L.18.12:	Discuss the special properties of water that contribute to Earth's suitability as an environment for life: cohesive behavior, ability to moderate temperature, expansion upon freezing, and versatility as a solvent.
SC.912.N.1.1:	Define a problem based on a specific body of knowledge, for example: biology, chemistry, physics, and earth/space science, and do the following: 1. **Pose questions about the natural world,** (Articulate the purpose of the investigation and identify the relevant scientific concepts). 2. **Conduct systematic observations,** (Write procedures that are clear and replicable. Identify observables and examine relationships between test (independent) variable and outcome (dependent) variable. Employ appropriate methods for accurate and consistent observations; conduct and record measurements at appropriate levels of precision. Follow safety guidelines). 3. **Examine books and other sources of information to see what is already known,** 4. **Review what is known in light of empirical evidence,** (Examine whether available empirical evidence can be interpreted in terms of existing knowledge and models, and if not, modify or develop new models). 5. **Plan investigations,** (Design and evaluate a scientific investigation). 6. **Use tools to gather, analyze, and interpret data (this includes the use of measurement in metric and other systems, and also the generation and interpretation of graphical representations of data, including data tables and graphs),** (Collect data or evidence in an organized way. Properly use instruments, equipment, and materials (e.g., scales, probeware, meter sticks, microscopes, computers) including set-up, calibration, technique, maintenance, and storage). 7. **Pose answers, explanations, or descriptions of events,** 8. **Generate explanations that explicate or describe natural phenomena (inferences),** 9. **Use appropriate evidence and reasoning to justify these explanations to others,** 10. **Communicate results of scientific investigations, and** 11. **Evaluate the merits of the explanations produced by others.**
SC.912.N.1.2:	Describe and explain what characterizes science and its methods.
SC.912.N.1.3:	Recognize that the strength or usefulness of a scientific claim is evaluated through scientific argumentation, which depends on critical and logical thinking, and the active consideration of alternative scientific explanations to explain the data presented.
SC.912.N.1.4:	Identify sources of information and assess their reliability according to the strict standards of scientific investigation.
SC.912.N.1.5:	Describe and provide examples of how similar investigations conducted in many parts of the world result in the same outcome.
SC.912.N.1.6:	Describe how scientific inferences are drawn from scientific observations and provide examples from the content being studied.
SC.912.N.1.7:	Recognize the role of creativity in constructing scientific questions, methods and explanations.
SC.912.N.2.1:	Identify what is science, what clearly is not science, and what superficially resembles science (but fails to meet the criteria for science).
SC.912.N.2.2:	Identify which questions can be answered through science and which questions are outside the boundaries of scientific investigation, such as questions addressed by other ways of knowing, such as art, philosophy, and religion.
SC.912.N.2.3:	Identify examples of pseudoscience (such as astrology, phrenology) in society.
SC.912.N.2.4:	Explain that scientific knowledge is both durable and robust and open to change. Scientific knowledge can change because it is often examined and re-examined by new investigations and scientific argumentation. Because of these frequent examinations, scientific knowledge becomes stronger, leading to its durability.
SC.912.N.2.5:	Describe instances in which scientists' varied backgrounds, talents, interests, and goals influence the inferences and thus the explanations that they make about observations of natural phenomena and describe that competing interpretations (explanations) of scientists are a strength of science as they are a source of new, testable ideas that have the potential to add new evidence to support one or another of the explanations.
SC.912.N.3.1:	Explain that a scientific theory is the culmination of many scientific investigations drawing together all the current evidence concerning a substantial range of phenomena; thus, a scientific theory represents the most powerful explanation scientists have to offer.
SC.912.N.3.2:	Describe the role consensus plays in the historical development of a theory in any one of the disciplines of science.
SC.912.N.3.3:	Explain that scientific laws are descriptions of specific relationships under given conditions in nature, but do not offer explanations for those relationships.
SC.912.N.3.4:	Recognize that theories do not become laws, nor do laws become theories; theories are well supported explanations and laws are well supported descriptions.
SC.912.N.3.5:	Describe the function of models in science, and identify the wide range of models used in science.
SC.912.N.4.1:	Explain how scientific knowledge and reasoning provide an empirically-based perspective to inform society's decision making.
SC.912.N.4.2:	Weigh the merits of alternative strategies for solving a specific societal problem by comparing a number of different costs and benefits, such as human, economic, and environmental.

SC.912.P.10.4:	Describe heat as the energy transferred by convection, conduction, and radiation, and explain the connection of heat to change in temperature or states of matter.
SC.912.P.10.6:	Create and interpret potential energy diagrams, for example: chemical reactions, orbits around a central body, motion of a pendulum.
SC.912.P.10.8:	Explain entropy's role in determining the efficiency of processes that convert energy to work.
SC.912.P.10.9:	Describe the quantization of energy at the atomic level.
SC.912.P.10.10:	Compare the magnitude and range of the four fundamental forces (gravitational, electromagnetic, weak nuclear, strong nuclear).
SC.912.P.10.11:	Explain and compare nuclear reactions (radioactive decay, fission and fusion), the energy changes associated with them and their associated safety issues.
SC.912.P.10.12:	Differentiate between chemical and nuclear reactions.
SC.912.P.10.16:	Explain the relationship between moving charges and magnetic fields, as well as changing magnetic fields and electric fields, and their application to modern technologies.
SC.912.P.10.17:	Explore the theory of electromagnetism by explaining electromagnetic waves in terms of oscillating electric and magnetic fields.
SC.912.P.10.18:	Explore the theory of electromagnetism by comparing and contrasting the different parts of the electromagnetic spectrum in terms of wavelength, frequency, and energy, and relate them to phenomena and applications.
SC.912.P.10.19:	Explain that all objects emit and absorb electromagnetic radiation and distinguish between objects that are blackbody radiators and those that are not.
SC.912.P.10.21:	Qualitatively describe the shift in frequency in sound or electromagnetic waves due to the relative motion of a source or a receiver.
SC.912.P.12.5:	Apply the law of conservation of linear momentum to interactions, such as collisions between objects.
SC.912.P.12.6:	Qualitatively apply the concept of angular momentum.
SC.912.P.12.8:	Recognize that Newton's Laws are a limiting case of Einstein's Special Theory of Relativity at speeds that are much smaller than the speed of light.
SC.912.P.12.9:	Recognize that time, length, and energy depend on the frame of reference.
SC.912.P.12.10:	Interpret the behavior of ideal gases in terms of kinetic molecular theory.
MA.K12.MTR.1.1:	Mathematicians who participate in effortful learning both individually and with others: • Analyze the problem in a way that makes sense given the task. • Ask questions that will help with solving the task. • Build perseverance by modifying methods as needed while solving a challenging task. • Stay engaged and maintain a positive mindset when working to solve tasks. • Help and support each other when attempting a new method or approach. **Clarifications:** Teachers who encourage students to participate actively in effortful learning both individually and with others: • Cultivate a community of growth mindset learners. • Foster perseverance in students by choosing tasks that are challenging. • Develop students' ability to analyze and problem solve. • Recognize students' effort when solving challenging problems.
MA.K12.MTR.2.1:	Demonstrate understanding by representing problems in multiple ways. Mathematicians who demonstrate understanding by representing problems in multiple ways: • Build understanding through modeling and using manipulatives. • Represent solutions to problems in multiple ways using objects, drawings, tables, graphs and equations. • Progress from modeling problems with objects and drawings to using algorithms and equations. • Express connections between concepts and representations. • Choose a representation based on the given context or purpose. **Clarifications:** Teachers who encourage students to demonstrate understanding by representing problems in multiple ways: • Help students make connections between concepts and representations. • Provide opportunities for students to use manipulatives when investigating concepts. • Guide students from concrete to pictorial to abstract representations as understanding progresses. • Show students that various representations can have different purposes and can be useful in different situations.
MA.K12.MTR.3.1:	Complete tasks with mathematical fluency. Mathematicians who complete tasks with mathematical fluency: • Select efficient and appropriate methods for solving problems within the given context. • Maintain flexibility and accuracy while performing procedures and mental calculations. • Complete tasks accurately and with confidence. • Adapt procedures to apply them to a new context. • Use feedback to improve efficiency when performing calculations. **Clarifications:** Teachers who encourage students to complete tasks with mathematical fluency: • Provide students with the flexibility to solve problems by selecting a procedure that allows them to solve efficiently and accurately. • Offer multiple opportunities for students to practice efficient and generalizable methods. • Provide opportunities for students to reflect on the method they used and determine if a more efficient method could have been used.
MA.K12.MTR.4.1:	Engage in discussions that reflect on the mathematical thinking of self and others. Mathematicians who engage in discussions that reflect on the mathematical thinking of self and others: • Communicate mathematical ideas, vocabulary and methods effectively. • Analyze the mathematical thinking of others. • Compare the efficiency of a method to those expressed by others. • Recognize errors and suggest how to correctly solve the task. • Justify results by explaining methods and processes. • Construct possible arguments based on evidence. **Clarifications:**

	Teachers who encourage students to engage in discussions that reflect on the mathematical thinking of self and others: • Establish a culture in which students ask questions of the teacher and their peers, and error is an opportunity for learning. • Create opportunities for students to discuss their thinking with peers. • Select, sequence and present student work to advance and deepen understanding of correct and increasingly efficient methods. • Develop students' ability to justify methods and compare their responses to the responses of their peers.
MA.K12.MTR.5.1:	Use patterns and structure to help understand and connect mathematical concepts. Mathematicians who use patterns and structure to help understand and connect mathematical concepts: • Focus on relevant details within a problem. • Create plans and procedures to logically order events, steps or ideas to solve problems. • Decompose a complex problem into manageable parts. • Relate previously learned concepts to new concepts. • Look for similarities among problems. • Connect solutions of problems to more complicated large-scale situations. **Clarifications:** Teachers who encourage students to use patterns and structure to help understand and connect mathematical concepts: • Help students recognize the patterns in the world around them and connect these patterns to mathematical concepts. • Support students to develop generalizations based on the similarities found among problems. • Provide opportunities for students to create plans and procedures to solve problems. • Develop students' ability to construct relationships between their current understanding and more sophisticated ways of thinking.
MA.K12.MTR.6.1:	Assess the reasonableness of solutions. Mathematicians who assess the reasonableness of solutions: • Estimate to discover possible solutions. • Use benchmark quantities to determine if a solution makes sense. • Check calculations when solving problems. • Verify possible solutions by explaining the methods used. • Evaluate results based on the given context. **Clarifications:** Teachers who encourage students to assess the reasonableness of solutions: • Have students estimate or predict solutions prior to solving. • Prompt students to continually ask, "Does this solution make sense? How do you know?" • Reinforce that students check their work as they progress within and after a task. • Strengthen students' ability to verify solutions through justifications.
MA.K12.MTR.7.1:	Apply mathematics to real-world contexts. Mathematicians who apply mathematics to real-world contexts: • Connect mathematical concepts to everyday experiences. • Use models and methods to understand, represent and solve problems. • Perform investigations to gather data or determine if a method is appropriate. • Redesign models and methods to improve accuracy or efficiency. **Clarifications:** Teachers who encourage students to apply mathematics to real-world contexts: • Provide opportunities for students to create models, both concrete and abstract, and perform investigations. • Challenge students to question the accuracy of their models and methods. • Support students as they validate conclusions by comparing them to the given situation. • Indicate how various concepts can be applied to other disciplines.
ELA.K12.EE.1.1:	Cite evidence to explain and justify reasoning. **Clarifications:** K-1 Students include textual evidence in their oral communication with guidance and support from adults. The evidence can consist of details from the text without naming the text. During 1st grade, students learn how to incorporate the evidence in their writing. 2-3 Students include relevant textual evidence in their written and oral communication. Students should name the text when they refer to it. In 3rd grade, students should use a combination of direct and indirect citations. 4-5 Students continue with previous skills and reference comments made by speakers and peers. Students cite texts that they've directly quoted, paraphrased, or used for information. When writing, students will use the form of citation dictated by the instructor or the style guide referenced by the instructor. 6-8 Students continue with previous skills and use a style guide to create a proper citation. 9-12 Students continue with previous skills and should be aware of existing style guides and the ways in which they differ.
ELA.K12.EE.2.1:	Read and comprehend grade-level complex texts proficiently. **Clarifications:** See Text Complexity for grade-level complexity bands and a text complexity rubric.
ELA.K12.EE.3.1:	Make inferences to support comprehension. **Clarifications:** Students will make inferences before the words infer or inference are introduced. Kindergarten students will answer questions like "Why is the girl smiling?" or make predictions about what will happen based on the title page. Students will use the terms and apply them in 2nd grade and beyond.
	Use appropriate collaborative techniques and active listening skills when engaging in discussions in a variety of situations. **Clarifications:**

ELA.K12.EE.4.1:	In kindergarten, students learn to listen to one another respectfully. In grades 1-2, students build upon these skills by justifying what they are thinking. For example: "I think _____ because _____." The collaborative conversations are becoming academic conversations. In grades 3-12, students engage in academic conversations discussing claims and justifying their reasoning, refining and applying skills. Students build on ideas, propel the conversation, and support claims and counterclaims with evidence.
ELA.K12.EE.5.1:	Use the accepted rules governing a specific format to create quality work. **Clarifications:** Students will incorporate skills learned into work products to produce quality work. For students to incorporate these skills appropriately, they must receive instruction. A 3rd grade student creating a poster board display must have instruction in how to effectively present information to do quality work.
ELA.K12.EE.6.1:	Use appropriate voice and tone when speaking or writing. **Clarifications:** In kindergarten and 1st grade, students learn the difference between formal and informal language. For example, the way we talk to our friends differs from the way we speak to adults. In 2nd grade and beyond, students practice appropriate social and academic language to discuss texts.
ELD.K12.ELL.SC.1:	English language learners communicate information, ideas and concepts necessary for academic success in the content area of Science.
ELD.K12.ELL.SI.1:	English language learners communicate for social and instructional purposes within the school setting.

General Course Information and Notes

GENERAL NOTES

Laboratory investigations that include the use of scientific inquiry, research, measurement, problem solving, laboratory apparatus and technologies, experimental procedures, and safety procedures are an integral part of this course. The National Science Teachers Association (NSTA) recommends that at the high school level, all students should be in the science lab or field, collecting data every week. School laboratory investigations (labs) are defined by the National Research Council (NRC) as an experience in the laboratory, classroom, or the field that provides students with opportunities to interact directly with natural phenomena or with data collected by others using tools, materials, data collection techniques, and models (NRC, 2006, p. 3). Laboratory investigations in the high school classroom should help all students develop a growing understanding of the complexity and ambiguity of empirical work, as well as the skills to calibrate and troubleshoot equipment used to make observations. Learners should understand measurement error; and have the skills to aggregate, interpret, and present the resulting data (National Research Council, 2006, p.77; NSTA, 2007).

Special Notes

Instructional Practices
Teaching from a range of complex text is optimized when teachers in all subject areas implement the following strategies on a routine basis:
1. Ensuring wide reading from complex text that varies in length.
2. Making close reading and rereading of texts central to lessons.
3. Emphasizing text-specific complex questions, and cognitively complex tasks, reinforce focus on the text and cultivate independence.
4. Emphasizing students supporting answers based upon evidence from the text.
5. Providing extensive research and writing opportunities (claims and evidence).

Science and Engineering Practices (NRC *Framework for K-12 Science Education, 2010*)

- Asking questions (for science) and defining problems (for engineering).
- Developing and using models.
- Planning and carrying out investigations.
- Analyzing and interpreting data.
- Using mathematics, information and computer technology, and computational thinking.
- Constructing explanations (for science) and designing solutions (for engineering).
- Engaging in argument from evidence.
- Obtaining, evaluating, and communicating information.

Honors and Advanced Level Course Note: Advanced courses require a greater demand on students through increased academic rigor. Academic rigor is obtained through the application, analysis, evaluation, and creation of complex ideas that are often abstract and multi-faceted. Students are challenged to think and collaborate critically on the content they are learning. Honors level rigor will be achieved by increasing text complexity through text selection, focus on high-level qualitative measures, and complexity of task. Instruction will be structured to give students a deeper understanding of conceptual themes and organization within and across disciplines. Academic rigor is more than simply assigning to students a greater quantity of work.

Florida's Benchmarks for Excellent Student Thinking (B.E.S.T.) Standards
This course includes Florida's B.E.S.T. ELA Expectations (EE) and Mathematical Thinking and Reasoning Standards (MTRs) for students. Florida educators should intentionally embed these standards within the content and their instruction as applicable. For guidance on the implementation of the EEs and MTRs, please visit cpalms.org/Standards/BEST_Standards.aspx and select the appropriate B.E.S.T. Standards package.

English Language Development ELD Standards Special Notes Section:
Teachers are required to provide listening, speaking, reading and writing instruction that allows English language learners (ELL) to communicate information, ideas and concepts for academic success in the content area of Science. For the given level of English language proficiency and with visual, graphic, or interactive support, students will interact with grade level words, expressions, sentences and discourse to process or produce language necessary for academic success The ELD standard should specify a relevant content area concept or topic of study chosen by curriculum developers and teachers which maximizes an ELL's need for communication and social skills. To access an ELL supporting document which delineates performance definitions and descriptors, please click on the following link: cpalms.org/uploads/docs/standards/eld/SC.pdf

GENERAL INFORMATION

Course Number: 2003410

Course Path: Section: Grades PreK to 12 Education Courses > **Grade Group:** Grades 9 to 12 and Adult Education Courses > **Subject:** Science > **SubSubject:** Physical Sciences >

Abbreviated Title: PHYS 2 HON

Number of Credits: One (1) credit

Course Length: Year (Y)

Course Attributes:

- Honors

Course Type: Core Academic Course

Course Level: 3

Course Status: Draft - Course Pending Approval

Grade Level(s): 9,10,11,12

Graduation Requirement: Equally Rigorous Science

Educator Certifications

Science (Secondary Grades 7-12)
Physics (Grades 6-12)

Renewable Energy 1 Honors (#2003500) 2022 - And Beyond

Course Standards

Name	Description
SC.912.E.5.8:	Connect the concepts of radiation and the electromagnetic spectrum to the use of historical and newly-developed observational tools.
SC.912.E.5.9:	Analyze the broad effects of space exploration on the economy and culture of Florida.
SC.912.E.6.4:	Analyze how specific geologic processes and features are expressed in Florida and elsewhere.
SC.912.E.6.6:	Analyze past, present, and potential future consequences to the environment resulting from various energy production technologies.
SC.912.E.7.1:	Analyze the movement of matter and energy through the different biogeochemical cycles, including water and carbon.
SC.912.E.7.2:	Analyze the causes of the various kinds of surface and deep water motion within the oceans and their impacts on the transfer of energy between the poles and the equator.
SC.912.E.7.3:	Differentiate and describe the various interactions among Earth systems, including: atmosphere, hydrosphere, cryosphere, geosphere, and biosphere.
SC.912.E.7.4:	Summarize the conditions that contribute to the climate of a geographic area, including the relationships to lakes and oceans.
SC.912.E.7.7:	Identify, analyze, and relate the internal (Earth system) and external (astronomical) conditions that contribute to global climate change.
SC.912.E.7.8:	Explain how various atmospheric, oceanic, and hydrologic conditions in Florida have influenced and can influence human behavior, both individually and collectively.
SC.912.E.7.9:	Cite evidence that the ocean has had a significant influence on climate change by absorbing, storing, and moving heat, carbon, and water.
SC.912.L.17.11:	Evaluate the costs and benefits of renewable and nonrenewable resources, such as water, energy, fossil fuels, wildlife, and forests.
SC.912.L.17.12:	Discuss the political, social, and environmental consequences of sustainable use of land.
SC.912.L.17.13:	Discuss the need for adequate monitoring of environmental parameters when making policy decisions.
SC.912.L.17.14:	Assess the need for adequate waste management strategies.
SC.912.L.17.15:	Discuss the effects of technology on environmental quality.
SC.912.L.17.16:	Discuss the large-scale environmental impacts resulting from human activity, including waste spills, oil spills, runoff, greenhouse gases, ozone depletion, and surface and groundwater pollution.
SC.912.L.17.17:	Assess the effectiveness of innovative methods of protecting the environment.
SC.912.L.17.18:	Describe how human population size and resource use relate to environmental quality.
SC.912.L.17.19:	Describe how different natural resources are produced and how their rates of use and renewal limit availability.
SC.912.L.17.20:	Predict the impact of individuals on environmental systems and examine how human lifestyles affect sustainability.
SC.912.N.1.1:	Define a problem based on a specific body of knowledge, for example: biology, chemistry, physics, and earth/space science, and do the following: 1. **Pose questions about the natural world,** (Articulate the purpose of the investigation and identify the relevant scientific concepts). 2. **Conduct systematic observations,** (Write procedures that are clear and replicable. Identify observables and examine relationships between test (independent) variable and outcome (dependent) variable. Employ appropriate methods for accurate and consistent observations; conduct and record measurements at appropriate levels of precision. Follow safety guidelines). 3. **Examine books and other sources of information to see what is already known,** 4. **Review what is known in light of empirical evidence,** (Examine whether available empirical evidence can be interpreted in terms of existing knowledge and models, and if not, modify or develop new models). 5. **Plan investigations,** (Design and evaluate a scientific investigation). 6. **Use tools to gather, analyze, and interpret data (this includes the use of measurement in metric and other systems, and also the generation and interpretation of graphical representations of data, including data tables and graphs),** (Collect data or evidence in an organized way. Properly use instruments, equipment, and materials (e.g., scales, probeware, meter sticks, microscopes, computers) including set-up, calibration, technique, maintenance, and storage). 7. **Pose answers, explanations, or descriptions of events,** 8. **Generate explanations that explicate or describe natural phenomena (inferences),** 9. **Use appropriate evidence and reasoning to justify these explanations to others,** 10. **Communicate results of scientific investigations, and** 11. **Evaluate the merits of the explanations produced by others.**
SC.912.N.1.2:	Describe and explain what characterizes science and its methods.
SC.912.N.1.3:	Recognize that the strength or usefulness of a scientific claim is evaluated through scientific argumentation, which depends on critical and logical thinking, and the active consideration of alternative scientific explanations to explain the data presented.
SC.912.N.1.4:	Identify sources of information and assess their reliability according to the strict standards of scientific investigation.
SC.912.N.1.5:	Describe and provide examples of how similar investigations conducted in many parts of the world result in the same outcome.
SC.912.N.1.6:	Describe how scientific inferences are drawn from scientific observations and provide examples from the content being studied.
SC.912.N.1.7:	Recognize the role of creativity in constructing scientific questions, methods and explanations.
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SC.912.N.2.2:	Identify which questions can be answered through science and which questions are outside the boundaries of scientific investigation, such as questions addressed by other ways of knowing, such as art, philosophy, and religion.
SC.912.N.2.4:	Explain that scientific knowledge is both durable and robust and open to change. Scientific knowledge can change because it is often examined and re-examined by new investigations and scientific argumentation. Because of these frequent examinations, scientific knowledge becomes stronger, leading to its durability.
SC.912.N.2.5:	Describe instances in which scientists' varied backgrounds, talents, interests, and goals influence the inferences and thus the explanations that they make about observations of natural phenomena and describe that competing interpretations (explanations) of scientists are a strength of science as they are a source of new, testable ideas that have the potential to add new evidence to support one or another of the explanations.
SC.912.N.3.1:	Explain that a scientific theory is the culmination of many scientific investigations drawing together all the current evidence concerning a substantial range of phenomena; thus, a scientific theory represents the most powerful explanation scientists have to offer.

SC.912.N.3.2:	Describe the role consensus plays in the historical development of a theory in any one of the disciplines of science.
SC.912.N.3.3:	Explain that scientific laws are descriptions of specific relationships under given conditions in nature, but do not offer explanations for those relationships.
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SC.912.N.3.5:	Describe the function of models in science, and identify the wide range of models used in science.
SC.912.N.4.1:	Explain how scientific knowledge and reasoning provide an empirically-based perspective to inform society's decision making.
SC.912.N.4.2:	Weigh the merits of alternative strategies for solving a specific societal problem by comparing a number of different costs and benefits, such as human, economic, and environmental.
SC.912.P.10.1:	Differentiate among the various forms of energy and recognize that they can be transformed from one form to others.
SC.912.P.10.2:	Explore the Law of Conservation of Energy by differentiating among open, closed, and isolated systems and explain that the total energy in an isolated system is a conserved quantity.
SC.912.P.10.11:	Explain and compare nuclear reactions (radioactive decay, fission and fusion), the energy changes associated with them and their associated safety issues.
SC.912.P.10.14:	Differentiate among conductors, semiconductors, and insulators.
SC.912.P.10.15:	Investigate and explain the relationships among current, voltage, resistance, and power.
SC.912.P.10.16:	Explain the relationship between moving charges and magnetic fields, as well as changing magnetic fields and electric fields, and their application to modern technologies.
SC.912.P.10.17:	Explore the theory of electromagnetism by explaining electromagnetic waves in terms of oscillating electric and magnetic fields.
SC.912.P.10.18:	Explore the theory of electromagnetism by comparing and contrasting the different parts of the electromagnetic spectrum in terms of wavelength, frequency, and energy, and relate them to phenomena and applications.
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MA.K12.MTR.3.1:	Complete tasks with mathematical fluency. Mathematicians who complete tasks with mathematical fluency: • Select efficient and appropriate methods for solving problems within the given context. • Maintain flexibility and accuracy while performing procedures and mental calculations. • Complete tasks accurately and with confidence. • Adapt procedures to apply them to a new context. • Use feedback to improve efficiency when performing calculations. **Clarifications:** Teachers who encourage students to complete tasks with mathematical fluency: • Provide students with the flexibility to solve problems by selecting a procedure that allows them to solve efficiently and accurately. • Offer multiple opportunities for students to practice efficient and generalizable methods. • Provide opportunities for students to reflect on the method they used and determine if a more efficient method could have been used.
MA.K12.MTR.4.1:	Engage in discussions that reflect on the mathematical thinking of self and others. Mathematicians who engage in discussions that reflect on the mathematical thinking of self and others: • Communicate mathematical ideas, vocabulary and methods effectively. • Analyze the mathematical thinking of others. • Compare the efficiency of a method to those expressed by others. • Recognize errors and suggest how to correctly solve the task. • Justify results by explaining methods and processes. • Construct possible arguments based on evidence. **Clarifications:** Teachers who encourage students to engage in discussions that reflect on the mathematical thinking of self and others:

	• Establish a culture in which students ask questions of the teacher and their peers, and error is an opportunity for learning. • Create opportunities for students to discuss their thinking with peers. • Select, sequence and present student work to advance and deepen understanding of correct and increasingly efficient methods. • Develop students' ability to justify methods and compare their responses to the responses of their peers.
MA.K12.MTR.5.1:	Use patterns and structure to help understand and connect mathematical concepts. Mathematicians who use patterns and structure to help understand and connect mathematical concepts: • Focus on relevant details within a problem. • Create plans and procedures to logically order events, steps or ideas to solve problems. • Decompose a complex problem into manageable parts. • Relate previously learned concepts to new concepts. • Look for similarities among problems. • Connect solutions of problems to more complicated large-scale situations. **Clarifications:** Teachers who encourage students to use patterns and structure to help understand and connect mathematical concepts: • Help students recognize the patterns in the world around them and connect these patterns to mathematical concepts. • Support students to develop generalizations based on the similarities found among problems. • Provide opportunities for students to create plans and procedures to solve problems. • Develop students' ability to construct relationships between their current understanding and more sophisticated ways of thinking.
MA.K12.MTR.6.1:	Assess the reasonableness of solutions. Mathematicians who assess the reasonableness of solutions: • Estimate to discover possible solutions. • Use benchmark quantities to determine if a solution makes sense. • Check calculations when solving problems. • Verify possible solutions by explaining the methods used. • Evaluate results based on the given context. **Clarifications:** Teachers who encourage students to assess the reasonableness of solutions: • Have students estimate or predict solutions prior to solving. • Prompt students to continually ask, "Does this solution make sense? How do you know?" • Reinforce that students check their work as they progress within and after a task. • Strengthen students' ability to verify solutions through justifications.
MA.K12.MTR.7.1:	Apply mathematics to real-world contexts. Mathematicians who apply mathematics to real-world contexts: • Connect mathematical concepts to everyday experiences. • Use models and methods to understand, represent and solve problems. • Perform investigations to gather data or determine if a method is appropriate. • Redesign models and methods to improve accuracy or efficiency. **Clarifications:** Teachers who encourage students to apply mathematics to real-world contexts: • Provide opportunities for students to create models, both concrete and abstract, and perform investigations. • Challenge students to question the accuracy of their models and methods. • Support students as they validate conclusions by comparing them to the given situation. • Indicate how various concepts can be applied to other disciplines.
ELA.K12.EE.1.1:	Cite evidence to explain and justify reasoning. **Clarifications:** K-1 Students include textual evidence in their oral communication with guidance and support from adults. The evidence can consist of details from the text without naming the text. During 1st grade, students learn how to incorporate the evidence in their writing. 2-3 Students include relevant textual evidence in their written and oral communication. Students should name the text when they refer to it. In 3rd grade, students should use a combination of direct and indirect citations. 4-5 Students continue with previous skills and reference comments made by speakers and peers. Students cite texts that they've directly quoted, paraphrased, or used for information. When writing, students will use the form of citation dictated by the instructor or the style guide referenced by the instructor. 6-8 Students continue with previous skills and use a style guide to create a proper citation. 9-12 Students continue with previous skills and should be aware of existing style guides and the ways in which they differ.
ELA.K12.EE.2.1:	Read and comprehend grade-level complex texts proficiently. **Clarifications:** See Text Complexity for grade-level complexity bands and a text complexity rubric.
ELA.K12.EE.3.1:	Make inferences to support comprehension. **Clarifications:** Students will make inferences before the words infer or inference are introduced. Kindergarten students will answer questions like "Why is the girl smiling?" or make predictions about what will happen based on the title page. Students will use the terms and apply them in 2nd grade and beyond.
	Use appropriate collaborative techniques and active listening skills when engaging in discussions in a variety of situations. **Clarifications:** In kindergarten, students learn to listen to one another respectfully.

ELA.K12.EE.4.1:	In grades 1-2, students build upon these skills by justifying what they are thinking. For example: "I think _____ because _____." The collaborative conversations are becoming academic conversations. In grades 3-12, students engage in academic conversations discussing claims and justifying their reasoning, refining and applying skills. Students build on ideas, propel the conversation, and support claims and counterclaims with evidence.
ELA.K12.EE.5.1:	Use the accepted rules governing a specific format to create quality work. **Clarifications:** Students will incorporate skills learned into work products to produce quality work. For students to incorporate these skills appropriately, they must receive instruction. A 3rd grade student creating a poster board display must have instruction in how to effectively present information to do quality work.
ELA.K12.EE.6.1:	Use appropriate voice and tone when speaking or writing. **Clarifications:** In kindergarten and 1st grade, students learn the difference between formal and informal language. For example, the way we talk to our friends differs from the way we speak to adults. In 2nd grade and beyond, students practice appropriate social and academic language to discuss texts.
ELD.K12.ELL.SC.1:	English language learners communicate information, ideas and concepts necessary for academic success in the content area of Science.
ELD.K12.ELL.SI.1:	English language learners communicate for social and instructional purposes within the school setting.
HE.912.C.1.3:	Evaluate how environment and personal health are interrelated. **Clarifications:** Food options within a community; prenatal-care services; availability of recreational facilities; air quality; weather-safety awareness; and weather, air, and water conditions.
SS.912.C.2.8:	Analyze the impact of citizen participation as a means of achieving political and social change. **Clarifications:** Examples are e-mail campaigns, boycotts, blogs, podcasts, protests, demonstrations, letters to editors.

General Course Information and Notes

VERSION DESCRIPTION

The course content includes: an introduction to energy technology, renewable energy in a sustainable future, the science behind climate change, environmental impacts and economics, and careers in renewable energy. Students will be introduced to different types of renewable energy technologies, how they work, their advantages, disadvantages, and limitations. The types of renewable energies and technologies studied include: wind energy, solar (thermal and photovoltaic), hydro-electric, bio-energy, tidal power, wave energy, geothermal energy, ocean thermal, fuel cells, heat pump systems, and high voltage DC energy transport. The availability and integration of these energy types and technologies are also studied to understand how renewable energy can work as a compliment to and replacement for conventional technologies.

GENERAL NOTES

Honors and Advanced Level Course Note: Advanced courses require a greater demand on students through increased academic rigor. Academic rigor is obtained through the application, analysis, evaluation, and creation of complex ideas that are often abstract and multi-faceted. Students are challenged to think and collaborate critically on the content they are learning. Honors level rigor will be achieved by increasing text complexity through text selection, focus on high-level qualitative measures, and complexity of task. Instruction will be structured to give students a deeper understanding of conceptual themes and organization within and across disciplines. Academic rigor is more than simply assigning to students a greater quantity of work.

Special Notes:

Instructional Practices
Teaching from a range of complex text is optimized when teachers in all subject areas implement the following strategies on a routine basis:

1. Ensuring wide reading from complex text that varies in length.
2. Making close reading and rereading of texts central to lessons.
3. Emphasizing text-specific complex questions, and cognitively complex tasks, reinforce focus on the text and cultivate independence.
4. Emphasizing students supporting answers based upon evidence from the text.
5. Providing extensive research and writing opportunities (claims and evidence).

Florida's Benchmarks for Excellent Student Thinking (B.E.S.T.) Standards
This course includes Florida's B.E.S.T. ELA Expectations (EE) and Mathematical Thinking and Reasoning Standards (MTRs) for students. Florida educators should intentionally embed these standards within the content and their instruction as applicable. For guidance on the implementation of the EEs and MTRs, please visit cpalms.org/Standards/BEST_Standards.aspx and select the appropriate B.E.S.T. Standards package.

English Language Development ELD Standards Special Notes Section:
Teachers are required to provide listening, speaking, reading and writing instruction that allows English language learners (ELL) to communicate information, ideas and concepts for academic success in the content area of Science. For the given level of English language proficiency and with visual, graphic, or interactive support, students will interact with grade level words, expressions, sentences and discourse to process or produce language necessary for academic success The ELD standard should specify a relevant content area concept or topic of study chosen by curriculum developers and teachers which maximizes an ELL's need for communication and social skills. To access an ELL supporting document which delineates performance definitions and descriptors, please click on the following link: cpalms.org/uploads/docs/standards/eld/SC.pdf

GENERAL INFORMATION

Course Number: 2003500

Course Path: Section: Grades PreK to 12 Education Courses > **Grade Group:** Grades 9 to 12 and Adult Education Courses > **Subject:** Science > **SubSubject:** Physical Sciences >

Abbreviated Title: RENEWABLE ENERGY 1 H

Number of Credits: One (1) credit

Course Length: Year (Y)

Course Attributes:

- Honors

Course Type: Elective Course

Course Level: 3

Course Status: Draft - Course Pending Approval

Grade Level(s): 9,10,11,12

Educator Certifications

Chemistry (Grades 6-12)
Physics (Grades 6-12)

Principles of Technology 1 (#2003600) 2022 - And Beyond

Course Standards

Name	Description
SC.912.L.17.11:	Evaluate the costs and benefits of renewable and nonrenewable resources, such as water, energy, fossil fuels, wildlife, and forests.
SC.912.L.17.15:	Discuss the effects of technology on environmental quality.
SC.912.N.1.1:	Define a problem based on a specific body of knowledge, for example: biology, chemistry, physics, and earth/space science, and do the following: 1. **Pose questions about the natural world,** (Articulate the purpose of the investigation and identify the relevant scientific concepts). 2. **Conduct systematic observations,** (Write procedures that are clear and replicable. Identify observables and examine relationships between test (independent) variable and outcome (dependent) variable. Employ appropriate methods for accurate and consistent observations; conduct and record measurements at appropriate levels of precision. Follow safety guidelines). 3. **Examine books and other sources of information to see what is already known,** 4. **Review what is known in light of empirical evidence,** (Examine whether available empirical evidence can be interpreted in terms of existing knowledge and models, and if not, modify or develop new models). 5. **Plan investigations,** (Design and evaluate a scientific investigation). 6. **Use tools to gather, analyze, and interpret data (this includes the use of measurement in metric and other systems, and also the generation and interpretation of graphical representations of data, including data tables and graphs),** (Collect data or evidence in an organized way. Properly use instruments, equipment, and materials (e.g., scales, probeware, meter sticks, microscopes, computers) including set-up, calibration, technique, maintenance, and storage). 7. **Pose answers, explanations, or descriptions of events,** 8. **Generate explanations that explicate or describe natural phenomena (inferences),** 9. **Use appropriate evidence and reasoning to justify these explanations to others,** 10. **Communicate results of scientific investigations, and** 11. **Evaluate the merits of the explanations produced by others.**
SC.912.N.1.2:	Describe and explain what characterizes science and its methods.
SC.912.N.1.3:	Recognize that the strength or usefulness of a scientific claim is evaluated through scientific argumentation, which depends on critical and logical thinking, and the active consideration of alternative scientific explanations to explain the data presented.
SC.912.N.1.4:	Identify sources of information and assess their reliability according to the strict standards of scientific investigation.
SC.912.N.1.5:	Describe and provide examples of how similar investigations conducted in many parts of the world result in the same outcome.
SC.912.N.1.6:	Describe how scientific inferences are drawn from scientific observations and provide examples from the content being studied.
SC.912.N.1.7:	Recognize the role of creativity in constructing scientific questions, methods and explanations.
SC.912.N.2.1:	Identify what is science, what clearly is not science, and what superficially resembles science (but fails to meet the criteria for science).
SC.912.N.2.2:	Identify which questions can be answered through science and which questions are outside the boundaries of scientific investigation, such as questions addressed by other ways of knowing, such as art, philosophy, and religion.
SC.912.N.2.3:	Identify examples of pseudoscience (such as astrology, phrenology) in society.
SC.912.N.2.4:	Explain that scientific knowledge is both durable and robust and open to change. Scientific knowledge can change because it is often examined and re-examined by new investigations and scientific argumentation. Because of these frequent examinations, scientific knowledge becomes stronger, leading to its durability.
SC.912.N.2.5:	Describe instances in which scientists' varied backgrounds, talents, interests, and goals influence the inferences and thus the explanations that they make about observations of natural phenomena and describe that competing interpretations (explanations) of scientists are a strength of science as they are a source of new, testable ideas that have the potential to add new evidence to support one or another of the explanations.
SC.912.N.3.1:	Explain that a scientific theory is the culmination of many scientific investigations drawing together all the current evidence concerning a substantial range of phenomena; thus, a scientific theory represents the most powerful explanation scientists have to offer.
SC.912.N.3.2:	Describe the role consensus plays in the historical development of a theory in any one of the disciplines of science.
SC.912.N.3.3:	Explain that scientific laws are descriptions of specific relationships under given conditions in nature, but do not offer explanations for those relationships.
SC.912.N.3.4:	Recognize that theories do not become laws, nor do laws become theories; theories are well supported explanations and laws are well supported descriptions.
SC.912.N.3.5:	Describe the function of models in science, and identify the wide range of models used in science.
SC.912.N.4.1:	Explain how scientific knowledge and reasoning provide an empirically-based perspective to inform society's decision making.
SC.912.N.4.2:	Weigh the merits of alternative strategies for solving a specific societal problem by comparing a number of different costs and benefits, such as human, economic, and environmental.
SC.912.P.8.1:	Differentiate among the four states of matter.
SC.912.P.8.4:	Explore the scientific theory of atoms (also known as atomic theory) by describing the structure of atoms in terms of protons, neutrons and electrons, and differentiate among these particles in terms of their mass, electrical charges and locations within the atom.
SC.912.P.10.1:	Differentiate among the various forms of energy and recognize that they can be transformed from one form to others.
SC.912.P.10.2:	Explore the Law of Conservation of Energy by differentiating among open, closed, and isolated systems and explain that the total energy in an isolated system is a conserved quantity.
SC.912.P.10.3:	Compare and contrast work and power qualitatively and quantitatively.
SC.912.P.10.4:	Describe heat as the energy transferred by convection, conduction, and radiation, and explain the connection of heat to change in temperature or states of matter.
SC.912.P.10.5:	Relate temperature to the average molecular kinetic energy.
SC.912.P.10.6:	Create and interpret potential energy diagrams, for example: chemical reactions, orbits around a central body, motion of a pendulum.
SC.912.P.10.10:	Compare the magnitude and range of the four fundamental forces (gravitational, electromagnetic, weak nuclear, strong nuclear).
SC.912.P.10.13:	Relate the configuration of static charges to the electric field, electric force, electric potential, and electric potential energy.

SC.912.P.10.14:	Differentiate among conductors, semiconductors, and insulators.
SC.912.P.10.15:	Investigate and explain the relationships among current, voltage, resistance, and power.
SC.912.P.12.1:	Distinguish between scalar and vector quantities and assess which should be used to describe an event.
SC.912.P.12.2:	Analyze the motion of an object in terms of its position, velocity, and acceleration (with respect to a frame of reference) as functions of time.
SC.912.P.12.3:	Interpret and apply Newton's three laws of motion.
SC.912.P.12.4:	Describe how the gravitational force between two objects depends on their masses and the distance between them.
SC.912.P.12.5:	Apply the law of conservation of linear momentum to interactions, such as collisions between objects.
MA.K12.MTR.1.1:	Mathematicians who participate in effortful learning both individually and with others: • Analyze the problem in a way that makes sense given the task. • Ask questions that will help with solving the task. • Build perseverance by modifying methods as needed while solving a challenging task. • Stay engaged and maintain a positive mindset when working to solve tasks. • Help and support each other when attempting a new method or approach. **Clarifications:** Teachers who encourage students to participate actively in effortful learning both individually and with others: • Cultivate a community of growth mindset learners. • Foster perseverance in students by choosing tasks that are challenging. • Develop students' ability to analyze and problem solve. • Recognize students' effort when solving challenging problems.
MA.K12.MTR.2.1:	Demonstrate understanding by representing problems in multiple ways. Mathematicians who demonstrate understanding by representing problems in multiple ways: • Build understanding through modeling and using manipulatives. • Represent solutions to problems in multiple ways using objects, drawings, tables, graphs and equations. • Progress from modeling problems with objects and drawings to using algorithms and equations. • Express connections between concepts and representations. • Choose a representation based on the given context or purpose. **Clarifications:** Teachers who encourage students to demonstrate understanding by representing problems in multiple ways: • Help students make connections between concepts and representations. • Provide opportunities for students to use manipulatives when investigating concepts. • Guide students from concrete to pictorial to abstract representations as understanding progresses. • Show students that various representations can have different purposes and can be useful in different situations.
MA.K12.MTR.3.1:	Complete tasks with mathematical fluency. Mathematicians who complete tasks with mathematical fluency: • Select efficient and appropriate methods for solving problems within the given context. • Maintain flexibility and accuracy while performing procedures and mental calculations. • Complete tasks accurately and with confidence. • Adapt procedures to apply them to a new context. • Use feedback to improve efficiency when performing calculations. **Clarifications:** Teachers who encourage students to complete tasks with mathematical fluency: • Provide students with the flexibility to solve problems by selecting a procedure that allows them to solve efficiently and accurately. • Offer multiple opportunities for students to practice efficient and generalizable methods. • Provide opportunities for students to reflect on the method they used and determine if a more efficient method could have been used.
MA.K12.MTR.4.1:	Engage in discussions that reflect on the mathematical thinking of self and others. Mathematicians who engage in discussions that reflect on the mathematical thinking of self and others: • Communicate mathematical ideas, vocabulary and methods effectively. • Analyze the mathematical thinking of others. • Compare the efficiency of a method to those expressed by others. • Recognize errors and suggest how to correctly solve the task. • Justify results by explaining methods and processes. • Construct possible arguments based on evidence. **Clarifications:** Teachers who encourage students to engage in discussions that reflect on the mathematical thinking of self and others: • Establish a culture in which students ask questions of the teacher and their peers, and error is an opportunity for learning. • Create opportunities for students to discuss their thinking with peers. • Select, sequence and present student work to advance and deepen understanding of correct and increasingly efficient methods. • Develop students' ability to justify methods and compare their responses to the responses of their peers.
MA.K12.MTR.5.1:	Use patterns and structure to help understand and connect mathematical concepts. Mathematicians who use patterns and structure to help understand and connect mathematical concepts: • Focus on relevant details within a problem. • Create plans and procedures to logically order events, steps or ideas to solve problems. • Decompose a complex problem into manageable parts. • Relate previously learned concepts to new concepts. • Look for similarities among problems. • Connect solutions of problems to more complicated large-scale situations.

	Clarifications: Teachers who encourage students to use patterns and structure to help understand and connect mathematical concepts: • Help students recognize the patterns in the world around them and connect these patterns to mathematical concepts. • Support students to develop generalizations based on the similarities found among problems. • Provide opportunities for students to create plans and procedures to solve problems. • Develop students' ability to construct relationships between their current understanding and more sophisticated ways of thinking.
MA.K12.MTR.6.1:	Assess the reasonableness of solutions. Mathematicians who assess the reasonableness of solutions: • Estimate to discover possible solutions. • Use benchmark quantities to determine if a solution makes sense. • Check calculations when solving problems. • Verify possible solutions by explaining the methods used. • Evaluate results based on the given context.
	Clarifications: Teachers who encourage students to assess the reasonableness of solutions: • Have students estimate or predict solutions prior to solving. • Prompt students to continually ask, "Does this solution make sense? How do you know?" • Reinforce that students check their work as they progress within and after a task. • Strengthen students' ability to verify solutions through justifications.
MA.K12.MTR.7.1:	Apply mathematics to real-world contexts. Mathematicians who apply mathematics to real-world contexts: • Connect mathematical concepts to everyday experiences. • Use models and methods to understand, represent and solve problems. • Perform investigations to gather data or determine if a method is appropriate. • Redesign models and methods to improve accuracy or efficiency.
	Clarifications: Teachers who encourage students to apply mathematics to real-world contexts: • Provide opportunities for students to create models, both concrete and abstract, and perform investigations. • Challenge students to question the accuracy of their models and methods. • Support students as they validate conclusions by comparing them to the given situation. • Indicate how various concepts can be applied to other disciplines.
ELA.K12.EE.1.1:	Cite evidence to explain and justify reasoning. **Clarifications:** K-1 Students include textual evidence in their oral communication with guidance and support from adults. The evidence can consist of details from the text without naming the text. During 1st grade, students learn how to incorporate the evidence in their writing. 2-3 Students include relevant textual evidence in their written and oral communication. Students should name the text when they refer to it. In 3rd grade, students should use a combination of direct and indirect citations. 4-5 Students continue with previous skills and reference comments made by speakers and peers. Students cite texts that they've directly quoted, paraphrased, or used for information. When writing, students will use the form of citation dictated by the instructor or the style guide referenced by the instructor. 6-8 Students continue with previous skills and use a style guide to create a proper citation. 9-12 Students continue with previous skills and should be aware of existing style guides and the ways in which they differ.
ELA.K12.EE.2.1:	Read and comprehend grade-level complex texts proficiently. **Clarifications:** See Text Complexity for grade-level complexity bands and a text complexity rubric.
ELA.K12.EE.3.1:	Make inferences to support comprehension. **Clarifications:** Students will make inferences before the words infer or inference are introduced. Kindergarten students will answer questions like "Why is the girl smiling?" or make predictions about what will happen based on the title page. Students will use the terms and apply them in 2nd grade and beyond.
ELA.K12.EE.4.1:	Use appropriate collaborative techniques and active listening skills when engaging in discussions in a variety of situations. **Clarifications:** In kindergarten, students learn to listen to one another respectfully. In grades 1-2, students build upon these skills by justifying what they are thinking. For example: "I think _____ because _____." The collaborative conversations are becoming academic conversations. In grades 3-12, students engage in academic conversations discussing claims and justifying their reasoning, refining and applying skills. Students build on ideas, propel the conversation, and support claims and counterclaims with evidence.
ELA.K12.EE.5.1:	Use the accepted rules governing a specific format to create quality work. **Clarifications:** Students will incorporate skills learned into work products to produce quality work. For students to incorporate these skills appropriately, they must receive instruction. A 3rd grade student creating a poster board display must have instruction in how to effectively present information to do quality work.
ELA.K12.EE.6.1:	Use appropriate voice and tone when speaking or writing. **Clarifications:** In kindergarten and 1st grade, students learn the difference between formal and informal language. For example, the way we talk to our friends

	differs from the way we speak to adults. In 2nd grade and beyond, students practice appropriate social and academic language to discuss texts.
ELD.K12.ELL.SC.1:	English language learners communicate information, ideas and concepts necessary for academic success in the content area of Science.
ELD.K12.ELL.SI.1:	English language learners communicate for social and instructional purposes within the school setting.

General Course Information and Notes

GENERAL NOTES

Laboratory investigations that include the use of scientific inquiry, research, measurement, problem solving, laboratory apparatus and technologies, experimental procedures, and safety procedures are an integral part of this course. The National Science Teachers Association (NSTA) recommends that at the high school level, all students should be in the science lab or field, collecting data every week. School laboratory investigations (labs) are defined by the National Research Council (NRC) as an experience in the laboratory, classroom, or the field that provides students with opportunities to interact directly with natural phenomena or with data collected by others using tools, materials, data collection techniques, and models (NRC, 2006, p. 3). Laboratory investigations in the high school classroom should help all students develop a growing understanding of the complexity and ambiguity of empirical work, as well as the skills to calibrate and troubleshoot equipment used to make observations. Learners should understand measurement error; and have the skills to aggregate, interpret, and present the resulting data (National Research Council, 2006, p.77; NSTA, 2007).

Special Notes

Instructional Practices

Teaching from a range of complex text is optimized when teachers in all subject areas implement the following strategies on a routine basis:

1. Ensuring wide reading from complex text that varies in length.
2. Making close reading and rereading of texts central to lessons.
3. Emphasizing text-specific complex questions, and cognitively complex tasks, reinforce focus on the text and cultivate independence.
4. Emphasizing students supporting answers based upon evidence from the text.
5. Providing extensive research and writing opportunities (claims and evidence).

Science and Engineering Practices (NRC *Framework for K-12 Science Education, 2010*)

- Asking questions (for science) and defining problems (for engineering).
- Developing and using models.
- Planning and carrying out investigations.
- Analyzing and interpreting data.
- Using mathematics, information and computer technology, and computational thinking.
- Constructing explanations (for science) and designing solutions (for engineering).
- Engaging in argument from evidence.
- Obtaining, evaluating, and communicating information.

cy Standards in Science

Secondary science courses include reading standards for literacy in science and technical subjects 6-12 and writing standards for literacy in history/social studies, science, and technical subjects 6-12. The courses also include speaking and listening standards. For a complete list of standards required for this course click on the blue tile labeled course standards. You may also download the complete course including all required standards and notes sections using the export function located at the top of this page.

Florida's Benchmarks for Excellent Student Thinking (B.E.S.T.) Standards

This course includes Florida's B.E.S.T. ELA Expectations (EE) and Mathematical Thinking and Reasoning Standards (MTRs) for students. Florida educators should intentionally embed these standards within the content and their instruction as applicable. For guidance on the implementation of the EEs and MTRs, please visit cpalms.org/Standards/BEST_Standards.aspx and select the appropriate B.E.S.T. Standards package.

English Language Development ELD Standards Special Notes Section:

Teachers are required to provide listening, speaking, reading and writing instruction that allows English language learners (ELL) to communicate information, ideas and concepts for academic success in the content area of Science. For the given level of English language proficiency and with visual, graphic, or interactive support, students will interact with grade level words, expressions, sentences and discourse to process or produce language necessary for academic success The ELD standard should specify a relevant content area concept or topic of study chosen by curriculum developers and teachers which maximizes an ELL's need for communication and social skills. To access an ELL supporting document which delineates performance definitions and descriptors, please click on the following link: cpalms.org/uploads/docs/standards/eld/SC.pdf

GENERAL INFORMATION

Course Number: 2003600

Course Path: Section: Grades PreK to 12 Education Courses > **Grade Group:** Grades 9 to 12 and Adult Education Courses > **Subject:** Science > **SubSubject:** Physical Sciences > **Abbreviated Title:** PRINC TECH 1

Number of Credits: One (1) credit

Course Length: Year (Y)

Course Type: Core Academic Course

Course Level: 2

Course Status: Draft - Course Pending Approval

Grade Level(s): 9,10,11,12

Graduation Requirement: Equally Rigorous Science

Educator Certifications

Educator Certifications

Science (Secondary Grades 7-12)
Physics (Grades 6-12)

Florida's Preinternational Baccalaureate Chemistry 1 (#2003800) 2022 - And Beyond

Course Standards

Name	Description
SC.912.N.1.1:	Define a problem based on a specific body of knowledge, for example: biology, chemistry, physics, and earth/space science, and do the following: 1. **Pose questions about the natural world,** (Articulate the purpose of the investigation and identify the relevant scientific concepts). 2. **Conduct systematic observations,** (Write procedures that are clear and replicable. Identify observables and examine relationships between test (independent) variable and outcome (dependent) variable. Employ appropriate methods for accurate and consistent observations; conduct and record measurements at appropriate levels of precision. Follow safety guidelines). 3. **Examine books and other sources of information to see what is already known,** 4. **Review what is known in light of empirical evidence,** (Examine whether available empirical evidence can be interpreted in terms of existing knowledge and models, and if not, modify or develop new models). 5. **Plan investigations,** (Design and evaluate a scientific investigation). 6. **Use tools to gather, analyze, and interpret data (this includes the use of measurement in metric and other systems, and also the generation and interpretation of graphical representations of data, including data tables and graphs),** (Collect data or evidence in an organized way. Properly use instruments, equipment, and materials (e.g., scales, probeware, meter sticks, microscopes, computers) including set-up, calibration, technique, maintenance, and storage). 7. **Pose answers, explanations, or descriptions of events,** 8. **Generate explanations that explicate or describe natural phenomena (inferences),** 9. **Use appropriate evidence and reasoning to justify these explanations to others,** 10. **Communicate results of scientific investigations, and** 11. **Evaluate the merits of the explanations produced by others.**
SC.912.N.1.2:	Describe and explain what characterizes science and its methods.
SC.912.N.1.4:	Identify sources of information and assess their reliability according to the strict standards of scientific investigation.
SC.912.N.1.5:	Describe and provide examples of how similar investigations conducted in many parts of the world result in the same outcome.
SC.912.N.2.5:	Describe instances in which scientists' varied backgrounds, talents, interests, and goals influence the inferences and thus the explanations that they make about observations of natural phenomena and describe that competing interpretations (explanations) of scientists are a strength of science as they are a source of new, testable ideas that have the potential to add new evidence to support one or another of the explanations.
SC.912.N.3.2:	Describe the role consensus plays in the historical development of a theory in any one of the disciplines of science.
SC.912.N.3.3:	Explain that scientific laws are descriptions of specific relationships under given conditions in nature, but do not offer explanations for those relationships.
SC.912.N.3.5:	Describe the function of models in science, and identify the wide range of models used in science.
SC.912.N.4.1:	Explain how scientific knowledge and reasoning provide an empirically-based perspective to inform society's decision making.
SC.912.P.8.1:	Differentiate among the four states of matter.
SC.912.P.8.2:	Differentiate between physical and chemical properties and physical and chemical changes of matter.
SC.912.P.8.3:	Explore the scientific theory of atoms (also known as atomic theory) by describing changes in the atomic model over time and why those changes were necessitated by experimental evidence.
SC.912.P.8.4:	Explore the scientific theory of atoms (also known as atomic theory) by describing the structure of atoms in terms of protons, neutrons and electrons, and differentiate among these particles in terms of their mass, electrical charges and locations within the atom.
SC.912.P.8.5:	Relate properties of atoms and their position in the periodic table to the arrangement of their electrons.
SC.912.P.8.6:	Distinguish between bonding forces holding compounds together and other attractive forces, including hydrogen bonding and van der Waals forces.
SC.912.P.8.7:	Interpret formula representations of molecules and compounds in terms of composition and structure.
SC.912.P.8.8:	Characterize types of chemical reactions, for example: redox, acid-base, synthesis, and single and double replacement reactions.
SC.912.P.8.9:	Apply the mole concept and the law of conservation of mass to calculate quantities of chemicals participating in reactions.
SC.912.P.8.11:	Relate acidity and basicity to hydronium and hydroxyl ion concentration and pH.
SC.912.P.10.1:	Differentiate among the various forms of energy and recognize that they can be transformed from one form to others.
SC.912.P.10.5:	Relate temperature to the average molecular kinetic energy.
SC.912.P.10.6:	Create and interpret potential energy diagrams, for example: chemical reactions, orbits around a central body, motion of a pendulum.
SC.912.P.10.7:	Distinguish between endothermic and exothermic chemical processes.
SC.912.P.10.9:	Describe the quantization of energy at the atomic level.
SC.912.P.10.12:	Differentiate between chemical and nuclear reactions.
SC.912.P.10.18:	Explore the theory of electromagnetism by comparing and contrasting the different parts of the electromagnetic spectrum in terms of wavelength, frequency, and energy, and relate them to phenomena and applications.
SC.912.P.12.10:	Interpret the behavior of ideal gases in terms of kinetic molecular theory.
SC.912.P.12.11:	Describe phase transitions in terms of kinetic molecular theory.
SC.912.P.12.12:	Explain how various factors, such as concentration, temperature, and presence of a catalyst affect the rate of a chemical reaction.
SC.912.P.12.13:	Explain the concept of dynamic equilibrium in terms of reversible processes occurring at the same rates.
	Mathematicians who participate in effortful learning both individually and with others: • Analyze the problem in a way that makes sense given the task. • Ask questions that will help with solving the task. • Build perseverance by modifying methods as needed while solving a challenging task.

- Stay engaged and maintain a positive mindset when working to solve tasks.
- Help and support each other when attempting a new method or approach.

MA.K12.MTR.1.1:

Clarifications:
Teachers who encourage students to participate actively in effortful learning both individually and with others:
- Cultivate a community of growth mindset learners.
- Foster perseverance in students by choosing tasks that are challenging.
- Develop students' ability to analyze and problem solve.
- Recognize students' effort when solving challenging problems.

Demonstrate understanding by representing problems in multiple ways.
Mathematicians who demonstrate understanding by representing problems in multiple ways:

- Build understanding through modeling and using manipulatives.
- Represent solutions to problems in multiple ways using objects, drawings, tables, graphs and equations.
- Progress from modeling problems with objects and drawings to using algorithms and equations.
- Express connections between concepts and representations.
- Choose a representation based on the given context or purpose.

MA.K12.MTR.2.1:

Clarifications:
Teachers who encourage students to demonstrate understanding by representing problems in multiple ways:
- Help students make connections between concepts and representations.
- Provide opportunities for students to use manipulatives when investigating concepts.
- Guide students from concrete to pictorial to abstract representations as understanding progresses.
- Show students that various representations can have different purposes and can be useful in different situations.

Complete tasks with mathematical fluency.
Mathematicians who complete tasks with mathematical fluency:

- Select efficient and appropriate methods for solving problems within the given context.
- Maintain flexibility and accuracy while performing procedures and mental calculations.
- Complete tasks accurately and with confidence.
- Adapt procedures to apply them to a new context.
- Use feedback to improve efficiency when performing calculations.

MA.K12.MTR.3.1:

Clarifications:
Teachers who encourage students to complete tasks with mathematical fluency:
- Provide students with the flexibility to solve problems by selecting a procedure that allows them to solve efficiently and accurately.
- Offer multiple opportunities for students to practice efficient and generalizable methods.
- Provide opportunities for students to reflect on the method they used and determine if a more efficient method could have been used.

Engage in discussions that reflect on the mathematical thinking of self and others.
Mathematicians who engage in discussions that reflect on the mathematical thinking of self and others:

- Communicate mathematical ideas, vocabulary and methods effectively.
- Analyze the mathematical thinking of others.
- Compare the efficiency of a method to those expressed by others.
- Recognize errors and suggest how to correctly solve the task.
- Justify results by explaining methods and processes.
- Construct possible arguments based on evidence.

MA.K12.MTR.4.1:

Clarifications:
Teachers who encourage students to engage in discussions that reflect on the mathematical thinking of self and others:
- Establish a culture in which students ask questions of the teacher and their peers, and error is an opportunity for learning.
- Create opportunities for students to discuss their thinking with peers.
- Select, sequence and present student work to advance and deepen understanding of correct and increasingly efficient methods.
- Develop students' ability to justify methods and compare their responses to the responses of their peers.

Use patterns and structure to help understand and connect mathematical concepts.
Mathematicians who use patterns and structure to help understand and connect mathematical concepts:

- Focus on relevant details within a problem.
- Create plans and procedures to logically order events, steps or ideas to solve problems.
- Decompose a complex problem into manageable parts.
- Relate previously learned concepts to new concepts.
- Look for similarities among problems.
- Connect solutions of problems to more complicated large-scale situations.

MA.K12.MTR.5.1:

Clarifications:
Teachers who encourage students to use patterns and structure to help understand and connect mathematical concepts:
- Help students recognize the patterns in the world around them and connect these patterns to mathematical concepts.
- Support students to develop generalizations based on the similarities found among problems.
- Provide opportunities for students to create plans and procedures to solve problems.
- Develop students' ability to construct relationships between their current understanding and more sophisticated ways of thinking.

Assess the reasonableness of solutions.
Mathematicians who assess the reasonableness of solutions:

- Estimate to discover possible solutions.
- Use benchmark quantities to determine if a solution makes sense.

MA.K12.MTR.6.1:	• Check calculations when solving problems. • Verify possible solutions by explaining the methods used. • Evaluate results based on the given context. **Clarifications:** Teachers who encourage students to assess the reasonableness of solutions: • Have students estimate or predict solutions prior to solving. • Prompt students to continually ask, "Does this solution make sense? How do you know?" • Reinforce that students check their work as they progress within and after a task. • Strengthen students' ability to verify solutions through justifications.
MA.K12.MTR.7.1:	Apply mathematics to real-world contexts. Mathematicians who apply mathematics to real-world contexts: • Connect mathematical concepts to everyday experiences. • Use models and methods to understand, represent and solve problems. • Perform investigations to gather data or determine if a method is appropriate. • Redesign models and methods to improve accuracy or efficiency. **Clarifications:** Teachers who encourage students to apply mathematics to real-world contexts: • Provide opportunities for students to create models, both concrete and abstract, and perform investigations. • Challenge students to question the accuracy of their models and methods. • Support students as they validate conclusions by comparing them to the given situation. • Indicate how various concepts can be applied to other disciplines.
ELA.K12.EE.1.1:	Cite evidence to explain and justify reasoning. **Clarifications:** K-1 Students include textual evidence in their oral communication with guidance and support from adults. The evidence can consist of details from the text without naming the text. During 1st grade, students learn how to incorporate the evidence in their writing. 2-3 Students include relevant textual evidence in their written and oral communication. Students should name the text when they refer to it. In 3rd grade, students should use a combination of direct and indirect citations. 4-5 Students continue with previous skills and reference comments made by speakers and peers. Students cite texts that they've directly quoted, paraphrased, or used for information. When writing, students will use the form of citation dictated by the instructor or the style guide referenced by the instructor. 6-8 Students continue with previous skills and use a style guide to create a proper citation. 9-12 Students continue with previous skills and should be aware of existing style guides and the ways in which they differ.
ELA.K12.EE.2.1:	Read and comprehend grade-level complex texts proficiently. **Clarifications:** See Text Complexity for grade-level complexity bands and a text complexity rubric.
ELA.K12.EE.3.1:	Make inferences to support comprehension. **Clarifications:** Students will make inferences before the words infer or inference are introduced. Kindergarten students will answer questions like "Why is the girl smiling?" or make predictions about what will happen based on the title page. Students will use the terms and apply them in 2nd grade and beyond.
ELA.K12.EE.4.1:	Use appropriate collaborative techniques and active listening skills when engaging in discussions in a variety of situations. **Clarifications:** In kindergarten, students learn to listen to one another respectfully. In grades 1-2, students build upon these skills by justifying what they are thinking. For example: "I think _____ because _____." The collaborative conversations are becoming academic conversations. In grades 3-12, students engage in academic conversations discussing claims and justifying their reasoning, refining and applying skills. Students build on ideas, propel the conversation, and support claims and counterclaims with evidence.
ELA.K12.EE.5.1:	Use the accepted rules governing a specific format to create quality work. **Clarifications:** Students will incorporate skills learned into work products to produce quality work. For students to incorporate these skills appropriately, they must receive instruction. A 3rd grade student creating a poster board display must have instruction in how to effectively present information to do quality work.
ELA.K12.EE.6.1:	Use appropriate voice and tone when speaking or writing. **Clarifications:** In kindergarten and 1st grade, students learn the difference between formal and informal language. For example, the way we talk to our friends differs from the way we speak to adults. In 2nd grade and beyond, students practice appropriate social and academic language to discuss texts.

General Course Information and Notes

GENERAL NOTES

Special Note. *Pre-IB courses have been created by individual schools or school districts since before the MYP started. These courses mapped backwards the Diploma Programme (DP) to prepare students as early as age 14. The IB was never involved in creating or approving these courses. The IB acknowledges that it is important for*

students to receive preparation for taking part in the DP, and that preparation is the MYP. The IB designed the MYP to address the whole child, which, as a result, has a very different philosophical approach that aims at educating all students aged 11-16. Pre-IB courses usually deal with content, with less emphasis upon the needs of the whole child or the affective domain than the MYP. A school can have a course that it calls "pre-IB" as long as it makes it clear that the course and any supporting material have been developed independently of the IB. For this reason, the school must name the course along the lines of, for example, the "Any School pre-IB course".

The IB does not recognize pre-IB courses or courses labeled IB by different school districts which are not an official part of the IBDP or IBCC curriculum. Typically, students enrolled in grade 9 or 10 are not in the IBDP or IBCC programmes.

ibanswers.ibo.org/app/answers/detail/a_id/5414/kw/pre-ib. **Florida's Pre-IB courses should only be used in schools where MYP is not offered in order to prepare students to enter the IBDP. Teachers of Florida's Pre-IB courses should have undergone IB training in order to ensure seamless articulation for students within the subject area.**

Honors and Advanced Level Course Note: Advanced courses require a greater demand on students through increased academic rigor. Academic rigor is obtained through the application, analysis, evaluation, and creation of complex ideas that are often abstract and multi-faceted. Students are challenged to think and collaborate critically on the content they are learning. Honors level rigor will be achieved by increasing text complexity through text selection, focus on high-level qualitative measures, and complexity of task. Instruction will be structured to give students a deeper understanding of conceptual themes and organization within and across disciplines. Academic rigor is more than simply assigning to students a greater quantity of work.

Florida's Benchmarks for Excellent Student Thinking (B.E.S.T.) Standards
This course includes Florida's B.E.S.T. ELA Expectations (EE) and Mathematical Thinking and Reasoning Standards (MTRs) for students. Florida educators should intentionally embed these standards within the content and their instruction as applicable. For guidance on the implementation of the EEs and MTRs, please visit cpalms.org/Standards/BEST_Standards.aspx and select the appropriate B.E.S.T. Standards package.

English Language Development ELD Standards Special Notes Section:
Teachers are required to provide listening, speaking, reading and writing instruction that allows English language learners (ELL) to communicate information, ideas and concepts for academic success in the content area of Science. For the given level of English language proficiency and with visual, graphic, or interactive support, students will interact with grade level words, expressions, sentences and discourse to process or produce language necessary for academic success The ELD standard should specify a relevant content area concept or topic of study chosen by curriculum developers and teachers which maximizes an ELL's need for communication and social skills. To access an ELL supporting document which delineates performance definitions and descriptors, please click on the following link: cpalms.org/uploads/docs/standards/eld/SC.pdf

GENERAL INFORMATION

Course Number: 2003800

Course Path: Section: Grades PreK to 12 Education Courses > **Grade Group:** Grades 9 to 12 and Adult Education Courses > **Subject:** Science > **SubSubject:** Chemistry > **Abbreviated Title:** FL PRE-IB CHEM 1

Number of Credits: One (1) credit

Course Length: Year (Y)

Course Attributes:
- Honors

Course Type: Core Academic Course

Course Level: 3

Course Status: Draft - Course Pending Approval

Grade Level(s): 9,10

Graduation Requirement: Equally Rigorous Science

Educator Certifications

Science (Secondary Grades 7-12)
Chemistry (Grades 6-12)

Equivalent Courses

2003340-Chemistry 1
2003350-Chemistry 1 Honors

Florida's Preinternational Baccalaureate Physics 1 (#2003836) 2022 - And Beyond

Course Standards

Name	Description
SC.912.E.5.2:	Identify patterns in the organization and distribution of matter in the universe and the forces that determine them.
SC.912.E.5.6:	Develop logical connections through physical principles, including Kepler's and Newton's Laws about the relationships and the effects of Earth, Moon, and Sun on each other.
SC.912.E.5.8:	Connect the concepts of radiation and the electromagnetic spectrum to the use of historical and newly-developed observational tools.
SC.912.L.18.12:	Discuss the special properties of water that contribute to Earth's suitability as an environment for life: cohesive behavior, ability to moderate temperature, expansion upon freezing, and versatility as a solvent.
SC.912.N.1.1:	Define a problem based on a specific body of knowledge, for example: biology, chemistry, physics, and earth/space science, and do the following: 1. **Pose questions about the natural world,** (Articulate the purpose of the investigation and identify the relevant scientific concepts). 2. **Conduct systematic observations,** (Write procedures that are clear and replicable. Identify observables and examine relationships between test (independent) variable and outcome (dependent) variable. Employ appropriate methods for accurate and consistent observations; conduct and record measurements at appropriate levels of precision. Follow safety guidelines). 3. **Examine books and other sources of information to see what is already known,** 4. **Review what is known in light of empirical evidence,** (Examine whether available empirical evidence can be interpreted in terms of existing knowledge and models, and if not, modify or develop new models). 5. **Plan investigations,** (Design and evaluate a scientific investigation). 6. **Use tools to gather, analyze, and interpret data (this includes the use of measurement in metric and other systems, and also the generation and interpretation of graphical representations of data, including data tables and graphs),** (Collect data or evidence in an organized way. Properly use instruments, equipment, and materials (e.g., scales, probeware, meter sticks, microscopes, computers) including set-up, calibration, technique, maintenance, and storage). 7. **Pose answers, explanations, or descriptions of events,** 8. **Generate explanations that explicate or describe natural phenomena (inferences),** 9. **Use appropriate evidence and reasoning to justify these explanations to others,** 10. **Communicate results of scientific investigations, and** 11. **Evaluate the merits of the explanations produced by others.**
SC.912.N.1.2:	Describe and explain what characterizes science and its methods.
SC.912.N.1.5:	Describe and provide examples of how similar investigations conducted in many parts of the world result in the same outcome.
SC.912.N.1.6:	Describe how scientific inferences are drawn from scientific observations and provide examples from the content being studied.
SC.912.N.1.7:	Recognize the role of creativity in constructing scientific questions, methods and explanations.
SC.912.N.2.2:	Identify which questions can be answered through science and which questions are outside the boundaries of scientific investigation, such as questions addressed by other ways of knowing, such as art, philosophy, and religion.
SC.912.N.2.3:	Identify examples of pseudoscience (such as astrology, phrenology) in society.
SC.912.N.2.4:	Explain that scientific knowledge is both durable and robust and open to change. Scientific knowledge can change because it is often examined and re-examined by new investigations and scientific argumentation. Because of these frequent examinations, scientific knowledge becomes stronger, leading to its durability.
SC.912.N.2.5:	Describe instances in which scientists' varied backgrounds, talents, interests, and goals influence the inferences and thus the explanations that they make about observations of natural phenomena and describe that competing interpretations (explanations) of scientists are a strength of science as they are a source of new, testable ideas that have the potential to add new evidence to support one or another of the explanations.
SC.912.N.3.1:	Explain that a scientific theory is the culmination of many scientific investigations drawing together all the current evidence concerning a substantial range of phenomena; thus, a scientific theory represents the most powerful explanation scientists have to offer.
SC.912.N.3.2:	Describe the role consensus plays in the historical development of a theory in any one of the disciplines of science.
SC.912.N.3.3:	Explain that scientific laws are descriptions of specific relationships under given conditions in nature, but do not offer explanations for those relationships.
SC.912.N.3.4:	Recognize that theories do not become laws, nor do laws become theories; theories are well supported explanations and laws are well supported descriptions.
SC.912.N.3.5:	Describe the function of models in science, and identify the wide range of models used in science.
SC.912.N.4.1:	Explain how scientific knowledge and reasoning provide an empirically-based perspective to inform society's decision making.
SC.912.P.8.1:	Differentiate among the four states of matter.
SC.912.P.8.3:	Explore the scientific theory of atoms (also known as atomic theory) by describing changes in the atomic model over time and why those changes were necessitated by experimental evidence.
SC.912.P.8.4:	Explore the scientific theory of atoms (also known as atomic theory) by describing the structure of atoms in terms of protons, neutrons and electrons, and differentiate among these particles in terms of their mass, electrical charges and locations within the atom.
SC.912.P.10.1:	Differentiate among the various forms of energy and recognize that they can be transformed from one form to others.
SC.912.P.10.2:	Explore the Law of Conservation of Energy by differentiating among open, closed, and isolated systems and explain that the total energy in an isolated system is a conserved quantity.
SC.912.P.10.3:	Compare and contrast work and power qualitatively and quantitatively.
SC.912.P.10.4:	Describe heat as the energy transferred by convection, conduction, and radiation, and explain the connection of heat to change in temperature or states of matter.
SC.912.P.10.5:	Relate temperature to the average molecular kinetic energy.

SC.912.P.10.6:	Create and interpret potential energy diagrams, for example: chemical reactions, orbits around a central body, motion of a pendulum.
SC.912.P.10.7:	Distinguish between endothermic and exothermic chemical processes.
SC.912.P.10.8:	Explain entropy's role in determining the efficiency of processes that convert energy to work.
SC.912.P.10.10:	Compare the magnitude and range of the four fundamental forces (gravitational, electromagnetic, weak nuclear, strong nuclear).
SC.912.P.10.13:	Relate the configuration of static charges to the electric field, electric force, electric potential, and electric potential energy.
SC.912.P.10.14:	Differentiate among conductors, semiconductors, and insulators.
SC.912.P.10.15:	Investigate and explain the relationships among current, voltage, resistance, and power.
SC.912.P.10.16:	Explain the relationship between moving charges and magnetic fields, as well as changing magnetic fields and electric fields, and their application to modern technologies.
SC.912.P.10.17:	Explore the theory of electromagnetism by explaining electromagnetic waves in terms of oscillating electric and magnetic fields.
SC.912.P.10.18:	Explore the theory of electromagnetism by comparing and contrasting the different parts of the electromagnetic spectrum in terms of wavelength, frequency, and energy, and relate them to phenomena and applications.
SC.912.P.10.20:	Describe the measurable properties of waves and explain the relationships among them and how these properties change when the wave moves from one medium to another.
SC.912.P.10.21:	Qualitatively describe the shift in frequency in sound or electromagnetic waves due to the relative motion of a source or a receiver.
SC.912.P.10.22:	Construct ray diagrams and use thin lens and mirror equations to locate the images formed by lenses and mirrors.
SC.912.P.12.1:	Distinguish between scalar and vector quantities and assess which should be used to describe an event.
SC.912.P.12.2:	Analyze the motion of an object in terms of its position, velocity, and acceleration (with respect to a frame of reference) as functions of time.
SC.912.P.12.3:	Interpret and apply Newton's three laws of motion.
SC.912.P.12.4:	Describe how the gravitational force between two objects depends on their masses and the distance between them.
SC.912.P.12.5:	Apply the law of conservation of linear momentum to interactions, such as collisions between objects.
SC.912.P.12.6:	Qualitatively apply the concept of angular momentum.
SC.912.P.12.7:	Recognize that nothing travels faster than the speed of light in vacuum which is the same for all observers no matter how they or the light source are moving.
SC.912.P.12.8:	Recognize that Newton's Laws are a limiting case of Einstein's Special Theory of Relativity at speeds that are much smaller than the speed of light.
SC.912.P.12.9:	Recognize that time, length, and energy depend on the frame of reference.
MA.K12.MTR.1.1:	Mathematicians who participate in effortful learning both individually and with others: • Analyze the problem in a way that makes sense given the task. • Ask questions that will help with solving the task. • Build perseverance by modifying methods as needed while solving a challenging task. • Stay engaged and maintain a positive mindset when working to solve tasks. • Help and support each other when attempting a new method or approach. **Clarifications:** Teachers who encourage students to participate actively in effortful learning both individually and with others: • Cultivate a community of growth mindset learners. • Foster perseverance in students by choosing tasks that are challenging. • Develop students' ability to analyze and problem solve. • Recognize students' effort when solving challenging problems.
MA.K12.MTR.2.1:	Demonstrate understanding by representing problems in multiple ways. Mathematicians who demonstrate understanding by representing problems in multiple ways: • Build understanding through modeling and using manipulatives. • Represent solutions to problems in multiple ways using objects, drawings, tables, graphs and equations. • Progress from modeling problems with objects and drawings to using algorithms and equations. • Express connections between concepts and representations. • Choose a representation based on the given context or purpose. **Clarifications:** Teachers who encourage students to demonstrate understanding by representing problems in multiple ways: • Help students make connections between concepts and representations. • Provide opportunities for students to use manipulatives when investigating concepts. • Guide students from concrete to pictorial to abstract representations as understanding progresses. • Show students that various representations can have different purposes and can be useful in different situations.
MA.K12.MTR.3.1:	Complete tasks with mathematical fluency. Mathematicians who complete tasks with mathematical fluency: • Select efficient and appropriate methods for solving problems within the given context. • Maintain flexibility and accuracy while performing procedures and mental calculations. • Complete tasks accurately and with confidence. • Adapt procedures to apply them to a new context. • Use feedback to improve efficiency when performing calculations. **Clarifications:** Teachers who encourage students to complete tasks with mathematical fluency: • Provide students with the flexibility to solve problems by selecting a procedure that allows them to solve efficiently and accurately. • Offer multiple opportunities for students to practice efficient and generalizable methods. • Provide opportunities for students to reflect on the method they used and determine if a more efficient method could have been used.
	Engage in discussions that reflect on the mathematical thinking of self and others. Mathematicians who engage in discussions that reflect on the mathematical thinking of self and others: • Communicate mathematical ideas, vocabulary and methods effectively. • Analyze the mathematical thinking of others.

MA.K12.MTR.4.1:	• Compare the efficiency of a method to those expressed by others. • Recognize errors and suggest how to correctly solve the task. • Justify results by explaining methods and processes. • Construct possible arguments based on evidence. **Clarifications:** Teachers who encourage students to engage in discussions that reflect on the mathematical thinking of self and others: • Establish a culture in which students ask questions of the teacher and their peers, and error is an opportunity for learning. • Create opportunities for students to discuss their thinking with peers. • Select, sequence and present student work to advance and deepen understanding of correct and increasingly efficient methods. • Develop students' ability to justify methods and compare their responses to the responses of their peers.
MA.K12.MTR.5.1:	Use patterns and structure to help understand and connect mathematical concepts. Mathematicians who use patterns and structure to help understand and connect mathematical concepts: • Focus on relevant details within a problem. • Create plans and procedures to logically order events, steps or ideas to solve problems. • Decompose a complex problem into manageable parts. • Relate previously learned concepts to new concepts. • Look for similarities among problems. • Connect solutions of problems to more complicated large-scale situations. **Clarifications:** Teachers who encourage students to use patterns and structure to help understand and connect mathematical concepts: • Help students recognize the patterns in the world around them and connect these patterns to mathematical concepts. • Support students to develop generalizations based on the similarities found among problems. • Provide opportunities for students to create plans and procedures to solve problems. • Develop students' ability to construct relationships between their current understanding and more sophisticated ways of thinking.
MA.K12.MTR.6.1:	Assess the reasonableness of solutions. Mathematicians who assess the reasonableness of solutions: • Estimate to discover possible solutions. • Use benchmark quantities to determine if a solution makes sense. • Check calculations when solving problems. • Verify possible solutions by explaining the methods used. • Evaluate results based on the given context. **Clarifications:** Teachers who encourage students to assess the reasonableness of solutions: • Have students estimate or predict solutions prior to solving. • Prompt students to continually ask, "Does this solution make sense? How do you know?" • Reinforce that students check their work as they progress within and after a task. • Strengthen students' ability to verify solutions through justifications.
MA.K12.MTR.7.1:	Apply mathematics to real-world contexts. Mathematicians who apply mathematics to real-world contexts: • Connect mathematical concepts to everyday experiences. • Use models and methods to understand, represent and solve problems. • Perform investigations to gather data or determine if a method is appropriate. • Redesign models and methods to improve accuracy or efficiency. **Clarifications:** Teachers who encourage students to apply mathematics to real-world contexts: • Provide opportunities for students to create models, both concrete and abstract, and perform investigations. • Challenge students to question the accuracy of their models and methods. • Support students as they validate conclusions by comparing them to the given situation. • Indicate how various concepts can be applied to other disciplines.
ELA.K12.EE.1.1:	Cite evidence to explain and justify reasoning. **Clarifications:** K-1 Students include textual evidence in their oral communication with guidance and support from adults. The evidence can consist of details from the text without naming the text. During 1st grade, students learn how to incorporate the evidence in their writing. 2-3 Students include relevant textual evidence in their written and oral communication. Students should name the text when they refer to it. In 3rd grade, students should use a combination of direct and indirect citations. 4-5 Students continue with previous skills and reference comments made by speakers and peers. Students cite texts that they've directly quoted, paraphrased, or used for information. When writing, students will use the form of citation dictated by the instructor or the style guide referenced by the instructor. 6-8 Students continue with previous skills and use a style guide to create a proper citation. 9-12 Students continue with previous skills and should be aware of existing style guides and the ways in which they differ.
ELA.K12.EE.2.1:	Read and comprehend grade-level complex texts proficiently. **Clarifications:** See Text Complexity for grade-level complexity bands and a text complexity rubric.
ELA.K12.EE.3.1:	Make inferences to support comprehension. **Clarifications:** Students will make inferences before the words infer or inference are introduced. Kindergarten students will answer questions like "Why is the girl

	smiling?" or make predictions about what will happen based on the title page. Students will use the terms and apply them in 2nd grade and beyond.
ELA.K12.EE.4.1:	Use appropriate collaborative techniques and active listening skills when engaging in discussions in a variety of situations. **Clarifications:** In kindergarten, students learn to listen to one another respectfully. In grades 1-2, students build upon these skills by justifying what they are thinking. For example: "I think _____ because _____." The collaborative conversations are becoming academic conversations. In grades 3-12, students engage in academic conversations discussing claims and justifying their reasoning, refining and applying skills. Students build on ideas, propel the conversation, and support claims and counterclaims with evidence.
ELA.K12.EE.5.1:	Use the accepted rules governing a specific format to create quality work. **Clarifications:** Students will incorporate skills learned into work products to produce quality work. For students to incorporate these skills appropriately, they must receive instruction. A 3rd grade student creating a poster board display must have instruction in how to effectively present information to do quality work.
ELA.K12.EE.6.1:	Use appropriate voice and tone when speaking or writing. **Clarifications:** In kindergarten and 1st grade, students learn the difference between formal and informal language. For example, the way we talk to our friends differs from the way we speak to adults. In 2nd grade and beyond, students practice appropriate social and academic language to discuss texts.
ELD.K12.ELL.SC.1:	English language learners communicate information, ideas and concepts necessary for academic success in the content area of Science.

General Course Information and Notes

GENERAL NOTES

While the content focus of this course is consistent with the Physics 1 course, students will explore these concepts in greater depth as preparatory work for the IB Physics course(s). In general, the academic pace and rigor will be greatly increased for pre-IB level coursework. Coursework should include opportunities for students to develop their understanding of both theory and experiments, developing traditional practical skills and techniques while also developing interpersonal and digital communication skills in preparation for the IB Physics course.

Integral to the experience of students in Pre-IB Physics courses is their experience in the classroom laboratory or in the field. Practical activities allow students to interact directly with natural phenomena and secondary data sources. These experiences provide the students with the opportunity to design investigations, collect data, develop manipulative skills, analyze results, collaborate with peers and evaluate and communicate their findings. Experiments can be used to introduce a topic, investigate a phenomenon or allow students to consider and examine questions and curiosities. These laboratory experiences are essential as preparatory work for the IB Physics course(s).

Instructional Practices

Teaching from a range of complex text is optimized when teachers in all subject areas implement the following strategies on a routing basis:

1. Ensuring wide reading from complex text that varies in length.
2. Making close reading and rereading of texts central to lessons.
3. Emphasizing text-specific complex questions, and cognitively complex tasks, reinforce focus on the text and cultivate independence.
4. Emphasizing students supporting answers based upon evidence from the text.
5. Providing extensive research and writing opportunities (claims and evidence).

Science and Engineering Practices (NRC *Framework for K-12 Science Education, 2010*)

- Asking questions (for science) and defining problems (for engineering).
- Developing and using models.
- Planning and carrying out investigations.
- Analyzing and interpreting data.
- Using mathematics, information and computer technology, and computational thinking.
- Constructing explanations (for science) and designing solutions (for engineering).
- Engaging in argument from evidence.
- Obtaining, evaluating, and communicating information.

Honors and Advanced Level Course Note: Advanced courses require a greater demand on students through increased academic rigor. Academic rigor is obtained through the application, analysis, evaluation, and creation of complex ideas that are often abstract and multi-faceted. Students are challenged to think and collaborate critically on the content they are learning. Honors level rigor will be achieved by increasing text complexity through text selection, focus on high-level qualitative measures, and complexity of task. Instruction will be structured to give students a deeper understanding of conceptual themes and organization within and across disciplines. Academic rigor is more than simply assigning to students a greater quantity of work.

Florida's Benchmarks for Excellent Student Thinking (B.E.S.T.) Standards:

This course includes Florida's B.E.S.T. ELA Expectations (EE) and Mathematical Thinking and Reasoning Standards (MTRs) for students. Florida educators should intentionally embed these standards within the content and their instruction as applicable. For guidance on the implementation of the EEs and MTRs, please visit cpalms.org/Standards/BEST_Standards.aspx and select the appropriate B.E.S.T. Standards package.

English Language Development ELD Standards Special Notes Section:

Teachers are required to provide listening, speaking, reading and writing instruction that allows English language learners (ELL) to communicate information, ideas and concepts for academic success in the content area of Science. For the given level of English language proficiency and with visual, graphic, or interactive support, students will interact with grade level words, expressions, sentences and discourse to process or produce language necessary for academic success The ELD standard should specify a

relevant content area concept or topic of study chosen by curriculum developers and teachers which maximizes an ELL's need for communication and social skills. To access an ELL supporting document which delineates performance definitions and descriptors, please click on the following link: cpalms.org/uploads/docs/standards/eld/SC.pdf.

Course Standards

Appropriate grade levels standards in Language Arts should be used for students in Grades 9-10 and Grades 11-12.

GENERAL INFORMATION

Course Number: 2003836

Course Path: Section: Grades PreK to 12 Education Courses > **Grade Group:** Grades 9 to 12 and Adult Education Courses > **Subject:** Science > **SubSubject:** Physical Sciences >

Abbreviated Title: FL PRE-IB PHYSICS 1

Number of Credits: One (1) credit

Course Length: Year (Y)

Course Attributes:

- Honors

Course Type: Core Academic Course

Course Level: 3

Course Status: Draft - Course Pending Approval

Grade Level(s): 9,10

Graduation Requirement: Equally Rigorous Science

Educator Certifications

Physics (Grades 6-12)

Nuclear Radiation Honors (#2020710) 2022 - And Beyond

Course Standards

Name	Description
SC.912.E.5.1:	Cite evidence used to develop and verify the scientific theory of the Big Bang (also known as the Big Bang Theory) of the origin of the universe.
SC.912.E.5.2:	Identify patterns in the organization and distribution of matter in the universe and the forces that determine them.
SC.912.E.5.3:	Describe and predict how the initial mass of a star determines its evolution.
SC.912.E.5.4:	Explain the physical properties of the Sun and its dynamic nature and connect them to conditions and events on Earth.
SC.912.E.5.7:	Relate the history of and explain the justification for future space exploration and continuing technology development.
SC.912.E.5.8:	Connect the concepts of radiation and the electromagnetic spectrum to the use of historical and newly-developed observational tools.
SC.912.E.6.6:	Analyze past, present, and potential future consequences to the environment resulting from various energy production technologies.
SC.912.E.7.1:	Analyze the movement of matter and energy through the different biogeochemical cycles, including water and carbon.
SC.912.L.14.6:	Explain the significance of genetic factors, environmental factors, and pathogenic agents to health from the perspectives of both individual and public health.
SC.912.L.15.2:	Discuss the use of molecular clocks to estimate how long ago various groups of organisms diverged evolutionarily from one another.
SC.912.L.16.10:	Evaluate the impact of biotechnology on the individual, society and the environment, including medical and ethical issues.
SC.912.L.17.13:	Discuss the need for adequate monitoring of environmental parameters when making policy decisions.
SC.912.L.17.14:	Assess the need for adequate waste management strategies.
SC.912.L.17.15:	Discuss the effects of technology on environmental quality.
SC.912.L.17.16:	Discuss the large-scale environmental impacts resulting from human activity, including waste spills, oil spills, runoff, greenhouse gases, ozone depletion, and surface and groundwater pollution.
SC.912.L.17.17:	Assess the effectiveness of innovative methods of protecting the environment.
SC.912.N.1.1:	Define a problem based on a specific body of knowledge, for example: biology, chemistry, physics, and earth/space science, and do the following: 1. **Pose questions about the natural world,** (Articulate the purpose of the investigation and identify the relevant scientific concepts). 2. **Conduct systematic observations,** (Write procedures that are clear and replicable. Identify observables and examine relationships between test (independent) variable and outcome (dependent) variable. Employ appropriate methods for accurate and consistent observations; conduct and record measurements at appropriate levels of precision. Follow safety guidelines). 3. **Examine books and other sources of information to see what is already known,** 4. **Review what is known in light of empirical evidence,** (Examine whether available empirical evidence can be interpreted in terms of existing knowledge and models, and if not, modify or develop new models). 5. **Plan investigations,** (Design and evaluate a scientific investigation). 6. **Use tools to gather, analyze, and interpret data (this includes the use of measurement in metric and other systems, and also the generation and interpretation of graphical representations of data, including data tables and graphs),** (Collect data or evidence in an organized way. Properly use instruments, equipment, and materials (e.g., scales, probeware, meter sticks, microscopes, computers) including set-up, calibration, technique, maintenance, and storage). 7. **Pose answers, explanations, or descriptions of events,** 8. **Generate explanations that explicate or describe natural phenomena (inferences),** 9. **Use appropriate evidence and reasoning to justify these explanations to others,** 10. **Communicate results of scientific investigations, and** 11. **Evaluate the merits of the explanations produced by others.**
SC.912.N.1.2:	Describe and explain what characterizes science and its methods.
SC.912.N.1.3:	Recognize that the strength or usefulness of a scientific claim is evaluated through scientific argumentation, which depends on critical and logical thinking, and the active consideration of alternative scientific explanations to explain the data presented.
SC.912.N.1.4:	Identify sources of information and assess their reliability according to the strict standards of scientific investigation.
SC.912.N.1.5:	Describe and provide examples of how similar investigations conducted in many parts of the world result in the same outcome.
SC.912.N.1.6:	Describe how scientific inferences are drawn from scientific observations and provide examples from the content being studied.
SC.912.N.1.7:	Recognize the role of creativity in constructing scientific questions, methods and explanations.
SC.912.N.2.1:	Identify what is science, what clearly is not science, and what superficially resembles science (but fails to meet the criteria for science).
SC.912.N.2.2:	Identify which questions can be answered through science and which questions are outside the boundaries of scientific investigation, such as questions addressed by other ways of knowing, such as art, philosophy, and religion.
SC.912.N.2.3:	Identify examples of pseudoscience (such as astrology, phrenology) in society.
SC.912.N.2.4:	Explain that scientific knowledge is both durable and robust and open to change. Scientific knowledge can change because it is often examined and re-examined by new investigations and scientific argumentation. Because of these frequent examinations, scientific knowledge becomes stronger, leading to its durability.
SC.912.N.2.5:	Describe instances in which scientists' varied backgrounds, talents, interests, and goals influence the inferences and thus the explanations that they make about observations of natural phenomena and describe that competing interpretations (explanations) of scientists are a strength of science as they are a source of new, testable ideas that have the potential to add new evidence to support one or another of the explanations.
SC.912.N.3.1:	Explain that a scientific theory is the culmination of many scientific investigations drawing together all the current evidence concerning a substantial range of phenomena; thus, a scientific theory represents the most powerful explanation scientists have to offer.
SC.912.N.3.2:	Describe the role consensus plays in the historical development of a theory in any one of the disciplines of science.
SC.912.N.3.3:	Explain that scientific laws are descriptions of specific relationships under given conditions in nature, but do not offer explanations for those relationships.
SC.912.N.3.4:	Recognize that theories do not become laws, nor do laws become theories; theories are well supported explanations and laws are well supported descriptions.

SC.912.N.3.5:	Describe the function of models in science, and identify the wide range of models used in science.
SC.912.N.4.1:	Explain how scientific knowledge and reasoning provide an empirically-based perspective to inform society's decision making.
SC.912.N.4.2:	Weigh the merits of alternative strategies for solving a specific societal problem by comparing a number of different costs and benefits, such as human, economic, and environmental.
SC.912.P.8.3:	Explore the scientific theory of atoms (also known as atomic theory) by describing changes in the atomic model over time and why those changes were necessitated by experimental evidence.
SC.912.P.8.4:	Explore the scientific theory of atoms (also known as atomic theory) by describing the structure of atoms in terms of protons, neutrons and electrons, and differentiate among these particles in terms of their mass, electrical charges and locations within the atom.
SC.912.P.8.5:	Relate properties of atoms and their position in the periodic table to the arrangement of their electrons.
SC.912.P.10.2:	Explore the Law of Conservation of Energy by differentiating among open, closed, and isolated systems and explain that the total energy in an isolated system is a conserved quantity.
SC.912.P.10.8:	Explain entropy's role in determining the efficiency of processes that convert energy to work.
SC.912.P.10.9:	Describe the quantization of energy at the atomic level.
SC.912.P.10.10:	Compare the magnitude and range of the four fundamental forces (gravitational, electromagnetic, weak nuclear, strong nuclear).
SC.912.P.10.11:	Explain and compare nuclear reactions (radioactive decay, fission and fusion), the energy changes associated with them and their associated safety issues.
SC.912.P.10.12:	Differentiate between chemical and nuclear reactions.
SC.912.P.10.16:	Explain the relationship between moving charges and magnetic fields, as well as changing magnetic fields and electric fields, and their application to modern technologies.
SC.912.P.10.18:	Explore the theory of electromagnetism by comparing and contrasting the different parts of the electromagnetic spectrum in terms of wavelength, frequency, and energy, and relate them to phenomena and applications.
SC.912.P.12.5:	Apply the law of conservation of linear momentum to interactions, such as collisions between objects.
SC.912.P.12.7:	Recognize that nothing travels faster than the speed of light in vacuum which is the same for all observers no matter how they or the light source are moving.
SC.912.P.12.9:	Recognize that time, length, and energy depend on the frame of reference.
MA.K12.MTR.1.1:	Mathematicians who participate in effortful learning both individually and with others: • Analyze the problem in a way that makes sense given the task. • Ask questions that will help with solving the task. • Build perseverance by modifying methods as needed while solving a challenging task. • Stay engaged and maintain a positive mindset when working to solve tasks. • Help and support each other when attempting a new method or approach. **Clarifications:** Teachers who encourage students to participate actively in effortful learning both individually and with others: • Cultivate a community of growth mindset learners. • Foster perseverance in students by choosing tasks that are challenging. • Develop students' ability to analyze and problem solve. • Recognize students' effort when solving challenging problems.
MA.K12.MTR.2.1:	Demonstrate understanding by representing problems in multiple ways. Mathematicians who demonstrate understanding by representing problems in multiple ways: • Build understanding through modeling and using manipulatives. • Represent solutions to problems in multiple ways using objects, drawings, tables, graphs and equations. • Progress from modeling problems with objects and drawings to using algorithms and equations. • Express connections between concepts and representations. • Choose a representation based on the given context or purpose. **Clarifications:** Teachers who encourage students to demonstrate understanding by representing problems in multiple ways: • Help students make connections between concepts and representations. • Provide opportunities for students to use manipulatives when investigating concepts. • Guide students from concrete to pictorial to abstract representations as understanding progresses. • Show students that various representations can have different purposes and can be useful in different situations.
MA.K12.MTR.3.1:	Complete tasks with mathematical fluency. Mathematicians who complete tasks with mathematical fluency: • Select efficient and appropriate methods for solving problems within the given context. • Maintain flexibility and accuracy while performing procedures and mental calculations. • Complete tasks accurately and with confidence. • Adapt procedures to apply them to a new context. • Use feedback to improve efficiency when performing calculations. **Clarifications:** Teachers who encourage students to complete tasks with mathematical fluency: • Provide students with the flexibility to solve problems by selecting a procedure that allows them to solve efficiently and accurately. • Offer multiple opportunities for students to practice efficient and generalizable methods. • Provide opportunities for students to reflect on the method they used and determine if a more efficient method could have been used.
	Engage in discussions that reflect on the mathematical thinking of self and others. Mathematicians who engage in discussions that reflect on the mathematical thinking of self and others: • Communicate mathematical ideas, vocabulary and methods effectively. • Analyze the mathematical thinking of others. • Compare the efficiency of a method to those expressed by others. • Recognize errors and suggest how to correctly solve the task.

MA.K12.MTR.4.1:	• Justify results by explaining methods and processes. • Construct possible arguments based on evidence. **Clarifications:** Teachers who encourage students to engage in discussions that reflect on the mathematical thinking of self and others: • Establish a culture in which students ask questions of the teacher and their peers, and error is an opportunity for learning. • Create opportunities for students to discuss their thinking with peers. • Select, sequence and present student work to advance and deepen understanding of correct and increasingly efficient methods. • Develop students' ability to justify methods and compare their responses to the responses of their peers.
MA.K12.MTR.5.1:	Use patterns and structure to help understand and connect mathematical concepts. Mathematicians who use patterns and structure to help understand and connect mathematical concepts: • Focus on relevant details within a problem. • Create plans and procedures to logically order events, steps or ideas to solve problems. • Decompose a complex problem into manageable parts. • Relate previously learned concepts to new concepts. • Look for similarities among problems. • Connect solutions of problems to more complicated large-scale situations. **Clarifications:** Teachers who encourage students to use patterns and structure to help understand and connect mathematical concepts: • Help students recognize the patterns in the world around them and connect these patterns to mathematical concepts. • Support students to develop generalizations based on the similarities found among problems. • Provide opportunities for students to create plans and procedures to solve problems. • Develop students' ability to construct relationships between their current understanding and more sophisticated ways of thinking.
MA.K12.MTR.6.1:	Assess the reasonableness of solutions. Mathematicians who assess the reasonableness of solutions: • Estimate to discover possible solutions. • Use benchmark quantities to determine if a solution makes sense. • Check calculations when solving problems. • Verify possible solutions by explaining the methods used. • Evaluate results based on the given context. **Clarifications:** Teachers who encourage students to assess the reasonableness of solutions: • Have students estimate or predict solutions prior to solving. • Prompt students to continually ask, "Does this solution make sense? How do you know?" • Reinforce that students check their work as they progress within and after a task. • Strengthen students' ability to verify solutions through justifications.
MA.K12.MTR.7.1:	Apply mathematics to real-world contexts. Mathematicians who apply mathematics to real-world contexts: • Connect mathematical concepts to everyday experiences. • Use models and methods to understand, represent and solve problems. • Perform investigations to gather data or determine if a method is appropriate. • Redesign models and methods to improve accuracy or efficiency. **Clarifications:** Teachers who encourage students to apply mathematics to real-world contexts: • Provide opportunities for students to create models, both concrete and abstract, and perform investigations. • Challenge students to question the accuracy of their models and methods. • Support students as they validate conclusions by comparing them to the given situation. • Indicate how various concepts can be applied to other disciplines.
ELA.K12.EE.1.1:	Cite evidence to explain and justify reasoning. **Clarifications:** K-1 Students include textual evidence in their oral communication with guidance and support from adults. The evidence can consist of details from the text without naming the text. During 1st grade, students learn how to incorporate the evidence in their writing. 2-3 Students include relevant textual evidence in their written and oral communication. Students should name the text when they refer to it. In 3rd grade, students should use a combination of direct and indirect citations. 4-5 Students continue with previous skills and reference comments made by speakers and peers. Students cite texts that they've directly quoted, paraphrased, or used for information. When writing, students will use the form of citation dictated by the instructor or the style guide referenced by the instructor. 6-8 Students continue with previous skills and use a style guide to create a proper citation. 9-12 Students continue with previous skills and should be aware of existing style guides and the ways in which they differ.
ELA.K12.EE.2.1:	Read and comprehend grade-level complex texts proficiently. **Clarifications:** See Text Complexity for grade-level complexity bands and a text complexity rubric.
ELA.K12.EE.3.1:	Make inferences to support comprehension. **Clarifications:** Students will make inferences before the words infer or inference are introduced. Kindergarten students will answer questions like "Why is the girl smiling?" or make predictions about what will happen based on the title page. Students will use the terms and apply them in 2nd grade and beyond.

ELA.K12.EE.4.1:	Use appropriate collaborative techniques and active listening skills when engaging in discussions in a variety of situations. **Clarifications:** In kindergarten, students learn to listen to one another respectfully. In grades 1-2, students build upon these skills by justifying what they are thinking. For example: "I think _____ because _____." The collaborative conversations are becoming academic conversations. In grades 3-12, students engage in academic conversations discussing claims and justifying their reasoning, refining and applying skills. Students build on ideas, propel the conversation, and support claims and counterclaims with evidence.
ELA.K12.EE.5.1:	Use the accepted rules governing a specific format to create quality work. **Clarifications:** Students will incorporate skills learned into work products to produce quality work. For students to incorporate these skills appropriately, they must receive instruction. A 3rd grade student creating a poster board display must have instruction in how to effectively present information to do quality work.
ELA.K12.EE.6.1:	Use appropriate voice and tone when speaking or writing. **Clarifications:** In kindergarten and 1st grade, students learn the difference between formal and informal language. For example, the way we talk to our friends differs from the way we speak to adults. In 2nd grade and beyond, students practice appropriate social and academic language to discuss texts.
ELD.K12.ELL.SC.1:	English language learners communicate information, ideas and concepts necessary for academic success in the content area of Science.
ELD.K12.ELL.SI.1:	English language learners communicate for social and instructional purposes within the school setting.

General Course Information and Notes

GENERAL NOTES

While the content focus of this course is consistent with the Nuclear Radiation course, students will explore these concepts in greater depth. In general, the academic pace and rigor will be greatly increased for honors level course work. Laboratory investigations that include the use of scientific inquiry, research, measurement, problem solving, laboratory apparatus and technologies, experimental procedures, and safety procedures are an integral part of this course. The National Science Teachers Association (NSTA) recommends that at the high school level, all students should be in the science lab or field, collecting data every week. School laboratory investigations (labs) are defined by the National Research Council (NRC) as an experience in the laboratory, classroom, or the field that provides students with opportunities to interact directly with natural phenomena or with data collected by others using tools, materials, data collection techniques, and models (NRC, 2006, p. 3). Laboratory investigations in the high school classroom should help all students develop a growing understanding of the complexity and ambiguity of empirical work, as well as the skills to calibrate and troubleshoot equipment used to make observations. Learners should understand measurement error; and have the skills to aggregate, interpret, and present the resulting data (National Research Council, 2006, p.77; NSTA, 2007).

Special Notes:

Instructional Practices
Teaching from a range of complex text is optimized when teachers in all subject areas implement the following strategies on a routine basis:

1. Ensuring wide reading from complex text that varies in length.
2. Making close reading and rereading of texts central to lessons.
3. Emphasizing text-specific complex questions, and cognitively complex tasks, reinforce focus on the text and cultivate independence.
4. Emphasizing students supporting answers based upon evidence from the text.
5. Providing extensive research and writing opportunities (claims and evidence).

Science and Engineering Practices (NRC *Framework for K-12 Science Education, 2010*)

- Asking questions (for science) and defining problems (for engineering).
- Developing and using models.
- Planning and carrying out investigations.
- Analyzing and interpreting data.
- Using mathematics, information and computer technology, and computational thinking.
- Constructing explanations (for science) and designing solutions (for engineering).
- Engaging in argument from evidence.
- Obtaining, evaluating, and communicating information.

Honors and Advanced Level Course Note: Advanced courses require a greater demand on students through increased academic rigor. Academic rigor is obtained through the application, analysis, evaluation, and creation of complex ideas that are often abstract and multi-faceted. Students are challenged to think and collaborate critically on the content they are learning. Honors level rigor will be achieved by increasing text complexity through text selection, focus on high-level qualitative measures, and complexity of task. Instruction will be structured to give students a deeper understanding of conceptual themes and organization within and across disciplines. Academic rigor is more than simply assigning to students a greater quantity of work.

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English Language Development ELD Standards Special Notes Section:

Teachers are required to provide listening, speaking, reading and writing instruction that allows English language learners (ELL) to communicate information, ideas and concepts for academic success in the content area of Science. For the given level of English language proficiency and with visual, graphic, or interactive support, students will interact with grade level words, expressions, sentences and discourse to process or produce language necessary for academic success The ELD standard should specify a relevant content area concept or topic of study chosen by curriculum developers and teachers which maximizes an ELL's need for communication and social skills. To access an ELL supporting document which delineates performance definitions and descriptors, please click on the following link: cpalms.org/uploads/docs/standards/eld/SC.pdf

GENERAL INFORMATION

Course Number: 2020710

Course Path: Section: Grades PreK to 12 Education Courses > **Grade Group:** Grades 9 to 12 and Adult Education Courses > **Subject:** Science > **SubSubject:** Physical Sciences > **Abbreviated Title:** NUC RADI HON

Number of Credits: One (1) credit

Course Length: Year (Y)

Course Attributes:

- Honors

Course Type: Core Academic Course

Course Level: 3

Course Status: Draft - Course Pending Approval

Grade Level(s): 9,10,11,12

Graduation Requirement: Equally Rigorous Science

Educator Certifications

Science (Secondary Grades 7-12)
Chemistry (Grades 6-12)
Physics (Grades 6-12)
Middle Grades General Science (Middle Grades 5-9)
Earth/Space Science (Grades 6-12)
Biology (Grades 6-12)

Astronomy Solar/Galactic Honors (#2020910) 2022 - And Beyond

Course Standards

Name	Description
SC.912.E.5.7:	Relate the history of and explain the justification for future space exploration and continuing technology development.
SC.912.E.5.8:	Connect the concepts of radiation and the electromagnetic spectrum to the use of historical and newly-developed observational tools.
SC.912.E.5.9:	Analyze the broad effects of space exploration on the economy and culture of Florida.
SC.912.E.5.10:	Describe and apply the coordinate system used to locate objects in the sky.
SC.912.E.5.11:	Distinguish the various methods of measuring astronomical distances and apply each in appropriate situations.
SC.912.E.6.2:	Connect surface features to surface processes that are responsible for their formation.
SC.912.E.7.7:	Identify, analyze, and relate the internal (Earth system) and external (astronomical) conditions that contribute to global climate change.
SC.912.N.1.1:	Define a problem based on a specific body of knowledge, for example: biology, chemistry, physics, and earth/space science, and do the following: 1. **Pose questions about the natural world,** (Articulate the purpose of the investigation and identify the relevant scientific concepts). 2. **Conduct systematic observations,** (Write procedures that are clear and replicable. Identify observables and examine relationships between test (independent) variable and outcome (dependent) variable. Employ appropriate methods for accurate and consistent observations; conduct and record measurements at appropriate levels of precision. Follow safety guidelines). 3. **Examine books and other sources of information to see what is already known,** 4. **Review what is known in light of empirical evidence,** (Examine whether available empirical evidence can be interpreted in terms of existing knowledge and models, and if not, modify or develop new models). 5. **Plan investigations,** (Design and evaluate a scientific investigation). 6. **Use tools to gather, analyze, and interpret data (this includes the use of measurement in metric and other systems, and also the generation and interpretation of graphical representations of data, including data tables and graphs),** (Collect data or evidence in an organized way. Properly use instruments, equipment, and materials (e.g., scales, probeware, meter sticks, microscopes, computers) including set-up, calibration, technique, maintenance, and storage). 7. **Pose answers, explanations, or descriptions of events,** 8. **Generate explanations that explicate or describe natural phenomena (inferences),** 9. **Use appropriate evidence and reasoning to justify these explanations to others,** 10. **Communicate results of scientific investigations, and** 11. **Evaluate the merits of the explanations produced by others.**
SC.912.N.1.2:	Describe and explain what characterizes science and its methods.
SC.912.N.1.3:	Recognize that the strength or usefulness of a scientific claim is evaluated through scientific argumentation, which depends on critical and logical thinking, and the active consideration of alternative scientific explanations to explain the data presented.
SC.912.N.1.4:	Identify sources of information and assess their reliability according to the strict standards of scientific investigation.
SC.912.N.1.5:	Describe and provide examples of how similar investigations conducted in many parts of the world result in the same outcome.
SC.912.N.1.6:	Describe how scientific inferences are drawn from scientific observations and provide examples from the content being studied.
SC.912.N.1.7:	Recognize the role of creativity in constructing scientific questions, methods and explanations.
SC.912.N.2.1:	Identify what is science, what clearly is not science, and what superficially resembles science (but fails to meet the criteria for science).
SC.912.N.2.2:	Identify which questions can be answered through science and which questions are outside the boundaries of scientific investigation, such as questions addressed by other ways of knowing, such as art, philosophy, and religion.
SC.912.N.2.3:	Identify examples of pseudoscience (such as astrology, phrenology) in society.
SC.912.N.2.4:	Explain that scientific knowledge is both durable and robust and open to change. Scientific knowledge can change because it is often examined and re-examined by new investigations and scientific argumentation. Because of these frequent examinations, scientific knowledge becomes stronger, leading to its durability.
SC.912.N.2.5:	Describe instances in which scientists' varied backgrounds, talents, interests, and goals influence the inferences and thus the explanations that they make about observations of natural phenomena and describe that competing interpretations (explanations) of scientists are a strength of science as they are a source of new, testable ideas that have the potential to add new evidence to support one or another of the explanations.
SC.912.N.3.1:	Explain that a scientific theory is the culmination of many scientific investigations drawing together all the current evidence concerning a substantial range of phenomena; thus, a scientific theory represents the most powerful explanation scientists have to offer.
SC.912.N.3.2:	Describe the role consensus plays in the historical development of a theory in any one of the disciplines of science.
SC.912.N.3.3:	Explain that scientific laws are descriptions of specific relationships under given conditions in nature, but do not offer explanations for those relationships.
SC.912.N.3.4:	Recognize that theories do not become laws, nor do laws become theories; theories are well supported explanations and laws are well supported descriptions.
SC.912.N.3.5:	Describe the function of models in science, and identify the wide range of models used in science.
SC.912.N.4.1:	Explain how scientific knowledge and reasoning provide an empirically-based perspective to inform society's decision making.
SC.912.N.4.2:	Weigh the merits of alternative strategies for solving a specific societal problem by comparing a number of different costs and benefits, such as human, economic, and environmental.
SC.912.P.8.1:	Differentiate among the four states of matter.
SC.912.P.8.4:	Explore the scientific theory of atoms (also known as atomic theory) by describing the structure of atoms in terms of protons, neutrons and electrons, and differentiate among these particles in terms of their mass, electrical charges and locations within the atom.
SC.912.P.10.4:	Describe heat as the energy transferred by convection, conduction, and radiation, and explain the connection of heat to change in temperature or states of matter.
SC.912.P.10.9:	Describe the quantization of energy at the atomic level.
SC.912.P.10.10:	Compare the magnitude and range of the four fundamental forces (gravitational, electromagnetic, weak nuclear, strong nuclear).

SC.912.P.10.11:	Explain and compare nuclear reactions (radioactive decay, fission and fusion), the energy changes associated with them and their associated safety issues.
SC.912.P.10.18:	Explore the theory of electromagnetism by comparing and contrasting the different parts of the electromagnetic spectrum in terms of wavelength, frequency, and energy, and relate them to phenomena and applications.
SC.912.P.10.19:	Explain that all objects emit and absorb electromagnetic radiation and distinguish between objects that are blackbody radiators and those that are not.
SC.912.P.10.20:	Describe the measurable properties of waves and explain the relationships among them and how these properties change when the wave moves from one medium to another.
SC.912.P.10.21:	Qualitatively describe the shift in frequency in sound or electromagnetic waves due to the relative motion of a source or a receiver.
SC.912.P.10.22:	Construct ray diagrams and use thin lens and mirror equations to locate the images formed by lenses and mirrors.
SC.912.P.12.2:	Analyze the motion of an object in terms of its position, velocity, and acceleration (with respect to a frame of reference) as functions of time.
SC.912.P.12.3:	Interpret and apply Newton's three laws of motion.
SC.912.P.12.4:	Describe how the gravitational force between two objects depends on their masses and the distance between them.
SC.912.P.12.6:	Qualitatively apply the concept of angular momentum.
SC.912.P.12.7:	Recognize that nothing travels faster than the speed of light in vacuum which is the same for all observers no matter how they or the light source are moving.
SC.912.P.12.8:	Recognize that Newton's Laws are a limiting case of Einstein's Special Theory of Relativity at speeds that are much smaller than the speed of light.
SC.912.P.12.9:	Recognize that time, length, and energy depend on the frame of reference.
MA.K12.MTR.1.1:	Mathematicians who participate in effortful learning both individually and with others: • Analyze the problem in a way that makes sense given the task. • Ask questions that will help with solving the task. • Build perseverance by modifying methods as needed while solving a challenging task. • Stay engaged and maintain a positive mindset when working to solve tasks. • Help and support each other when attempting a new method or approach. **Clarifications:** Teachers who encourage students to participate actively in effortful learning both individually and with others: • Cultivate a community of growth mindset learners. • Foster perseverance in students by choosing tasks that are challenging. • Develop students' ability to analyze and problem solve. • Recognize students' effort when solving challenging problems.
MA.K12.MTR.2.1:	Demonstrate understanding by representing problems in multiple ways. Mathematicians who demonstrate understanding by representing problems in multiple ways: • Build understanding through modeling and using manipulatives. • Represent solutions to problems in multiple ways using objects, drawings, tables, graphs and equations. • Progress from modeling problems with objects and drawings to using algorithms and equations. • Express connections between concepts and representations. • Choose a representation based on the given context or purpose. **Clarifications:** Teachers who encourage students to demonstrate understanding by representing problems in multiple ways: • Help students make connections between concepts and representations. • Provide opportunities for students to use manipulatives when investigating concepts. • Guide students from concrete to pictorial to abstract representations as understanding progresses. • Show students that various representations can have different purposes and can be useful in different situations.
MA.K12.MTR.3.1:	Complete tasks with mathematical fluency. Mathematicians who complete tasks with mathematical fluency: • Select efficient and appropriate methods for solving problems within the given context. • Maintain flexibility and accuracy while performing procedures and mental calculations. • Complete tasks accurately and with confidence. • Adapt procedures to apply them to a new context. • Use feedback to improve efficiency when performing calculations. **Clarifications:** Teachers who encourage students to complete tasks with mathematical fluency: • Provide students with the flexibility to solve problems by selecting a procedure that allows them to solve efficiently and accurately. • Offer multiple opportunities for students to practice efficient and generalizable methods. • Provide opportunities for students to reflect on the method they used and determine if a more efficient method could have been used.
MA.K12.MTR.4.1:	Engage in discussions that reflect on the mathematical thinking of self and others. Mathematicians who engage in discussions that reflect on the mathematical thinking of self and others: • Communicate mathematical ideas, vocabulary and methods effectively. • Analyze the mathematical thinking of others. • Compare the efficiency of a method to those expressed by others. • Recognize errors and suggest how to correctly solve the task. • Justify results by explaining methods and processes. • Construct possible arguments based on evidence. **Clarifications:** Teachers who encourage students to engage in discussions that reflect on the mathematical thinking of self and others: • Establish a culture in which students ask questions of the teacher and their peers, and error is an opportunity for learning. • Create opportunities for students to discuss their thinking with peers. • Select, sequence and present student work to advance and deepen understanding of correct and increasingly efficient methods.

	• Develop students' ability to justify methods and compare their responses to the responses of their peers.
MA.K12.MTR.5.1:	Use patterns and structure to help understand and connect mathematical concepts. Mathematicians who use patterns and structure to help understand and connect mathematical concepts: • Focus on relevant details within a problem. • Create plans and procedures to logically order events, steps or ideas to solve problems. • Decompose a complex problem into manageable parts. • Relate previously learned concepts to new concepts. • Look for similarities among problems. • Connect solutions of problems to more complicated large-scale situations. **Clarifications:** Teachers who encourage students to use patterns and structure to help understand and connect mathematical concepts: • Help students recognize the patterns in the world around them and connect these patterns to mathematical concepts. • Support students to develop generalizations based on the similarities found among problems. • Provide opportunities for students to create plans and procedures to solve problems. • Develop students' ability to construct relationships between their current understanding and more sophisticated ways of thinking.
MA.K12.MTR.6.1:	Assess the reasonableness of solutions. Mathematicians who assess the reasonableness of solutions: • Estimate to discover possible solutions. • Use benchmark quantities to determine if a solution makes sense. • Check calculations when solving problems. • Verify possible solutions by explaining the methods used. • Evaluate results based on the given context. **Clarifications:** Teachers who encourage students to assess the reasonableness of solutions: • Have students estimate or predict solutions prior to solving. • Prompt students to continually ask, "Does this solution make sense? How do you know?" • Reinforce that students check their work as they progress within and after a task. • Strengthen students' ability to verify solutions through justifications.
MA.K12.MTR.7.1:	Apply mathematics to real-world contexts. Mathematicians who apply mathematics to real-world contexts: • Connect mathematical concepts to everyday experiences. • Use models and methods to understand, represent and solve problems. • Perform investigations to gather data or determine if a method is appropriate. • Redesign models and methods to improve accuracy or efficiency. **Clarifications:** Teachers who encourage students to apply mathematics to real-world contexts: • Provide opportunities for students to create models, both concrete and abstract, and perform investigations. • Challenge students to question the accuracy of their models and methods. • Support students as they validate conclusions by comparing them to the given situation. • Indicate how various concepts can be applied to other disciplines.
ELA.K12.EE.1.1:	Cite evidence to explain and justify reasoning. **Clarifications:** K-1 Students include textual evidence in their oral communication with guidance and support from adults. The evidence can consist of details from the text without naming the text. During 1st grade, students learn how to incorporate the evidence in their writing. 2-3 Students include relevant textual evidence in their written and oral communication. Students should name the text when they refer to it. In 3rd grade, students should use a combination of direct and indirect citations. 4-5 Students continue with previous skills and reference comments made by speakers and peers. Students cite texts that they've directly quoted, paraphrased, or used for information. When writing, students will use the form of citation dictated by the instructor or the style guide referenced by the instructor. 6-8 Students continue with previous skills and use a style guide to create a proper citation. 9-12 Students continue with previous skills and should be aware of existing style guides and the ways in which they differ.
ELA.K12.EE.2.1:	Read and comprehend grade-level complex texts proficiently. **Clarifications:** See Text Complexity for grade-level complexity bands and a text complexity rubric.
ELA.K12.EE.3.1:	Make inferences to support comprehension. **Clarifications:** Students will make inferences before the words infer or inference are introduced. Kindergarten students will answer questions like "Why is the girl smiling?" or make predictions about what will happen based on the title page. Students will use the terms and apply them in 2nd grade and beyond.
ELA.K12.EE.4.1:	Use appropriate collaborative techniques and active listening skills when engaging in discussions in a variety of situations. **Clarifications:** In kindergarten, students learn to listen to one another respectfully. In grades 1-2, students build upon these skills by justifying what they are thinking. For example: "I think _____ because _____." The collaborative conversations are becoming academic conversations. In grades 3-12, students engage in academic conversations discussing claims and justifying their reasoning, refining and applying skills. Students

	build on ideas, propel the conversation, and support claims and counterclaims with evidence.
ELA.K12.EE.5.1:	Use the accepted rules governing a specific format to create quality work. **Clarifications:** Students will incorporate skills learned into work products to produce quality work. For students to incorporate these skills appropriately, they must receive instruction. A 3rd grade student creating a poster board display must have instruction in how to effectively present information to do quality work.
ELA.K12.EE.6.1:	Use appropriate voice and tone when speaking or writing. **Clarifications:** In kindergarten and 1st grade, students learn the difference between formal and informal language. For example, the way we talk to our friends differs from the way we speak to adults. In 2nd grade and beyond, students practice appropriate social and academic language to discuss texts.
ELD.K12.ELL.SC.1:	English language learners communicate information, ideas and concepts necessary for academic success in the content area of Science.
ELD.K12.ELL.SI.1:	English language learners communicate for social and instructional purposes within the school setting.

General Course Information and Notes

GENERAL NOTES

While the content focus of this course is consistent with the Astronomy Solar/Galactic course, students will explore these concepts in greater depth. In general, the academic pace and rigor will be greatly increased for honors level course work. Laboratory investigations that include the use of scientific inquiry, research, measurement, problem solving, laboratory apparatus and technologies, experimental procedures, and safety procedures are an integral part of this course. The National Science Teachers Association (NSTA) recommends that at the high school level, all students should be in the science lab or field, collecting data every week. School laboratory investigations (labs) are defined by the National Research Council (NRC) as an experience in the laboratory, classroom, or the field that provides students with opportunities to interact directly with natural phenomena or with data collected by others using tools, materials, data collection techniques, and models (NRC, 2006, p. 3). Laboratory investigations in the high school classroom should help all students develop a growing understanding of the complexity and ambiguity of empirical work, as well as the skills to calibrate and troubleshoot equipment used to make observations. Learners should understand measurement error; and have the skills to aggregate, interpret, and present the resulting data (National Research Council, 2006, p.77; NSTA, 2007).

Special Notes:

Instructional Practices Teaching from a range of complex text is optimized when teachers in all subject areas implement the following strategies on a routine basis:

1. Ensuring wide reading from complex text that varies in length.
2. Making close reading and rereading of texts central to lessons.
3. Emphasizing text-specific complex questions, and cognitively complex tasks, reinforce focus on the text and cultivate independence.
4. Emphasizing students supporting answers based upon evidence from the text.
5. Providing extensive research and writing opportunities (claims and evidence).

Science and Engineering Practices (NRC *Framework for K-12 Science Education, 2010*)

- Asking questions (for science) and defining problems (for engineering).
- Developing and using models.
- Planning and carrying out investigations.
- Analyzing and interpreting data.
- Using mathematics, information and computer technology, and computational thinking.
- Constructing explanations (for science) and designing solutions (for engineering).
- Engaging in argument from evidence.
- Obtaining, evaluating, and communicating information.

Honors and Advanced Level Course Note: Advanced courses require a greater demand on students through increased academic rigor. Academic rigor is obtained through the application, analysis, evaluation, and creation of complex ideas that are often abstract and multi-faceted. Students are challenged to think and collaborate critically on the content they are learning. Honors level rigor will be achieved by increasing text complexity through text selection, focus on high-level qualitative measures, and complexity of task. Instruction will be structured to give students a deeper understanding of conceptual themes and organization within and across disciplines. Academic rigor is more than simply assigning to students a greater quantity of work.

Florida's Benchmarks for Excellent Student Thinking (B.E.S.T.) Standards
This course includes Florida's B.E.S.T. ELA Expectations (EE) and Mathematical Thinking and Reasoning Standards (MTRs) for students. Florida educators should intentionally embed these standards within the content and their instruction as applicable. For guidance on the implementation of the EEs and MTRs, please visit cpalms.org/Standards/BEST_Standards.aspx and select the appropriate B.E.S.T. Standards package.

English Language Development ELD Standards Special Notes Section:
Teachers are required to provide listening, speaking, reading and writing instruction that allows English language learners (ELL) to communicate information, ideas and concepts for academic success in the content area of Science. For the given level of English language proficiency and with visual, graphic, or interactive support, students will interact with grade level words, expressions, sentences and discourse to process or produce language necessary for academic success The ELD standard should specify a relevant content area concept or topic of study chosen by curriculum developers and teachers which maximizes an ELL's need for communication and social skills. To access an ELL supporting document which delineates performance definitions and descriptors, please click on the following link: cpalms.org/uploads/docs/standards/eld/SC.pdf

GENERAL INFORMATION

Course Number: 2020910

Course Path: Section: Grades PreK to 12 Education Courses > **Grade Group:** Grades 9 to 12 and Adult Education Courses > **Subject:** Science > **SubSubject:** Earth/Space Sciences >

Abbreviated Title: ASTR S/G HON

Number of Credits: One (1) credit

Course Length: Year (Y)

Course Attributes:

- Honors

Course Type: Core Academic Course

Course Level: 3

Course Status: Draft - Course Pending Approval

Grade Level(s): 9,10,11,12

Graduation Requirement: Equally Rigorous Science

Educator Certifications

Science (Secondary Grades 7-12)
Physics (Grades 6-12)
Middle Grades General Science (Middle Grades 5-9)
Earth/Space Science (Grades 6-12)

Science - Grade K (#5020010) 2022 - And Beyond

Course Standards

Name	Description
SC.K.E.5.1:	Explore the Law of Gravity by investigating how objects are pulled toward the ground unless something holds them up.
SC.K.E.5.2:	Recognize the repeating pattern of day and night.
SC.K.E.5.3:	Recognize that the Sun can only be seen in the daytime.
SC.K.E.5.4:	Observe that sometimes the Moon can be seen at night and sometimes during the day.
SC.K.E.5.5:	Observe that things can be big and things can be small as seen from Earth.
SC.K.E.5.6:	Observe that some objects are far away and some are nearby as seen from Earth.
SC.K.L.14.1:	Recognize the five senses and related body parts.
SC.K.L.14.2:	Recognize that some books and other media portray animals and plants with characteristics and behaviors they do not have in real life.
SC.K.L.14.3:	Observe plants and animals, describe how they are alike and how they are different in the way they look and in the things they do.
SC.K.N.1.1:	Collaborate with a partner to collect information.
SC.K.N.1.2:	Make observations of the natural world and know that they are descriptors collected using the five senses.
SC.K.N.1.3:	Keep records as appropriate -- such as pictorial records -- of investigations conducted.
SC.K.N.1.4:	Observe and create a visual representation of an object which includes its major features.
SC.K.N.1.5:	Recognize that learning can come from careful observation.
SC.K.P.8.1:	Sort objects by observable properties, such as size, shape, color, temperature (hot or cold), weight (heavy or light) and texture.
SC.K.P.9.1:	Recognize that the shape of materials such as paper and clay can be changed by cutting, tearing, crumpling, smashing, or rolling.
SC.K.P.10.1:	Observe that things that make sound vibrate.
SC.K.P.12.1:	Investigate that things move in different ways, such as fast, slow, etc.
SC.K.P.13.1:	Observe that a push or a pull can change the way an object is moving.
MA.K12.MTR.1.1:	Mathematicians who participate in effortful learning both individually and with others: • Analyze the problem in a way that makes sense given the task. • Ask questions that will help with solving the task. • Build perseverance by modifying methods as needed while solving a challenging task. • Stay engaged and maintain a positive mindset when working to solve tasks. • Help and support each other when attempting a new method or approach. **Clarifications:** Teachers who encourage students to participate actively in effortful learning both individually and with others: • Cultivate a community of growth mindset learners. • Foster perseverance in students by choosing tasks that are challenging. • Develop students' ability to analyze and problem solve. • Recognize students' effort when solving challenging problems.
MA.K12.MTR.2.1:	Demonstrate understanding by representing problems in multiple ways. Mathematicians who demonstrate understanding by representing problems in multiple ways: • Build understanding through modeling and using manipulatives. • Represent solutions to problems in multiple ways using objects, drawings, tables, graphs and equations. • Progress from modeling problems with objects and drawings to using algorithms and equations. • Express connections between concepts and representations. • Choose a representation based on the given context or purpose. **Clarifications:** Teachers who encourage students to demonstrate understanding by representing problems in multiple ways: • Help students make connections between concepts and representations. • Provide opportunities for students to use manipulatives when investigating concepts. • Guide students from concrete to pictorial to abstract representations as understanding progresses. • Show students that various representations can have different purposes and can be useful in different situations.
MA.K12.MTR.3.1:	Complete tasks with mathematical fluency. Mathematicians who complete tasks with mathematical fluency: • Select efficient and appropriate methods for solving problems within the given context. • Maintain flexibility and accuracy while performing procedures and mental calculations. • Complete tasks accurately and with confidence. • Adapt procedures to apply them to a new context. • Use feedback to improve efficiency when performing calculations. **Clarifications:** Teachers who encourage students to complete tasks with mathematical fluency: • Provide students with the flexibility to solve problems by selecting a procedure that allows them to solve efficiently and accurately. • Offer multiple opportunities for students to practice efficient and generalizable methods. • Provide opportunities for students to reflect on the method they used and determine if a more efficient method could have been used.
	Engage in discussions that reflect on the mathematical thinking of self and others. Mathematicians who engage in discussions that reflect on the mathematical thinking of self and others:

MA.K12.MTR.4.1:	• Communicate mathematical ideas, vocabulary and methods effectively. • Analyze the mathematical thinking of others. • Compare the efficiency of a method to those expressed by others. • Recognize errors and suggest how to correctly solve the task. • Justify results by explaining methods and processes. • Construct possible arguments based on evidence. **Clarifications:** Teachers who encourage students to engage in discussions that reflect on the mathematical thinking of self and others: • Establish a culture in which students ask questions of the teacher and their peers, and error is an opportunity for learning. • Create opportunities for students to discuss their thinking with peers. • Select, sequence and present student work to advance and deepen understanding of correct and increasingly efficient methods. • Develop students' ability to justify methods and compare their responses to the responses of their peers.
MA.K12.MTR.5.1:	Use patterns and structure to help understand and connect mathematical concepts. Mathematicians who use patterns and structure to help understand and connect mathematical concepts: • Focus on relevant details within a problem. • Create plans and procedures to logically order events, steps or ideas to solve problems. • Decompose a complex problem into manageable parts. • Relate previously learned concepts to new concepts. • Look for similarities among problems. • Connect solutions of problems to more complicated large-scale situations. **Clarifications:** Teachers who encourage students to use patterns and structure to help understand and connect mathematical concepts: • Help students recognize the patterns in the world around them and connect these patterns to mathematical concepts. • Support students to develop generalizations based on the similarities found among problems. • Provide opportunities for students to create plans and procedures to solve problems. • Develop students' ability to construct relationships between their current understanding and more sophisticated ways of thinking.
MA.K12.MTR.6.1:	Assess the reasonableness of solutions. Mathematicians who assess the reasonableness of solutions: • Estimate to discover possible solutions. • Use benchmark quantities to determine if a solution makes sense. • Check calculations when solving problems. • Verify possible solutions by explaining the methods used. • Evaluate results based on the given context. **Clarifications:** Teachers who encourage students to assess the reasonableness of solutions: • Have students estimate or predict solutions prior to solving. • Prompt students to continually ask, "Does this solution make sense? How do you know?" • Reinforce that students check their work as they progress within and after a task. • Strengthen students' ability to verify solutions through justifications.
MA.K12.MTR.7.1:	Apply mathematics to real-world contexts. Mathematicians who apply mathematics to real-world contexts: • Connect mathematical concepts to everyday experiences. • Use models and methods to understand, represent and solve problems. • Perform investigations to gather data or determine if a method is appropriate. • Redesign models and methods to improve accuracy or efficiency. **Clarifications:** Teachers who encourage students to apply mathematics to real-world contexts: • Provide opportunities for students to create models, both concrete and abstract, and perform investigations. • Challenge students to question the accuracy of their models and methods. • Support students as they validate conclusions by comparing them to the given situation. • Indicate how various concepts can be applied to other disciplines.
ELA.K12.EE.1.1:	Cite evidence to explain and justify reasoning. **Clarifications:** K-1 Students include textual evidence in their oral communication with guidance and support from adults. The evidence can consist of details from the text without naming the text. During 1st grade, students learn how to incorporate the evidence in their writing. 2-3 Students include relevant textual evidence in their written and oral communication. Students should name the text when they refer to it. In 3rd grade, students should use a combination of direct and indirect citations. 4-5 Students continue with previous skills and reference comments made by speakers and peers. Students cite texts that they've directly quoted, paraphrased, or used for information. When writing, students will use the form of citation dictated by the instructor or the style guide referenced by the instructor. 6-8 Students continue with previous skills and use a style guide to create a proper citation. 9-12 Students continue with previous skills and should be aware of existing style guides and the ways in which they differ.
ELA.K12.EE.2.1:	Read and comprehend grade-level complex texts proficiently. **Clarifications:** See Text Complexity for grade-level complexity bands and a text complexity rubric.

ELA.K12.EE.3.1:	Make inferences to support comprehension. **Clarifications:** Students will make inferences before the words infer or inference are introduced. Kindergarten students will answer questions like "Why is the girl smiling?" or make predictions about what will happen based on the title page. Students will use the terms and apply them in 2nd grade and beyond.
ELA.K12.EE.4.1:	Use appropriate collaborative techniques and active listening skills when engaging in discussions in a variety of situations. **Clarifications:** In kindergarten, students learn to listen to one another respectfully. In grades 1-2, students build upon these skills by justifying what they are thinking. For example: "I think _____ because _____." The collaborative conversations are becoming academic conversations. In grades 3-12, students engage in academic conversations discussing claims and justifying their reasoning, refining and applying skills. Students build on ideas, propel the conversation, and support claims and counterclaims with evidence.
ELA.K12.EE.5.1:	Use the accepted rules governing a specific format to create quality work. **Clarifications:** Students will incorporate skills learned into work products to produce quality work. For students to incorporate these skills appropriately, they must receive instruction. A 3rd grade student creating a poster board display must have instruction in how to effectively present information to do quality work.
ELA.K12.EE.6.1:	Use appropriate voice and tone when speaking or writing. **Clarifications:** In kindergarten and 1st grade, students learn the difference between formal and informal language. For example, the way we talk to our friends differs from the way we speak to adults. In 2nd grade and beyond, students practice appropriate social and academic language to discuss texts.
ELD.K12.ELL.SC.1:	English language learners communicate information, ideas and concepts necessary for academic success in the content area of Science.
ELD.K12.ELL.SI.1:	English language learners communicate for social and instructional purposes within the school setting.
HE.K.C.1.5:	Recognize there are body parts inside and outside of the body. **Clarifications:** Brain, muscles, and skin.

General Course Information and Notes

GENERAL NOTES

Special Notes:

Instructional Practices
Teaching from a range of complex text is optimized when teachers in all subject areas implement the following strategies on a routine basis:

1. Ensuring wide reading from complex text that varies in length.
2. Making close reading and rereading of texts central to lessons.
3. Emphasizing text-specific complex questions, and cognitively complex tasks, reinforce focus on the text and cultivate independence.
4. Emphasizing students supporting answers based upon evidence from the text.
5. Providing extensive research and writing opportunities (claims and evidence).

Science and Engineering Practices (NRC *Framework for K-12 Science Education, 2010*)

- Asking questions (for science) and defining problems (for engineering).
- Developing and using models.
- Planning and carrying out investigations.
- Analyzing and interpreting data.
- Using mathematics, information and computer technology, and computational thinking.
- Constructing explanations (for science) and designing solutions (for engineering).
- Engaging in argument from evidence.
- Obtaining, evaluating, and communicating information.

Florida's Benchmarks for Excellent Student Thinking (B.E.S.T.) Standards
This course includes Florida's B.E.S.T. ELA Expectations (EE) and Mathematical Thinking and Reasoning Standards (MTRs) for students. Florida educators should intentionally embed these standards within the content and their instruction as applicable. For guidance on the implementation of the EEs and MTRs, please visit cpalms.org/Standards/BEST_Standards.aspx and select the appropriate B.E.S.T. Standards package.

English Language Development ELD Standards Special Notes Section:

Teachers are required to provide listening, speaking, reading and writing instruction that allows English language learners (ELL) to communicate information, ideas and concepts for academic success in the content area of Science. For the given level of English language proficiency and with visual, graphic, or interactive support, students will interact with grade level words, expressions, sentences and discourse to process or produce language necessary for academic success The ELD standard should specify a relevant content area concept or topic of study chosen by curriculum developers and teachers which maximizes an ELL's need for communication and social skills. To access an ELL supporting document which delineates performance definitions and descriptors, please click on the following link: cpalms.org/uploads/docs/standards/eld/SC.pdf

GENERAL INFORMATION

Course Number: 5020010

Course Path: Section: Grades PreK to 12 Education Courses > **Grade Group:** Grades PreK to 5 Education Courses > **Subject:** Science > **SubSubject:** General Sciences >

Abbreviated Title: SCIENCE GRADE K

Course Length: Year (Y)

Course Attributes:

- Class Size Core Required

Course Type: Core Academic Course

Course Status: Draft - Course Pending Approval

Grade Level(s): K

Educator Certifications

Primary Education (K-3)
Prekindergarten/Primary Education (Age 3 through Grade 3)
Early Childhood Education (Early Childhood)
Elementary Education (Elementary Grades 1-6)
Elementary Education (Grades K-6)

Science Grade One (#5020020) 2022 - And Beyond

Course Standards

Name	Description
SC.1.E.5.1:	Observe and discuss that there are more stars in the sky than anyone can easily count and that they are not scattered evenly in the sky.
SC.1.E.5.2:	Explore the Law of Gravity by demonstrating that Earth's gravity pulls any object on or near Earth toward it even though nothing is touching the object.
SC.1.E.5.3:	Investigate how magnifiers make things appear bigger and help people see things they could not see without them.
SC.1.E.5.4:	Identify the beneficial and harmful properties of the Sun.
SC.1.E.6.1:	Recognize that water, rocks, soil, and living organisms are found on Earth's surface.
SC.1.E.6.2:	Describe the need for water and how to be safe around water.
SC.1.E.6.3:	Recognize that some things in the world around us happen fast and some happen slowly.
SC.1.L.14.1:	Make observations of living things and their environment using the five senses.
SC.1.L.14.2:	Identify the major parts of plants, including stem, roots, leaves, and flowers.
SC.1.L.14.3:	Differentiate between living and nonliving things.
SC.1.L.16.1:	Make observations that plants and animals closely resemble their parents, but variations exist among individuals within a population.
SC.1.L.17.1:	Through observation, recognize that all plants and animals, including humans, need the basic necessities of air, water, food, and space.
SC.1.N.1.1:	Raise questions about the natural world, investigate them in teams through free exploration, and generate appropriate explanations based on those explorations.
SC.1.N.1.2:	Using the five senses as tools, make careful observations, describe objects in terms of number, shape, texture, size, weight, color, and motion, and compare their observations with others.
SC.1.N.1.3:	Keep records as appropriate - such as pictorial and written records - of investigations conducted.
SC.1.N.1.4:	Ask "how do you know?" in appropriate situations.
SC.1.P.8.1:	Sort objects by observable properties, such as size, shape, color, temperature (hot or cold), weight (heavy or light), texture, and whether objects sink or float.
SC.1.P.12.1:	Demonstrate and describe the various ways that objects can move, such as in a straight line, zigzag, back-and-forth, round-and-round, fast, and slow.
SC.1.P.13.1:	Demonstrate that the way to change the motion of an object is by applying a push or a pull.
MA.K12.MTR.1.1:	Mathematicians who participate in effortful learning both individually and with others: • Analyze the problem in a way that makes sense given the task. • Ask questions that will help with solving the task. • Build perseverance by modifying methods as needed while solving a challenging task. • Stay engaged and maintain a positive mindset when working to solve tasks. • Help and support each other when attempting a new method or approach. **Clarifications:** Teachers who encourage students to participate actively in effortful learning both individually and with others: • Cultivate a community of growth mindset learners. • Foster perseverance in students by choosing tasks that are challenging. • Develop students' ability to analyze and problem solve. • Recognize students' effort when solving challenging problems.
MA.K12.MTR.2.1:	Demonstrate understanding by representing problems in multiple ways. Mathematicians who demonstrate understanding by representing problems in multiple ways: • Build understanding through modeling and using manipulatives. • Represent solutions to problems in multiple ways using objects, drawings, tables, graphs and equations. • Progress from modeling problems with objects and drawings to using algorithms and equations. • Express connections between concepts and representations. • Choose a representation based on the given context or purpose. **Clarifications:** Teachers who encourage students to demonstrate understanding by representing problems in multiple ways: • Help students make connections between concepts and representations. • Provide opportunities for students to use manipulatives when investigating concepts. • Guide students from concrete to pictorial to abstract representations as understanding progresses. • Show students that various representations can have different purposes and can be useful in different situations.
MA.K12.MTR.3.1:	Complete tasks with mathematical fluency. Mathematicians who complete tasks with mathematical fluency: • Select efficient and appropriate methods for solving problems within the given context. • Maintain flexibility and accuracy while performing procedures and mental calculations. • Complete tasks accurately and with confidence. • Adapt procedures to apply them to a new context. • Use feedback to improve efficiency when performing calculations. **Clarifications:** Teachers who encourage students to complete tasks with mathematical fluency: • Provide students with the flexibility to solve problems by selecting a procedure that allows them to solve efficiently and accurately.

	• Offer multiple opportunities for students to practice efficient and generalizable methods. • Provide opportunities for students to reflect on the method they used and determine if a more efficient method could have been used.
MA.K12.MTR.4.1:	Engage in discussions that reflect on the mathematical thinking of self and others. Mathematicians who engage in discussions that reflect on the mathematical thinking of self and others: • Communicate mathematical ideas, vocabulary and methods effectively. • Analyze the mathematical thinking of others. • Compare the efficiency of a method to those expressed by others. • Recognize errors and suggest how to correctly solve the task. • Justify results by explaining methods and processes. • Construct possible arguments based on evidence. **Clarifications:** Teachers who encourage students to engage in discussions that reflect on the mathematical thinking of self and others: • Establish a culture in which students ask questions of the teacher and their peers, and error is an opportunity for learning. • Create opportunities for students to discuss their thinking with peers. • Select, sequence and present student work to advance and deepen understanding of correct and increasingly efficient methods. • Develop students' ability to justify methods and compare their responses to the responses of their peers.
MA.K12.MTR.5.1:	Use patterns and structure to help understand and connect mathematical concepts. Mathematicians who use patterns and structure to help understand and connect mathematical concepts: • Focus on relevant details within a problem. • Create plans and procedures to logically order events, steps or ideas to solve problems. • Decompose a complex problem into manageable parts. • Relate previously learned concepts to new concepts. • Look for similarities among problems. • Connect solutions of problems to more complicated large-scale situations. **Clarifications:** Teachers who encourage students to use patterns and structure to help understand and connect mathematical concepts: • Help students recognize the patterns in the world around them and connect these patterns to mathematical concepts. • Support students to develop generalizations based on the similarities found among problems. • Provide opportunities for students to create plans and procedures to solve problems. • Develop students' ability to construct relationships between their current understanding and more sophisticated ways of thinking.
MA.K12.MTR.6.1:	Assess the reasonableness of solutions. Mathematicians who assess the reasonableness of solutions: • Estimate to discover possible solutions. • Use benchmark quantities to determine if a solution makes sense. • Check calculations when solving problems. • Verify possible solutions by explaining the methods used. • Evaluate results based on the given context. **Clarifications:** Teachers who encourage students to assess the reasonableness of solutions: • Have students estimate or predict solutions prior to solving. • Prompt students to continually ask, "Does this solution make sense? How do you know?" • Reinforce that students check their work as they progress within and after a task. • Strengthen students' ability to verify solutions through justifications.
MA.K12.MTR.7.1:	Apply mathematics to real-world contexts. Mathematicians who apply mathematics to real-world contexts: • Connect mathematical concepts to everyday experiences. • Use models and methods to understand, represent and solve problems. • Perform investigations to gather data or determine if a method is appropriate. • Redesign models and methods to improve accuracy or efficiency. **Clarifications:** Teachers who encourage students to apply mathematics to real-world contexts: • Provide opportunities for students to create models, both concrete and abstract, and perform investigations. • Challenge students to question the accuracy of their models and methods. • Support students as they validate conclusions by comparing them to the given situation. • Indicate how various concepts can be applied to other disciplines.
ELA.K12.EE.1.1:	Cite evidence to explain and justify reasoning. **Clarifications:** K-1 Students include textual evidence in their oral communication with guidance and support from adults. The evidence can consist of details from the text without naming the text. During 1st grade, students learn how to incorporate the evidence in their writing. 2-3 Students include relevant textual evidence in their written and oral communication. Students should name the text when they refer to it. In 3rd grade, students should use a combination of direct and indirect citations. 4-5 Students continue with previous skills and reference comments made by speakers and peers. Students cite texts that they've directly quoted, paraphrased, or used for information. When writing, students will use the form of citation dictated by the instructor or the style guide referenced by the instructor. 6-8 Students continue with previous skills and use a style guide to create a proper citation. 9-12 Students continue with previous skills and should be aware of existing style guides and the ways in which they differ.

ELA.K12.EE.2.1:	Read and comprehend grade-level complex texts proficiently. **Clarifications:** See Text Complexity for grade-level complexity bands and a text complexity rubric.
ELA.K12.EE.3.1:	Make inferences to support comprehension. **Clarifications:** Students will make inferences before the words infer or inference are introduced. Kindergarten students will answer questions like "Why is the girl smiling?" or make predictions about what will happen based on the title page. Students will use the terms and apply them in 2nd grade and beyond.
ELA.K12.EE.4.1:	Use appropriate collaborative techniques and active listening skills when engaging in discussions in a variety of situations. **Clarifications:** In kindergarten, students learn to listen to one another respectfully. In grades 1-2, students build upon these skills by justifying what they are thinking. For example: "I think _____ because _____." The collaborative conversations are becoming academic conversations. In grades 3-12, students engage in academic conversations discussing claims and justifying their reasoning, refining and applying skills. Students build on ideas, propel the conversation, and support claims and counterclaims with evidence.
ELA.K12.EE.5.1:	Use the accepted rules governing a specific format to create quality work. **Clarifications:** Students will incorporate skills learned into work products to produce quality work. For students to incorporate these skills appropriately, they must receive instruction. A 3rd grade student creating a poster board display must have instruction in how to effectively present information to do quality work.
ELA.K12.EE.6.1:	Use appropriate voice and tone when speaking or writing. **Clarifications:** In kindergarten and 1st grade, students learn the difference between formal and informal language. For example, the way we talk to our friends differs from the way we speak to adults. In 2nd grade and beyond, students practice appropriate social and academic language to discuss texts.
ELD.K12.ELL.SC.1:	English language learners communicate information, ideas and concepts necessary for academic success in the content area of Science.
ELD.K12.ELL.SI.1:	English language learners communicate for social and instructional purposes within the school setting.
HE.1.C.1.5:	Identify the correct names of human body parts. **Clarifications:** Stomach, intestines, heart, lungs, skin, muscles, and bones.

General Course Information and Notes

VERSION DESCRIPTION

Instructional Practices
Teaching from a range of complex text is optimized when teachers in all subject areas implement the following strategies on a routine basis:

1. Ensuring wide reading from complex text that varies in length.
2. Making close reading and rereading of texts central to lessons.
3. Emphasizing text-specific complex questions, and cognitively complex tasks, reinforce focus on the text and cultivate independence.
4. Emphasizing students supporting answers based upon evidence from the text.
5. Providing extensive research and writing opportunities (claims and evidence).

Science and Engineering Practices

- Asking questions (for science) and defining problems (for engineering).
- Developing and using models.
- Planning and carrying out investigations.
- Analyzing and interpreting data.
- Using mathematics, information and computer technology, and computational thinking.
- Constructing explanations (for science) and designing solutions (for engineering).
- Engaging in argument from evidence.
- Obtaining, evaluating, and communicating information.

English Language Development (ELD) Standards Special Notes Section:

Teachers are required to provide listening, speaking, reading and writing instruction that allows English language learners (ELL) to communicate information, ideas and concepts for academic success in the content area of Science. For the given level of English language proficiency and with visual, graphic, or interactive support, students will interact with grade level words, expressions, sentences and discourse to process or produce language necessary for academic success The ELD standard should specify a relevant content area concept or topic of study chosen by curriculum developers and teachers which maximizes an ELL's need for communication and social skills. To access an ELL supporting document which delineates performance definitions and descriptors, please click on the following link: cpalms.org/uploads/docs/standards/eld/SC.pdf.

GENERAL INFORMATION

Course Path: Section: Grades PreK to 12 Education

Course Number: 5020020

Courses > **Grade Group:** Grades PreK to 5 Education Courses > **Subject:** Science > **SubSubject:** General Sciences >

Abbreviated Title: SCIENCE GRADE ONE

Course Length: Year (Y)

Course Attributes:

- Class Size Core Required

Course Type: Core Academic Course

Course Status: Draft - Course Pending Approval

Grade Level(s): 1

Educator Certifications

Elementary Education (Elementary Grades 1-6)
Science (Elementary Grades 1-6)
Primary Education (K-3)
Prekindergarten/Primary Education (Age 3 through Grade 3)

Science - Grade Two (#5020030) 2022 - And Beyond

Course Standards

Name	Description
SC.2.E.6.1:	Recognize that Earth is made up of rocks. Rocks come in many sizes and shapes.
SC.2.E.6.2:	Describe how small pieces of rock and dead plant and animal parts can be the basis of soil and explain the process by which soil is formed.
SC.2.E.6.3:	Classify soil types based on color, texture (size of particles), the ability to retain water, and the ability to support the growth of plants.
SC.2.E.7.1:	Compare and describe changing patterns in nature that repeat themselves, such as weather conditions including temperature and precipitation, day to day and season to season.
SC.2.E.7.2:	Investigate by observing and measuring, that the Sun's energy directly and indirectly warms the water, land, and air.
SC.2.E.7.3:	Investigate, observe and describe how water left in an open container disappears (evaporates), but water in a closed container does not disappear (evaporate).
SC.2.E.7.4:	Investigate that air is all around us and that moving air is wind.
SC.2.E.7.5:	State the importance of preparing for severe weather, lightning, and other weather related events.
SC.2.L.14.1:	Distinguish human body parts (brain, heart, lungs, stomach, muscles, and skeleton) and their basic functions.
SC.2.L.16.1:	Observe and describe major stages in the life cycles of plants and animals, including beans and butterflies.
SC.2.L.17.1:	Compare and contrast the basic needs that all living things, including humans, have for survival.
SC.2.L.17.2:	Recognize and explain that living things are found all over Earth, but each is only able to live in habitats that meet its basic needs.
SC.2.N.1.1:	Raise questions about the natural world, investigate them in teams through free exploration and systematic observations, and generate appropriate explanations based on those explorations.
SC.2.N.1.2:	Compare the observations made by different groups using the same tools.
SC.2.N.1.3:	Ask "how do you know?" in appropriate situations and attempt reasonable answers when asked the same question by others.
SC.2.N.1.4:	Explain how particular scientific investigations should yield similar conclusions when repeated.
SC.2.N.1.5:	Distinguish between empirical observation (what you see, hear, feel, smell, or taste) and ideas or inferences (what you think).
SC.2.N.1.6:	Explain how scientists alone or in groups are always investigating new ways to solve problems.
SC.2.P.8.1:	Observe and measure objects in terms of their properties, including size, shape, color, temperature, weight, texture, sinking or floating in water, and attraction and repulsion of magnets.
SC.2.P.8.2:	Identify objects and materials as solid, liquid, or gas.
SC.2.P.8.3:	Recognize that solids have a definite shape and that liquids and gases take the shape of their container.
SC.2.P.8.4:	Observe and describe water in its solid, liquid, and gaseous states.
SC.2.P.8.5:	Measure and compare temperatures taken every day at the same time.
SC.2.P.8.6:	Measure and compare the volume of liquids using containers of various shapes and sizes.
SC.2.P.9.1:	Investigate that materials can be altered to change some of their properties, but not all materials respond the same way to any one alteration.
SC.2.P.10.1:	Discuss that people use electricity or other forms of energy to cook their food, cool or warm their homes, and power their cars.
SC.2.P.13.1:	Investigate the effect of applying various pushes and pulls on different objects.
SC.2.P.13.2:	Demonstrate that magnets can be used to make some things move without touching them.
SC.2.P.13.3:	Recognize that objects are pulled toward the ground unless something holds them up.
SC.2.P.13.4:	Demonstrate that the greater the force (push or pull) applied to an object, the greater the change in motion of the object.
MA.K12.MTR.1.1:	Mathematicians who participate in effortful learning both individually and with others: • Analyze the problem in a way that makes sense given the task. • Ask questions that will help with solving the task. • Build perseverance by modifying methods as needed while solving a challenging task. • Stay engaged and maintain a positive mindset when working to solve tasks. • Help and support each other when attempting a new method or approach. **Clarifications:** Teachers who encourage students to participate actively in effortful learning both individually and with others: • Cultivate a community of growth mindset learners. • Foster perseverance in students by choosing tasks that are challenging. • Develop students' ability to analyze and problem solve. • Recognize students' effort when solving challenging problems.
MA.K12.MTR.2.1:	Demonstrate understanding by representing problems in multiple ways. Mathematicians who demonstrate understanding by representing problems in multiple ways: • Build understanding through modeling and using manipulatives. • Represent solutions to problems in multiple ways using objects, drawings, tables, graphs and equations. • Progress from modeling problems with objects and drawings to using algorithms and equations. • Express connections between concepts and representations. • Choose a representation based on the given context or purpose. **Clarifications:** Teachers who encourage students to demonstrate understanding by representing problems in multiple ways: • Help students make connections between concepts and representations. • Provide opportunities for students to use manipulatives when investigating concepts. • Guide students from concrete to pictorial to abstract representations as understanding progresses. • Show students that various representations can have different purposes and can be useful in different situations.

MA.K12.MTR.3.1:	Complete tasks with mathematical fluency. Mathematicians who complete tasks with mathematical fluency: • Select efficient and appropriate methods for solving problems within the given context. • Maintain flexibility and accuracy while performing procedures and mental calculations. • Complete tasks accurately and with confidence. • Adapt procedures to apply them to a new context. • Use feedback to improve efficiency when performing calculations. **Clarifications:** Teachers who encourage students to complete tasks with mathematical fluency: • Provide students with the flexibility to solve problems by selecting a procedure that allows them to solve efficiently and accurately. • Offer multiple opportunities for students to practice efficient and generalizable methods. • Provide opportunities for students to reflect on the method they used and determine if a more efficient method could have been used.
MA.K12.MTR.4.1:	Engage in discussions that reflect on the mathematical thinking of self and others. Mathematicians who engage in discussions that reflect on the mathematical thinking of self and others: • Communicate mathematical ideas, vocabulary and methods effectively. • Analyze the mathematical thinking of others. • Compare the efficiency of a method to those expressed by others. • Recognize errors and suggest how to correctly solve the task. • Justify results by explaining methods and processes. • Construct possible arguments based on evidence. **Clarifications:** Teachers who encourage students to engage in discussions that reflect on the mathematical thinking of self and others: • Establish a culture in which students ask questions of the teacher and their peers, and error is an opportunity for learning. • Create opportunities for students to discuss their thinking with peers. • Select, sequence and present student work to advance and deepen understanding of correct and increasingly efficient methods. • Develop students' ability to justify methods and compare their responses to the responses of their peers.
MA.K12.MTR.5.1:	Use patterns and structure to help understand and connect mathematical concepts. Mathematicians who use patterns and structure to help understand and connect mathematical concepts: • Focus on relevant details within a problem. • Create plans and procedures to logically order events, steps or ideas to solve problems. • Decompose a complex problem into manageable parts. • Relate previously learned concepts to new concepts. • Look for similarities among problems. • Connect solutions of problems to more complicated large-scale situations. **Clarifications:** Teachers who encourage students to use patterns and structure to help understand and connect mathematical concepts: • Help students recognize the patterns in the world around them and connect these patterns to mathematical concepts. • Support students to develop generalizations based on the similarities found among problems. • Provide opportunities for students to create plans and procedures to solve problems. • Develop students' ability to construct relationships between their current understanding and more sophisticated ways of thinking.
MA.K12.MTR.6.1:	Assess the reasonableness of solutions. Mathematicians who assess the reasonableness of solutions: • Estimate to discover possible solutions. • Use benchmark quantities to determine if a solution makes sense. • Check calculations when solving problems. • Verify possible solutions by explaining the methods used. • Evaluate results based on the given context. **Clarifications:** Teachers who encourage students to assess the reasonableness of solutions: • Have students estimate or predict solutions prior to solving. • Prompt students to continually ask, "Does this solution make sense? How do you know?" • Reinforce that students check their work as they progress within and after a task. • Strengthen students' ability to verify solutions through justifications.
MA.K12.MTR.7.1:	Apply mathematics to real-world contexts. Mathematicians who apply mathematics to real-world contexts: • Connect mathematical concepts to everyday experiences. • Use models and methods to understand, represent and solve problems. • Perform investigations to gather data or determine if a method is appropriate. • Redesign models and methods to improve accuracy or efficiency. **Clarifications:** Teachers who encourage students to apply mathematics to real-world contexts: • Provide opportunities for students to create models, both concrete and abstract, and perform investigations. • Challenge students to question the accuracy of their models and methods. • Support students as they validate conclusions by comparing them to the given situation. • Indicate how various concepts can be applied to other disciplines.
	Cite evidence to explain and justify reasoning.

ELA.K12.EE.1.1:	**Clarifications:** K-1 Students include textual evidence in their oral communication with guidance and support from adults. The evidence can consist of details from the text without naming the text. During 1st grade, students learn how to incorporate the evidence in their writing. 2-3 Students include relevant textual evidence in their written and oral communication. Students should name the text when they refer to it. In 3rd grade, students should use a combination of direct and indirect citations. 4-5 Students continue with previous skills and reference comments made by speakers and peers. Students cite texts that they've directly quoted, paraphrased, or used for information. When writing, students will use the form of citation dictated by the instructor or the style guide referenced by the instructor. 6-8 Students continue with previous skills and use a style guide to create a proper citation. 9-12 Students continue with previous skills and should be aware of existing style guides and the ways in which they differ.
ELA.K12.EE.2.1:	Read and comprehend grade-level complex texts proficiently. **Clarifications:** See Text Complexity for grade-level complexity bands and a text complexity rubric.
ELA.K12.EE.3.1:	Make inferences to support comprehension. **Clarifications:** Students will make inferences before the words infer or inference are introduced. Kindergarten students will answer questions like "Why is the girl smiling?" or make predictions about what will happen based on the title page. Students will use the terms and apply them in 2nd grade and beyond.
ELA.K12.EE.4.1:	Use appropriate collaborative techniques and active listening skills when engaging in discussions in a variety of situations. **Clarifications:** In kindergarten, students learn to listen to one another respectfully. In grades 1-2, students build upon these skills by justifying what they are thinking. For example: "I think _____ because _____." The collaborative conversations are becoming academic conversations. In grades 3-12, students engage in academic conversations discussing claims and justifying their reasoning, refining and applying skills. Students build on ideas, propel the conversation, and support claims and counterclaims with evidence.
ELA.K12.EE.5.1:	Use the accepted rules governing a specific format to create quality work. **Clarifications:** Students will incorporate skills learned into work products to produce quality work. For students to incorporate these skills appropriately, they must receive instruction. A 3rd grade student creating a poster board display must have instruction in how to effectively present information to do quality work.
ELA.K12.EE.6.1:	Use appropriate voice and tone when speaking or writing. **Clarifications:** In kindergarten and 1st grade, students learn the difference between formal and informal language. For example, the way we talk to our friends differs from the way we speak to adults. In 2nd grade and beyond, students practice appropriate social and academic language to discuss texts.
ELD.K12.ELL.SC.1:	English language learners communicate information, ideas and concepts necessary for academic success in the content area of Science.
ELD.K12.ELL.SI.1:	English language learners communicate for social and instructional purposes within the school setting.
HE.2.B.5.2:	Name healthy options to health-related issues or problems. **Clarifications:** Safety equipment, peer cooperation, and communication.
HE.2.C.1.5:	Recognize the locations and functions of major human organs. **Clarifications:** The functions of the heart, lungs, and muscles.

General Course Information and Notes

GENERAL NOTES

Special Notes:

Instructional Practices
Teaching from a range of complex text is optimized when teachers in all subject areas implement the following strategies on a routine basis:

1. Ensuring wide reading from complex text that varies in length.
2. Making close reading and rereading of texts central to lessons.
3. Emphasizing text-specific complex questions, and cognitively complex tasks, reinforce focus on the text and cultivate independence.
4. Emphasizing students supporting answers based upon evidence from the text.
5. Providing extensive research and writing opportunities (claims and evidence).

Science and Engineering Practices (NRC *Framework for K-12 Science Education, 2010*)

- Asking questions (for science) and defining problems (for engineering).
- Developing and using models.
- Planning and carrying out investigations.
- Analyzing and interpreting data.
- Using mathematics, information and computer technology, and computational thinking.

- Constructing explanations (for science) and designing solutions (for engineering).
- Engaging in argument from evidence.
- Obtaining, evaluating, and communicating information.

Florida's Benchmarks for Excellent Student Thinking (B.E.S.T.) Standards
This course includes Florida's B.E.S.T. ELA Expectations (EE) and Mathematical Thinking and Reasoning Standards (MTRs) for students. Florida educators should intentionally embed these standards within the content and their instruction as applicable. For guidance on the implementation of the EEs and MTRs, please visit cpalms.org/Standards/BEST_Standards.aspx and select the appropriate B.E.S.T. Standards package.

English Language Development ELD Standards Special Notes Section:

Teachers are required to provide listening, speaking, reading and writing instruction that allows English language learners (ELL) to communicate information, ideas and concepts for academic success in the content area of Science. For the given level of English language proficiency and with visual, graphic, or interactive support, students will interact with grade level words, expressions, sentences and discourse to process or produce language necessary for academic success The ELD standard should specify a relevant content area concept or topic of study chosen by curriculum developers and teachers which maximizes an ELL's need for communication and social skills. To access an ELL supporting document which delineates performance definitions and descriptors, please click on the following link: cpalms.org/uploads/docs/standards/eld/SC.pdf

GENERAL INFORMATION

Course Number: 5020030

Course Path: Section: Grades PreK to 12 Education Courses > **Grade Group:** Grades PreK to 5 Education Courses > **Subject:** Science > **SubSubject:** General Sciences >
Abbreviated Title: SCIENCE GRADE TWO
Course Length: Year (Y)
Course Attributes:
- Class Size Core Required

Course Type: Core Academic Course
Course Status: Draft - Course Pending Approval
Grade Level(s): 2

Educator Certifications

Elementary Education (Elementary Grades 1-6)
Science (Elementary Grades 1-6)
Primary Education (K-3)
Prekindergarten/Primary Education (Age 3 through Grade 3)
Elementary Education (Grades K-6)

Science - Grade Three (#5020040) 2022 - And Beyond

Course Standards

Name	Description
SC.3.E.5.1:	Explain that stars can be different; some are smaller, some are larger, and some appear brighter than others; all except the Sun are so far away that they look like points of light.
SC.3.E.5.2:	Identify the Sun as a star that emits energy; some of it in the form of light.
SC.3.E.5.3:	Recognize that the Sun appears large and bright because it is the closest star to Earth.
SC.3.E.5.4:	Explore the Law of Gravity by demonstrating that gravity is a force that can be overcome.
SC.3.E.5.5:	Investigate that the number of stars that can be seen through telescopes is dramatically greater than those seen by the unaided eye.
SC.3.E.6.1:	Demonstrate that radiant energy from the Sun can heat objects and when the Sun is not present, heat may be lost.
SC.3.L.14.1:	Describe structures in plants and their roles in food production, support, water and nutrient transport, and reproduction.
SC.3.L.14.2:	Investigate and describe how plants respond to stimuli (heat, light, gravity), such as the way plant stems grow toward light and their roots grow downward in response to gravity.
SC.3.L.15.1:	Classify animals into major groups (mammals, birds, reptiles, amphibians, fish, arthropods, vertebrates and invertebrates, those having live births and those which lay eggs) according to their physical characteristics and behaviors.
SC.3.L.15.2:	Classify flowering and nonflowering plants into major groups such as those that produce seeds, or those like ferns and mosses that produce spores, according to their physical characteristics.
SC.3.L.17.1:	Describe how animals and plants respond to changing seasons.
SC.3.L.17.2:	Recognize that plants use energy from the Sun, air, and water to make their own food.
SC.3.N.1.1:	Raise questions about the natural world, investigate them individually and in teams through free exploration and systematic investigations, and generate appropriate explanations based on those explorations.
SC.3.N.1.2:	Compare the observations made by different groups using the same tools and seek reasons to explain the differences across groups.
SC.3.N.1.3:	Keep records as appropriate, such as pictorial, written, or simple charts and graphs, of investigations conducted.
SC.3.N.1.4:	Recognize the importance of communication among scientists.
SC.3.N.1.5:	Recognize that scientists question, discuss, and check each other's evidence and explanations.
SC.3.N.1.6:	Infer based on observation.
SC.3.N.1.7:	Explain that empirical evidence is information, such as observations or measurements, that is used to help validate explanations of natural phenomena.
SC.3.N.3.1:	Recognize that words in science can have different or more specific meanings than their use in everyday language; for example, energy, cell, heat/cold, and evidence.
SC.3.N.3.2:	Recognize that scientists use models to help understand and explain how things work.
SC.3.N.3.3:	Recognize that all models are approximations of natural phenomena; as such, they do not perfectly account for all observations.
SC.3.P.8.1:	Measure and compare temperatures of various samples of solids and liquids.
SC.3.P.8.2:	Measure and compare the mass and volume of solids and liquids.
SC.3.P.8.3:	Compare materials and objects according to properties such as size, shape, color, texture, and hardness.
SC.3.P.9.1:	Describe the changes water undergoes when it changes state through heating and cooling by using familiar scientific terms such as melting, freezing, boiling, evaporation, and condensation.
SC.3.P.10.1:	Identify some basic forms of energy such as light, heat, sound, electrical, and mechanical.
SC.3.P.10.2:	Recognize that energy has the ability to cause motion or create change.
SC.3.P.10.3:	Demonstrate that light travels in a straight line until it strikes an object or travels from one medium to another.
SC.3.P.10.4:	Demonstrate that light can be reflected, refracted, and absorbed.
SC.3.P.11.1:	Investigate, observe, and explain that things that give off light often also give off heat.
SC.3.P.11.2:	Investigate, observe, and explain that heat is produced when one object rubs against another, such as rubbing one's hands together.
MA.K12.MTR.1.1:	Mathematicians who participate in effortful learning both individually and with others: • Analyze the problem in a way that makes sense given the task. • Ask questions that will help with solving the task. • Build perseverance by modifying methods as needed while solving a challenging task. • Stay engaged and maintain a positive mindset when working to solve tasks. • Help and support each other when attempting a new method or approach. **Clarifications:** Teachers who encourage students to participate actively in effortful learning both individually and with others: • Cultivate a community of growth mindset learners. • Foster perseverance in students by choosing tasks that are challenging. • Develop students' ability to analyze and problem solve. • Recognize students' effort when solving challenging problems.
MA.K12.MTR.2.1:	Demonstrate understanding by representing problems in multiple ways. Mathematicians who demonstrate understanding by representing problems in multiple ways: • Build understanding through modeling and using manipulatives. • Represent solutions to problems in multiple ways using objects, drawings, tables, graphs and equations. • Progress from modeling problems with objects and drawings to using algorithms and equations. • Express connections between concepts and representations. • Choose a representation based on the given context or purpose. **Clarifications:** Teachers who encourage students to demonstrate understanding by representing problems in multiple ways:

- Help students make connections between concepts and representations.
- Provide opportunities for students to use manipulatives when investigating concepts.
- Guide students from concrete to pictorial to abstract representations as understanding progresses.
- Show students that various representations can have different purposes and can be useful in different situations.

MA.K12.MTR.3.1:

Complete tasks with mathematical fluency.
Mathematicians who complete tasks with mathematical fluency:

- Select efficient and appropriate methods for solving problems within the given context.
- Maintain flexibility and accuracy while performing procedures and mental calculations.
- Complete tasks accurately and with confidence.
- Adapt procedures to apply them to a new context.
- Use feedback to improve efficiency when performing calculations.

Clarifications:
Teachers who encourage students to complete tasks with mathematical fluency:

- Provide students with the flexibility to solve problems by selecting a procedure that allows them to solve efficiently and accurately.
- Offer multiple opportunities for students to practice efficient and generalizable methods.
- Provide opportunities for students to reflect on the method they used and determine if a more efficient method could have been used.

MA.K12.MTR.4.1:

Engage in discussions that reflect on the mathematical thinking of self and others.
Mathematicians who engage in discussions that reflect on the mathematical thinking of self and others:

- Communicate mathematical ideas, vocabulary and methods effectively.
- Analyze the mathematical thinking of others.
- Compare the efficiency of a method to those expressed by others.
- Recognize errors and suggest how to correctly solve the task.
- Justify results by explaining methods and processes.
- Construct possible arguments based on evidence.

Clarifications:
Teachers who encourage students to engage in discussions that reflect on the mathematical thinking of self and others:

- Establish a culture in which students ask questions of the teacher and their peers, and error is an opportunity for learning.
- Create opportunities for students to discuss their thinking with peers.
- Select, sequence and present student work to advance and deepen understanding of correct and increasingly efficient methods.
- Develop students' ability to justify methods and compare their responses to the responses of their peers.

MA.K12.MTR.5.1:

Use patterns and structure to help understand and connect mathematical concepts.
Mathematicians who use patterns and structure to help understand and connect mathematical concepts:

- Focus on relevant details within a problem.
- Create plans and procedures to logically order events, steps or ideas to solve problems.
- Decompose a complex problem into manageable parts.
- Relate previously learned concepts to new concepts.
- Look for similarities among problems.
- Connect solutions of problems to more complicated large-scale situations.

Clarifications:
Teachers who encourage students to use patterns and structure to help understand and connect mathematical concepts:

- Help students recognize the patterns in the world around them and connect these patterns to mathematical concepts.
- Support students to develop generalizations based on the similarities found among problems.
- Provide opportunities for students to create plans and procedures to solve problems.
- Develop students' ability to construct relationships between their current understanding and more sophisticated ways of thinking.

MA.K12.MTR.6.1:

Assess the reasonableness of solutions.
Mathematicians who assess the reasonableness of solutions:

- Estimate to discover possible solutions.
- Use benchmark quantities to determine if a solution makes sense.
- Check calculations when solving problems.
- Verify possible solutions by explaining the methods used.
- Evaluate results based on the given context.

Clarifications:
Teachers who encourage students to assess the reasonableness of solutions:

- Have students estimate or predict solutions prior to solving.
- Prompt students to continually ask, "Does this solution make sense? How do you know?"
- Reinforce that students check their work as they progress within and after a task.
- Strengthen students' ability to verify solutions through justifications.

MA.K12.MTR.7.1:

Apply mathematics to real-world contexts.
Mathematicians who apply mathematics to real-world contexts:

- Connect mathematical concepts to everyday experiences.
- Use models and methods to understand, represent and solve problems.
- Perform investigations to gather data or determine if a method is appropriate. • Redesign models and methods to improve accuracy or efficiency.

Clarifications:
Teachers who encourage students to apply mathematics to real-world contexts:

- Provide opportunities for students to create models, both concrete and abstract, and perform investigations.

	• Challenge students to question the accuracy of their models and methods. • Support students as they validate conclusions by comparing them to the given situation. • Indicate how various concepts can be applied to other disciplines.
ELA.K12.EE.1.1:	Cite evidence to explain and justify reasoning. **Clarifications:** K-1 Students include textual evidence in their oral communication with guidance and support from adults. The evidence can consist of details from the text without naming the text. During 1st grade, students learn how to incorporate the evidence in their writing. 2-3 Students include relevant textual evidence in their written and oral communication. Students should name the text when they refer to it. In 3rd grade, students should use a combination of direct and indirect citations. 4-5 Students continue with previous skills and reference comments made by speakers and peers. Students cite texts that they've directly quoted, paraphrased, or used for information. When writing, students will use the form of citation dictated by the instructor or the style guide referenced by the instructor. 6-8 Students continue with previous skills and use a style guide to create a proper citation. 9-12 Students continue with previous skills and should be aware of existing style guides and the ways in which they differ.
ELA.K12.EE.2.1:	Read and comprehend grade-level complex texts proficiently. **Clarifications:** See Text Complexity for grade-level complexity bands and a text complexity rubric.
ELA.K12.EE.3.1:	Make inferences to support comprehension. **Clarifications:** Students will make inferences before the words infer or inference are introduced. Kindergarten students will answer questions like "Why is the girl smiling?" or make predictions about what will happen based on the title page. Students will use the terms and apply them in 2nd grade and beyond.
ELA.K12.EE.4.1:	Use appropriate collaborative techniques and active listening skills when engaging in discussions in a variety of situations. **Clarifications:** In kindergarten, students learn to listen to one another respectfully. In grades 1-2, students build upon these skills by justifying what they are thinking. For example: "I think _____ because _____." The collaborative conversations are becoming academic conversations. In grades 3-12, students engage in academic conversations discussing claims and justifying their reasoning, refining and applying skills. Students build on ideas, propel the conversation, and support claims and counterclaims with evidence.
ELA.K12.EE.5.1:	Use the accepted rules governing a specific format to create quality work. **Clarifications:** Students will incorporate skills learned into work products to produce quality work. For students to incorporate these skills appropriately, they must receive instruction. A 3rd grade student creating a poster board display must have instruction in how to effectively present information to do quality work.
ELA.K12.EE.6.1:	Use appropriate voice and tone when speaking or writing. **Clarifications:** In kindergarten and 1st grade, students learn the difference between formal and informal language. For example, the way we talk to our friends differs from the way we speak to adults. In 2nd grade and beyond, students practice appropriate social and academic language to discuss texts.
ELD.K12.ELL.SC.1:	English language learners communicate information, ideas and concepts necessary for academic success in the content area of Science.
ELD.K12.ELL.SI.1:	English language learners communicate for social and instructional purposes within the school setting.
HE.3.C.1.4:	Recognize common childhood health conditions. **Clarifications:** Asthma, diabetes, food allergies, dental cavities, and colds.
HE.3.C.1.5:	Recognize that body parts and organs work together to form human body systems. **Clarifications:** Circulatory system, digestive system, nervous system, reproductive system, and other body systems.

General Course Information and Notes

GENERAL NOTES

Special Notes:

Instructional Practices

Teaching from a range of complex text is optimized when teachers in all subject areas implement the following strategies on a routine basis:

1. Ensuring wide reading from complex text that varies in length.
2. Making close reading and rereading of texts central to lessons.
3. Emphasizing text-specific complex questions, and cognitively complex tasks, reinforce focus on the text and cultivate independence.
4. Emphasizing students supporting answers based upon evidence from the text.
5. Providing extensive research and writing opportunities (claims and evidence).

Science and Engineering Practices (NRC *Framework for K-12 Science Education, 2010*)

- Asking questions (for science) and defining problems (for engineering).
- Developing and using models.
- Planning and carrying out investigations.
- Analyzing and interpreting data.
- Using mathematics, information and computer technology, and computational thinking.
- Constructing explanations (for science) and designing solutions (for engineering).
- Engaging in argument from evidence.
- Obtaining, evaluating, and communicating information.

Florida's Benchmarks for Excellent Student Thinking (B.E.S.T.) Standards
This course includes Florida's B.E.S.T. ELA Expectations (EE) and Mathematical Thinking and Reasoning Standards (MTRs) for students. Florida educators should intentionally embed these standards within the content and their instruction as applicable. For guidance on the implementation of the EEs and MTRs, please visit cpalms.org/Standards/BEST_Standards.aspx and select the appropriate B.E.S.T. Standards package.

English Language Development ELD Standards Special Notes Section:

Teachers are required to provide listening, speaking, reading and writing instruction that allows English language learners (ELL) to communicate information, ideas and concepts for academic success in the content area of Science. For the given level of English language proficiency and with visual, graphic, or interactive support, students will interact with grade level words, expressions, sentences and discourse to process or produce language necessary for academic success The ELD standard should specify a relevant content area concept or topic of study chosen by curriculum developers and teachers which maximizes an ELL's need for communication and social skills. To access an ELL supporting document which delineates performance definitions and descriptors, please click on the following link: cpalms.org/uploads/docs/standards/eld/SC.pdf

GENERAL INFORMATION

Course Number: 5020040

Course Path: Section: Grades PreK to 12 Education Courses > **Grade Group:** Grades PreK to 5 Education Courses > **Subject:** Science > **SubSubject:** General Sciences >

Abbreviated Title: SCIENCE GRADE THREE

Course Length: Year (Y)

Course Attributes:
- Class Size Core Required

Course Type: Core Academic Course

Course Status: Draft - Course Pending Approval

Grade Level(s): 3

Educator Certifications

Elementary Education (Elementary Grades 1-6)
Primary Education (K-3)
Science (Elementary Grades 1-6)
Prekindergarten/Primary Education (Age 3 through Grade 3)
Elementary Education (Grades K-6)

Science - Grade Four (#5020050) 2022 - And Beyond

Course Standards

Name	Description
SC.4.E.5.1:	Observe that the patterns of stars in the sky stay the same although they appear to shift across the sky nightly, and different stars can be seen in different seasons.
SC.4.E.5.2:	Describe the changes in the observable shape of the moon over the course of about a month.
SC.4.E.5.3:	Recognize that Earth revolves around the Sun in a year and rotates on its axis in a 24-hour day.
SC.4.E.5.4:	Relate that the rotation of Earth (day and night) and apparent movements of the Sun, Moon, and stars are connected.
SC.4.E.5.5:	Investigate and report the effects of space research and exploration on the economy and culture of Florida.
SC.4.E.6.1:	Identify the three categories of rocks: igneous, (formed from molten rock); sedimentary (pieces of other rocks and fossilized organisms); and metamorphic (formed from heat and pressure).
SC.4.E.6.2:	Identify the physical properties of common earth-forming minerals, including hardness, color, luster, cleavage, and streak color, and recognize the role of minerals in the formation of rocks.
SC.4.E.6.3:	Recognize that humans need resources found on Earth and that these are either renewable or nonrenewable.
SC.4.E.6.4:	Describe the basic differences between physical weathering (breaking down of rock by wind, water, ice, temperature change, and plants) and erosion (movement of rock by gravity, wind, water, and ice).
SC.4.E.6.5:	Investigate how technology and tools help to extend the ability of humans to observe very small things and very large things.
SC.4.E.6.6:	Identify resources available in Florida (water, phosphate, oil, limestone, silicon, wind, and solar energy).
SC.4.L.16.1:	Identify processes of sexual reproduction in flowering plants, including pollination, fertilization (seed production), seed dispersal, and germination.
SC.4.L.16.2:	Explain that although characteristics of plants and animals are inherited, some characteristics can be affected by the environment.
SC.4.L.16.3:	Recognize that animal behaviors may be shaped by heredity and learning.
SC.4.L.16.4:	Compare and contrast the major stages in the life cycles of Florida plants and animals, such as those that undergo incomplete and complete metamorphosis, and flowering and nonflowering seed-bearing plants.
SC.4.L.17.1:	Compare the seasonal changes in Florida plants and animals to those in other regions of the country.
SC.4.L.17.2:	Explain that animals, including humans, cannot make their own food and that when animals eat plants or other animals, the energy stored in the food source is passed to them.
SC.4.L.17.3:	Trace the flow of energy from the Sun as it is transferred along the food chain through the producers to the consumers.
SC.4.L.17.4:	Recognize ways plants and animals, including humans, can impact the environment.
SC.4.N.1.1:	Raise questions about the natural world, use appropriate reference materials that support understanding to obtain information (identifying the source), conduct both individual and team investigations through free exploration and systematic investigations, and generate appropriate explanations based on those explorations.
SC.4.N.1.2:	Compare the observations made by different groups using multiple tools and seek reasons to explain the differences across groups.
SC.4.N.1.3:	Explain that science does not always follow a rigidly defined method ("the scientific method") but that science does involve the use of observations and empirical evidence.
SC.4.N.1.4:	Attempt reasonable answers to scientific questions and cite evidence in support.
SC.4.N.1.5:	Compare the methods and results of investigations done by other classmates.
SC.4.N.1.6:	Keep records that describe observations made, carefully distinguishing actual observations from ideas and inferences about the observations.
SC.4.N.1.7:	Recognize and explain that scientists base their explanations on evidence.
SC.4.N.1.8:	Recognize that science involves creativity in designing experiments.
SC.4.N.2.1:	Explain that science focuses solely on the natural world.
SC.4.N.3.1:	Explain that models can be three dimensional, two dimensional, an explanation in your mind, or a computer model.
SC.4.P.8.1:	Measure and compare objects and materials based on their physical properties including: mass, shape, volume, color, hardness, texture, odor, taste, attraction to magnets.
SC.4.P.8.2:	Identify properties and common uses of water in each of its states.
SC.4.P.8.3:	Explore the Law of Conservation of Mass by demonstrating that the mass of a whole object is always the same as the sum of the masses of its parts.
SC.4.P.8.4:	Investigate and describe that magnets can attract magnetic materials and attract and repel other magnets.
SC.4.P.9.1:	Identify some familiar changes in materials that result in other materials with different characteristics, such as decaying animal or plant matter, burning, rusting, and cooking.
SC.4.P.10.1:	Observe and describe some basic forms of energy, including light, heat, sound, electrical, and the energy of motion.
SC.4.P.10.2:	Investigate and describe that energy has the ability to cause motion or create change.
SC.4.P.10.3:	Investigate and explain that sound is produced by vibrating objects and that pitch depends on how fast or slow the object vibrates.
SC.4.P.10.4:	Describe how moving water and air are sources of energy and can be used to move things.
SC.4.P.11.1:	Recognize that heat flows from a hot object to a cold object and that heat flow may cause materials to change temperature.
SC.4.P.11.2:	Identify common materials that conduct heat well or poorly.
SC.4.P.12.1:	Recognize that an object in motion always changes its position and may change its direction.
SC.4.P.12.2:	Investigate and describe that the speed of an object is determined by the distance it travels in a unit of time and that objects can move at different speeds.
MA.K12.MTR.1.1:	Mathematicians who participate in effortful learning both individually and with others: • Analyze the problem in a way that makes sense given the task. • Ask questions that will help with solving the task. • Build perseverance by modifying methods as needed while solving a challenging task. • Stay engaged and maintain a positive mindset when working to solve tasks. • Help and support each other when attempting a new method or approach. **Clarifications:**

Teachers who encourage students to participate actively in effortful learning both individually and with others:

- Cultivate a community of growth mindset learners.
- Foster perseverance in students by choosing tasks that are challenging.
- Develop students' ability to analyze and problem solve.
- Recognize students' effort when solving challenging problems.

MA.K12.MTR.2.1:

Demonstrate understanding by representing problems in multiple ways.
Mathematicians who demonstrate understanding by representing problems in multiple ways:

- Build understanding through modeling and using manipulatives.
- Represent solutions to problems in multiple ways using objects, drawings, tables, graphs and equations.
- Progress from modeling problems with objects and drawings to using algorithms and equations.
- Express connections between concepts and representations.
- Choose a representation based on the given context or purpose.

Clarifications:
Teachers who encourage students to demonstrate understanding by representing problems in multiple ways:

- Help students make connections between concepts and representations.
- Provide opportunities for students to use manipulatives when investigating concepts.
- Guide students from concrete to pictorial to abstract representations as understanding progresses.
- Show students that various representations can have different purposes and can be useful in different situations.

MA.K12.MTR.3.1:

Complete tasks with mathematical fluency.
Mathematicians who complete tasks with mathematical fluency:

- Select efficient and appropriate methods for solving problems within the given context.
- Maintain flexibility and accuracy while performing procedures and mental calculations.
- Complete tasks accurately and with confidence.
- Adapt procedures to apply them to a new context.
- Use feedback to improve efficiency when performing calculations.

Clarifications:
Teachers who encourage students to complete tasks with mathematical fluency:

- Provide students with the flexibility to solve problems by selecting a procedure that allows them to solve efficiently and accurately.
- Offer multiple opportunities for students to practice efficient and generalizable methods.
- Provide opportunities for students to reflect on the method they used and determine if a more efficient method could have been used.

MA.K12.MTR.4.1:

Engage in discussions that reflect on the mathematical thinking of self and others.
Mathematicians who engage in discussions that reflect on the mathematical thinking of self and others:

- Communicate mathematical ideas, vocabulary and methods effectively.
- Analyze the mathematical thinking of others.
- Compare the efficiency of a method to those expressed by others.
- Recognize errors and suggest how to correctly solve the task.
- Justify results by explaining methods and processes.
- Construct possible arguments based on evidence.

Clarifications:
Teachers who encourage students to engage in discussions that reflect on the mathematical thinking of self and others:

- Establish a culture in which students ask questions of the teacher and their peers, and error is an opportunity for learning.
- Create opportunities for students to discuss their thinking with peers.
- Select, sequence and present student work to advance and deepen understanding of correct and increasingly efficient methods.
- Develop students' ability to justify methods and compare their responses to the responses of their peers.

MA.K12.MTR.5.1:

Use patterns and structure to help understand and connect mathematical concepts.
Mathematicians who use patterns and structure to help understand and connect mathematical concepts:

- Focus on relevant details within a problem.
- Create plans and procedures to logically order events, steps or ideas to solve problems.
- Decompose a complex problem into manageable parts.
- Relate previously learned concepts to new concepts.
- Look for similarities among problems.
- Connect solutions of problems to more complicated large-scale situations.

Clarifications:
Teachers who encourage students to use patterns and structure to help understand and connect mathematical concepts:

- Help students recognize the patterns in the world around them and connect these patterns to mathematical concepts.
- Support students to develop generalizations based on the similarities found among problems.
- Provide opportunities for students to create plans and procedures to solve problems.
- Develop students' ability to construct relationships between their current understanding and more sophisticated ways of thinking.

MA.K12.MTR.6.1:

Assess the reasonableness of solutions.
Mathematicians who assess the reasonableness of solutions:

- Estimate to discover possible solutions.
- Use benchmark quantities to determine if a solution makes sense.
- Check calculations when solving problems.
- Verify possible solutions by explaining the methods used.
- Evaluate results based on the given context.

	Clarifications: Teachers who encourage students to assess the reasonableness of solutions: • Have students estimate or predict solutions prior to solving. • Prompt students to continually ask, "Does this solution make sense? How do you know?" • Reinforce that students check their work as they progress within and after a task. • Strengthen students' ability to verify solutions through justifications.
MA.K12.MTR.7.1:	Apply mathematics to real-world contexts. Mathematicians who apply mathematics to real-world contexts: • Connect mathematical concepts to everyday experiences. • Use models and methods to understand, represent and solve problems. • Perform investigations to gather data or determine if a method is appropriate. • Redesign models and methods to improve accuracy or efficiency. **Clarifications:** Teachers who encourage students to apply mathematics to real-world contexts: • Provide opportunities for students to create models, both concrete and abstract, and perform investigations. • Challenge students to question the accuracy of their models and methods. • Support students as they validate conclusions by comparing them to the given situation. • Indicate how various concepts can be applied to other disciplines.
ELA.K12.EE.1.1:	Cite evidence to explain and justify reasoning. **Clarifications:** K-1 Students include textual evidence in their oral communication with guidance and support from adults. The evidence can consist of details from the text without naming the text. During 1st grade, students learn how to incorporate the evidence in their writing. 2-3 Students include relevant textual evidence in their written and oral communication. Students should name the text when they refer to it. In 3rd grade, students should use a combination of direct and indirect citations. 4-5 Students continue with previous skills and reference comments made by speakers and peers. Students cite texts that they've directly quoted, paraphrased, or used for information. When writing, students will use the form of citation dictated by the instructor or the style guide referenced by the instructor. 6-8 Students continue with previous skills and use a style guide to create a proper citation. 9-12 Students continue with previous skills and should be aware of existing style guides and the ways in which they differ.
ELA.K12.EE.2.1:	Read and comprehend grade-level complex texts proficiently. **Clarifications:** See Text Complexity for grade-level complexity bands and a text complexity rubric.
ELA.K12.EE.3.1:	Make inferences to support comprehension. **Clarifications:** Students will make inferences before the words infer or inference are introduced. Kindergarten students will answer questions like "Why is the girl smiling?" or make predictions about what will happen based on the title page. Students will use the terms and apply them in 2nd grade and beyond.
ELA.K12.EE.4.1:	Use appropriate collaborative techniques and active listening skills when engaging in discussions in a variety of situations. **Clarifications:** In kindergarten, students learn to listen to one another respectfully. In grades 1-2, students build upon these skills by justifying what they are thinking. For example: "I think _____ because _____." The collaborative conversations are becoming academic conversations. In grades 3-12, students engage in academic conversations discussing claims and justifying their reasoning, refining and applying skills. Students build on ideas, propel the conversation, and support claims and counterclaims with evidence.
ELA.K12.EE.5.1:	Use the accepted rules governing a specific format to create quality work. **Clarifications:** Students will incorporate skills learned into work products to produce quality work. For students to incorporate these skills appropriately, they must receive instruction. A 3rd grade student creating a poster board display must have instruction in how to effectively present information to do quality work.
ELA.K12.EE.6.1:	Use appropriate voice and tone when speaking or writing. **Clarifications:** In kindergarten and 1st grade, students learn the difference between formal and informal language. For example, the way we talk to our friends differs from the way we speak to adults. In 2nd grade and beyond, students practice appropriate social and academic language to discuss texts.
ELD.K12.ELL.SC.1:	English language learners communicate information, ideas and concepts necessary for academic success in the content area of Science.
ELD.K12.ELL.SI.1:	English language learners communicate for social and instructional purposes within the school setting.
HE.4.C.1.5:	Identify the human body parts and organs that work together to form healthy body systems. **Clarifications:** Muscular and skeletal systems, circulatory and respiratory systems, and endocrine and reproductive systems.

General Course Information and Notes

GENERAL NOTES

Special Notes:

Instructional Practices
Teaching from a range of complex text is optimized when teachers in all subject areas implement the following strategies on a routine basis:

1. Ensuring wide reading from complex text that varies in length.
2. Making close reading and rereading of texts central to lessons.
3. Emphasizing text-specific complex questions, and cognitively complex tasks, reinforce focus on the text and cultivate independence.
4. Emphasizing students supporting answers based upon evidence from the text.
5. Providing extensive research and writing opportunities (claims and evidence).

Science and Engineering Practices (NRC *Framework for K-12 Science Education, 2010*)

- Asking questions (for science) and defining problems (for engineering).
- Developing and using models.
- Planning and carrying out investigations.
- Analyzing and interpreting data.
- Using mathematics, information and computer technology, and computational thinking.
- Constructing explanations (for science) and designing solutions (for engineering).
- Engaging in argument from evidence.
- Obtaining, evaluating, and communicating information.

Additional content addressed on the Grade 4 NAEP Science assessment includes:

- Earth materials have properties that make them useful in solving human problems and enhancing the quality of life. (SC.6.E.6.2)
- The Sun warms the land, air, and water and helps plants grow. (SC.3.E.6.1;SC.3.L.17.2)
- Weather changes from day to day and during the seasons. (SC.2.E.7.1)
- Scientists use tools for observing, recording, and predicting weather changes. (SC.5.E.7.3; SC.5.E.7.4)
- Plants and animals have life cycles. (SC.2.L.16.1)
- Environment changes impact organism survival and reproduction. (SC.5.L.15.1)
- Organisms need food, water, air, and shelter. (SC.1.L.17.1)
- Some objects are composed of a single substance; others are composed of more than one substance. (SC.5.P.8.3)
- Heat (thermal energy) results when substances burn, materials rub against each other, and electricity flows though wires. (SC.3.P.11.2)
- Metals are conductors of heat and electricity. (SC.3.P.11.2)
- Increasing the temperature of any substance requires the addition of energy.
- Electricity flowing through an electrical circuit produces magnetic effects in the wires. Energy is transferred to the surroundings as light, sound, and heat (thermal energy). (SC.5.P.11.1; SC.5.P.11.2)

The NAEP frameworks for Science may be accessed at nagb.org/publications/frameworks/science-09.pdf

Florida's Benchmarks for Excellent Student Thinking (B.E.S.T.) Standards
This course includes Florida's B.E.S.T. ELA Expectations (EE) and Mathematical Thinking and Reasoning Standards (MTRs) for students. Florida educators should intentionally embed these standards within the content and their instruction as applicable. For guidance on the implementation of the EEs and MTRs, please visit cpalms.org/Standards/BEST_Standards.aspx and select the appropriate B.E.S.T. Standards package.

English Language Development ELD Standards Special Notes Section:
Teachers are required to provide listening, speaking, reading and writing instruction that allows English language learners (ELL) to communicate information, ideas and concepts for academic success in the content area of Science. For the given level of English language proficiency and with visual, graphic, or interactive support, students will interact with grade level words, expressions, sentences and discourse to process or produce language necessary for academic success The ELD standard should specify a relevant content area concept or topic of study chosen by curriculum developers and teachers which maximizes an ELL's need for communication and social skills. To access an ELL supporting document which delineates performance definitions and descriptors, please click on the following link: cpalms.org/uploads/docs/standards/eld/SC.pdf

GENERAL INFORMATION

Course Number: 5020050

Course Path: Section: Grades PreK to 12 Education Courses > **Grade Group:** Grades PreK to 5 Education Courses > **Subject:** Science > **SubSubject:** General Sciences >
Abbreviated Title: SCIENCE GRADE FOUR
Course Length: Year (Y)
Course Attributes:
- Class Size Core Required

Course Type: Core Academic Course
Course Status: Draft - Course Pending Approval
Grade Level(s): 4

Educator Certifications

Elementary Education (Elementary Grades 1-6)
Science (Elementary Grades 1-6)

Science - Grade Five (#5020060) 2022 - And Beyond

Course Standards

Name	Description
SC.5.E.5.1:	Recognize that a galaxy consists of gas, dust, and many stars, including any objects orbiting the stars. Identify our home galaxy as the Milky Way.
SC.5.E.5.2:	Recognize the major common characteristics of all planets and compare/contrast the properties of inner and outer planets.
SC.5.E.5.3:	Distinguish among the following objects of the Solar System -- Sun, planets, moons, asteroids, comets -- and identify Earth's position in it.
SC.5.E.7.1:	Create a model to explain the parts of the water cycle. Water can be a gas, a liquid, or a solid and can go back and forth from one state to another.
SC.5.E.7.2:	Recognize that the ocean is an integral part of the water cycle and is connected to all of Earth's water reservoirs via evaporation and precipitation processes.
SC.5.E.7.3:	Recognize how air temperature, barometric pressure, humidity, wind speed and direction, and precipitation determine the weather in a particular place and time.
SC.5.E.7.4:	Distinguish among the various forms of precipitation (rain, snow, sleet, and hail), making connections to the weather in a particular place and time.
SC.5.E.7.5:	Recognize that some of the weather-related differences, such as temperature and humidity, are found among different environments, such as swamps, deserts, and mountains.
SC.5.E.7.6:	Describe characteristics (temperature and precipitation) of different climate zones as they relate to latitude, elevation, and proximity to bodies of water.
SC.5.E.7.7:	Design a family preparedness plan for natural disasters and identify the reasons for having such a plan.
SC.5.L.14.1:	Identify the organs in the human body and describe their functions, including the skin, brain, heart, lungs, stomach, liver, intestines, pancreas, muscles and skeleton, reproductive organs, kidneys, bladder, and sensory organs.
SC.5.L.14.2:	Compare and contrast the function of organs and other physical structures of plants and animals, including humans, for example: some animals have skeletons for support -- some with internal skeletons others with exoskeletons -- while some plants have stems for support.
SC.5.L.15.1:	Describe how, when the environment changes, differences between individuals allow some plants and animals to survive and reproduce while others die or move to new locations.
SC.5.L.17.1:	Compare and contrast adaptations displayed by animals and plants that enable them to survive in different environments such as life cycles variations, animal behaviors and physical characteristics.
SC.5.N.1.1:	Define a problem, use appropriate reference materials to support scientific understanding, plan and carry out scientific investigations of various types such as: systematic observations, experiments requiring the identification of variables, collecting and organizing data, interpreting data in charts, tables, and graphics, analyze information, make predictions, and defend conclusions.
SC.5.N.1.2:	Explain the difference between an experiment and other types of scientific investigation.
SC.5.N.1.3:	Recognize and explain the need for repeated experimental trials.
SC.5.N.1.4:	Identify a control group and explain its importance in an experiment.
SC.5.N.1.5:	Recognize and explain that authentic scientific investigation frequently does not parallel the steps of "the scientific method."
SC.5.N.1.6:	Recognize and explain the difference between personal opinion/interpretation and verified observation.
SC.5.N.2.1:	Recognize and explain that science is grounded in empirical observations that are testable; explanation must always be linked with evidence.
SC.5.N.2.2:	Recognize and explain that when scientific investigations are carried out, the evidence produced by those investigations should be replicable by others.
SC.5.P.8.1:	Compare and contrast the basic properties of solids, liquids, and gases, such as mass, volume, color, texture, and temperature.
SC.5.P.8.2:	Investigate and identify materials that will dissolve in water and those that will not and identify the conditions that will speed up or slow down the dissolving process.
SC.5.P.8.3:	Demonstrate and explain that mixtures of solids can be separated based on observable properties of their parts such as particle size, shape, color, and magnetic attraction.
SC.5.P.8.4:	Explore the scientific theory of atoms (also called atomic theory) by recognizing that all matter is composed of parts that are too small to be seen without magnification.
SC.5.P.9.1:	Investigate and describe that many physical and chemical changes are affected by temperature.
SC.5.P.10.1:	Investigate and describe some basic forms of energy, including light, heat, sound, electrical, chemical, and mechanical.
SC.5.P.10.2:	Investigate and explain that energy has the ability to cause motion or create change.
SC.5.P.10.3:	Investigate and explain that an electrically-charged object can attract an uncharged object and can either attract or repel another charged object without any contact between the objects.
SC.5.P.10.4:	Investigate and explain that electrical energy can be transformed into heat, light, and sound energy, as well as the energy of motion.
SC.5.P.11.1:	Investigate and illustrate the fact that the flow of electricity requires a closed circuit (a complete loop).
SC.5.P.11.2:	Identify and classify materials that conduct electricity and materials that do not.
SC.5.P.13.1:	Identify familiar forces that cause objects to move, such as pushes or pulls, including gravity acting on falling objects.
SC.5.P.13.2:	Investigate and describe that the greater the force applied to it, the greater the change in motion of a given object.
SC.5.P.13.3:	Investigate and describe that the more mass an object has, the less effect a given force will have on the object's motion.
SC.5.P.13.4:	Investigate and explain that when a force is applied to an object but it does not move, it is because another opposing force is being applied by something in the environment so that the forces are balanced.
MA.K12.MTR.1.1:	Mathematicians who participate in effortful learning both individually and with others: • Analyze the problem in a way that makes sense given the task. • Ask questions that will help with solving the task. • Build perseverance by modifying methods as needed while solving a challenging task. • Stay engaged and maintain a positive mindset when working to solve tasks. • Help and support each other when attempting a new method or approach. **Clarifications:** Teachers who encourage students to participate actively in effortful learning both individually and with others: • Cultivate a community of growth mindset learners.

- Foster perseverance in students by choosing tasks that are challenging.
- Develop students' ability to analyze and problem solve.
- Recognize students' effort when solving challenging problems.

Demonstrate understanding by representing problems in multiple ways.
Mathematicians who demonstrate understanding by representing problems in multiple ways:

- Build understanding through modeling and using manipulatives.
- Represent solutions to problems in multiple ways using objects, drawings, tables, graphs and equations.
- Progress from modeling problems with objects and drawings to using algorithms and equations.
- Express connections between concepts and representations.

MA.K12.MTR.2.1:

- Choose a representation based on the given context or purpose.

Clarifications:
Teachers who encourage students to demonstrate understanding by representing problems in multiple ways:

- Help students make connections between concepts and representations.
- Provide opportunities for students to use manipulatives when investigating concepts.
- Guide students from concrete to pictorial to abstract representations as understanding progresses.
- Show students that various representations can have different purposes and can be useful in different situations.

Complete tasks with mathematical fluency.
Mathematicians who complete tasks with mathematical fluency:

- Select efficient and appropriate methods for solving problems within the given context.
- Maintain flexibility and accuracy while performing procedures and mental calculations.
- Complete tasks accurately and with confidence.
- Adapt procedures to apply them to a new context.

MA.K12.MTR.3.1:

- Use feedback to improve efficiency when performing calculations.

Clarifications:
Teachers who encourage students to complete tasks with mathematical fluency:

- Provide students with the flexibility to solve problems by selecting a procedure that allows them to solve efficiently and accurately.
- Offer multiple opportunities for students to practice efficient and generalizable methods.
- Provide opportunities for students to reflect on the method they used and determine if a more efficient method could have been used.

Engage in discussions that reflect on the mathematical thinking of self and others.
Mathematicians who engage in discussions that reflect on the mathematical thinking of self and others:

- Communicate mathematical ideas, vocabulary and methods effectively.
- Analyze the mathematical thinking of others.
- Compare the efficiency of a method to those expressed by others.
- Recognize errors and suggest how to correctly solve the task.
- Justify results by explaining methods and processes.

MA.K12.MTR.4.1:

- Construct possible arguments based on evidence.

Clarifications:
Teachers who encourage students to engage in discussions that reflect on the mathematical thinking of self and others:

- Establish a culture in which students ask questions of the teacher and their peers, and error is an opportunity for learning.
- Create opportunities for students to discuss their thinking with peers.
- Select, sequence and present student work to advance and deepen understanding of correct and increasingly efficient methods.
- Develop students' ability to justify methods and compare their responses to the responses of their peers.

Use patterns and structure to help understand and connect mathematical concepts.
Mathematicians who use patterns and structure to help understand and connect mathematical concepts:

- Focus on relevant details within a problem.
- Create plans and procedures to logically order events, steps or ideas to solve problems.
- Decompose a complex problem into manageable parts.
- Relate previously learned concepts to new concepts.
- Look for similarities among problems.

MA.K12.MTR.5.1:

- Connect solutions of problems to more complicated large-scale situations.

Clarifications:
Teachers who encourage students to use patterns and structure to help understand and connect mathematical concepts:

- Help students recognize the patterns in the world around them and connect these patterns to mathematical concepts.
- Support students to develop generalizations based on the similarities found among problems.
- Provide opportunities for students to create plans and procedures to solve problems.
- Develop students' ability to construct relationships between their current understanding and more sophisticated ways of thinking.

Assess the reasonableness of solutions.
Mathematicians who assess the reasonableness of solutions:

- Estimate to discover possible solutions.
- Use benchmark quantities to determine if a solution makes sense.
- Check calculations when solving problems.
- Verify possible solutions by explaining the methods used.

MA.K12.MTR.6.1:

- Evaluate results based on the given context.

Clarifications:
Teachers who encourage students to assess the reasonableness of solutions:

	• Have students estimate or predict solutions prior to solving. • Prompt students to continually ask, "Does this solution make sense? How do you know?" • Reinforce that students check their work as they progress within and after a task. • Strengthen students' ability to verify solutions through justifications.
MA.K12.MTR.7.1:	Apply mathematics to real-world contexts. Mathematicians who apply mathematics to real-world contexts: • Connect mathematical concepts to everyday experiences. • Use models and methods to understand, represent and solve problems. • Perform investigations to gather data or determine if a method is appropriate. • Redesign models and methods to improve accuracy or efficiency. **Clarifications:** Teachers who encourage students to apply mathematics to real-world contexts: • Provide opportunities for students to create models, both concrete and abstract, and perform investigations. • Challenge students to question the accuracy of their models and methods. • Support students as they validate conclusions by comparing them to the given situation. • Indicate how various concepts can be applied to other disciplines.
ELA.K12.EE.1.1:	Cite evidence to explain and justify reasoning. **Clarifications:** K-1 Students include textual evidence in their oral communication with guidance and support from adults. The evidence can consist of details from the text without naming the text. During 1st grade, students learn how to incorporate the evidence in their writing. 2-3 Students include relevant textual evidence in their written and oral communication. Students should name the text when they refer to it. In 3rd grade, students should use a combination of direct and indirect citations. 4-5 Students continue with previous skills and reference comments made by speakers and peers. Students cite texts that they've directly quoted, paraphrased, or used for information. When writing, students will use the form of citation dictated by the instructor or the style guide referenced by the instructor. 6-8 Students continue with previous skills and use a style guide to create a proper citation. 9-12 Students continue with previous skills and should be aware of existing style guides and the ways in which they differ.
ELA.K12.EE.2.1:	Read and comprehend grade-level complex texts proficiently. **Clarifications:** See Text Complexity for grade-level complexity bands and a text complexity rubric.
ELA.K12.EE.3.1:	Make inferences to support comprehension. **Clarifications:** Students will make inferences before the words infer or inference are introduced. Kindergarten students will answer questions like "Why is the girl smiling?" or make predictions about what will happen based on the title page. Students will use the terms and apply them in 2nd grade and beyond.
ELA.K12.EE.4.1:	Use appropriate collaborative techniques and active listening skills when engaging in discussions in a variety of situations. **Clarifications:** In kindergarten, students learn to listen to one another respectfully. In grades 1-2, students build upon these skills by justifying what they are thinking. For example: "I think _____ because _____." The collaborative conversations are becoming academic conversations. In grades 3-12, students engage in academic conversations discussing claims and justifying their reasoning, refining and applying skills. Students build on ideas, propel the conversation, and support claims and counterclaims with evidence.
ELA.K12.EE.5.1:	Use the accepted rules governing a specific format to create quality work. **Clarifications:** Students will incorporate skills learned into work products to produce quality work. For students to incorporate these skills appropriately, they must receive instruction. A 3rd grade student creating a poster board display must have instruction in how to effectively present information to do quality work.
ELA.K12.EE.6.1:	Use appropriate voice and tone when speaking or writing. **Clarifications:** In kindergarten and 1st grade, students learn the difference between formal and informal language. For example, the way we talk to our friends differs from the way we speak to adults. In 2nd grade and beyond, students practice appropriate social and academic language to discuss texts.
ELD.K12.ELL.SC.1:	English language learners communicate information, ideas and concepts necessary for academic success in the content area of Science.
ELD.K12.ELL.SI.1:	English language learners communicate for social and instructional purposes within the school setting.
HE.5.C.1.5:	Explain how human body parts and organs work together in healthy body systems, including the endocrine and reproductive systems. **Clarifications:** Digestive and circulatory systems receiving and distributing nutrients to provide energy, endocrine glands influencing the reproductive system and respiratory system providing oxygen to other body systems.

General Course Information and Notes

GENERAL NOTES

Special Notes:

Instructional Practices
Teaching from a range of complex text is optimized when teachers in all subject areas implement the following strategies on a routine basis:

1. Ensuring wide reading from complex text that varies in length.
2. Making close reading and rereading of texts central to lessons.
3. Emphasizing text-specific complex questions, and cognitively complex tasks, reinforce focus on the text and cultivate independence.
4. Emphasizing students supporting answers based upon evidence from the text.
5. Providing extensive research and writing opportunities (claims and evidence).

Science and Engineering Practices (NRC *Framework for K-12 Science Education, 2010*)

- Asking questions (for science) and defining problems (for engineering).
- Developing and using models.
- Planning and carrying out investigations.
- Analyzing and interpreting data.
- Using mathematics, information and computer technology, and computational thinking.
- Constructing explanations (for science) and designing solutions (for engineering).
- Engaging in argument from evidence.
- Obtaining, evaluating, and communicating information.

Florida's Benchmarks for Excellent Student Thinking (B.E.S.T.) Standards
This course includes Florida's B.E.S.T. ELA Expectations (EE) and Mathematical Thinking and Reasoning Standards (MTRs) for students. Florida educators should intentionally embed these standards within the content and their instruction as applicable. For guidance on the implementation of the EEs and MTRs, please visit cpalms.org/Standards/BEST_Standards.aspx and select the appropriate B.E.S.T. Standards package.

English Language Development ELD Standards Special Notes Section:
Teachers are required to provide listening, speaking, reading and writing instruction that allows English language learners (ELL) to communicate information, ideas and concepts for academic success in the content area of Science. For the given level of English language proficiency and with visual, graphic, or interactive support, students will interact with grade level words, expressions, sentences and discourse to process or produce language necessary for academic success The ELD standard should specify a relevant content area concept or topic of study chosen by curriculum developers and teachers which maximizes an ELL's need for communication and social skills. To access an ELL supporting document which delineates performance definitions and descriptors, please click on the following link: cpalms.org/uploads/docs/standards/eld/SC.pdf

GENERAL INFORMATION

Course Number: 5020060

Course Path: Section: Grades PreK to 12 Education Courses > **Grade Group:** Grades PreK to 5 Education Courses > **Subject:** Science > **SubSubject:** General Sciences >
Abbreviated Title: SCIENCE GRADE FIVE
Course Length: Year (Y)
Course Attributes:
- Class Size Core Required

Course Type: Core Academic Course
Course Status: Draft - Course Pending Approval
Grade Level(s): 5

Educator Certifications

Elementary Education (Elementary Grades 1-6)
Middle Grades General Science (Middle Grades 5-9)
Science (Elementary Grades 1-6)
Elementary Education (Grades K-6)

STEM Lab Kindergarten (#5020070) 2022 - And Beyond

Course Standards

Name	Description
SC.K.E.5.1:	Explore the Law of Gravity by investigating how objects are pulled toward the ground unless something holds them up.
SC.K.E.5.2:	Recognize the repeating pattern of day and night.
SC.K.E.5.3:	Recognize that the Sun can only be seen in the daytime.
SC.K.E.5.4:	Observe that sometimes the Moon can be seen at night and sometimes during the day.
SC.K.E.5.5:	Observe that things can be big and things can be small as seen from Earth.
SC.K.E.5.6:	Observe that some objects are far away and some are nearby as seen from Earth.
SC.K.N.1.1:	Collaborate with a partner to collect information.
SC.K.N.1.2:	Make observations of the natural world and know that they are descriptors collected using the five senses.
SC.K.N.1.3:	Keep records as appropriate -- such as pictorial records -- of investigations conducted.
SC.K.N.1.4:	Observe and create a visual representation of an object which includes its major features.
SC.K.N.1.5:	Recognize that learning can come from careful observation.
SC.K.P.8.1:	Sort objects by observable properties, such as size, shape, color, temperature (hot or cold), weight (heavy or light) and texture.
SC.K.P.9.1:	Recognize that the shape of materials such as paper and clay can be changed by cutting, tearing, crumpling, smashing, or rolling.
SC.K.P.10.1:	Observe that things that make sound vibrate.
SC.K.P.12.1:	Investigate that things move in different ways, such as fast, slow, etc.
SC.K.P.13.1:	Observe that a push or a pull can change the way an object is moving.
SC.K2.CS-CC.1.3:	Collaborate and cooperate with peers, teachers, and others using technology to solve problems.
SC.K2.CS-CP.1.1:	Identify different kinds of data (e.g., text, charts, graphs, numbers, pictures, audio, video, and collections of objects).
SC.K2.CS-CP.2.2:	Perform a simple task (e.g., making a sandwich and brushing teeth) breaking it into small steps.
SC.K2.CS-CP.3.1:	Create developmentally appropriate multimedia products with support from teachers, family members, or student partners.
SC.K2.CS-CS.2.2:	Solve age-appropriate problems (e.g., puzzles and logical thinking programs) with or without technology (i.e., computational thinking).
SC.K2.CS-CS.2.5:	Create a simple algorithm, individually and collaboratively, without using computers to complete the task (e.g., making a sandwich, getting ready for school).
SC.K2.CS-CS.3.1:	Create a digital artifact (independently and collaboratively) that clearly expresses thoughts and ideas.
SC.K2.CS-CS.4.1:	Recognize different kinds of computing devices in the classroom and other places (e.g., laptops, tablets, smart phones, desktops, printers).
SC.K2.CS-PC.2.2:	Communicate about technology using developmentally appropriate terminology.
MA.K12.MTR.1.1:	Mathematicians who participate in effortful learning both individually and with others: • Analyze the problem in a way that makes sense given the task. • Ask questions that will help with solving the task. • Build perseverance by modifying methods as needed while solving a challenging task. • Stay engaged and maintain a positive mindset when working to solve tasks. • Help and support each other when attempting a new method or approach. **Clarifications:** Teachers who encourage students to participate actively in effortful learning both individually and with others: • Cultivate a community of growth mindset learners. • Foster perseverance in students by choosing tasks that are challenging. • Develop students' ability to analyze and problem solve. • Recognize students' effort when solving challenging problems.
MA.K12.MTR.2.1:	Demonstrate understanding by representing problems in multiple ways. Mathematicians who demonstrate understanding by representing problems in multiple ways: • Build understanding through modeling and using manipulatives. • Represent solutions to problems in multiple ways using objects, drawings, tables, graphs and equations. • Progress from modeling problems with objects and drawings to using algorithms and equations. • Express connections between concepts and representations. • Choose a representation based on the given context or purpose. **Clarifications:** Teachers who encourage students to demonstrate understanding by representing problems in multiple ways: • Help students make connections between concepts and representations. • Provide opportunities for students to use manipulatives when investigating concepts. • Guide students from concrete to pictorial to abstract representations as understanding progresses. • Show students that various representations can have different purposes and can be useful in different situations.
	Complete tasks with mathematical fluency. Mathematicians who complete tasks with mathematical fluency: • Select efficient and appropriate methods for solving problems within the given context. • Maintain flexibility and accuracy while performing procedures and mental calculations. • Complete tasks accurately and with confidence.

MA.K12.MTR.3.1:	• Adapt procedures to apply them to a new context. • Use feedback to improve efficiency when performing calculations. **Clarifications:** Teachers who encourage students to complete tasks with mathematical fluency: • Provide students with the flexibility to solve problems by selecting a procedure that allows them to solve efficiently and accurately. • Offer multiple opportunities for students to practice efficient and generalizable methods. • Provide opportunities for students to reflect on the method they used and determine if a more efficient method could have been used.
MA.K12.MTR.4.1:	Engage in discussions that reflect on the mathematical thinking of self and others. Mathematicians who engage in discussions that reflect on the mathematical thinking of self and others: • Communicate mathematical ideas, vocabulary and methods effectively. • Analyze the mathematical thinking of others. • Compare the efficiency of a method to those expressed by others. • Recognize errors and suggest how to correctly solve the task. • Justify results by explaining methods and processes. • Construct possible arguments based on evidence. **Clarifications:** Teachers who encourage students to engage in discussions that reflect on the mathematical thinking of self and others: • Establish a culture in which students ask questions of the teacher and their peers, and error is an opportunity for learning. • Create opportunities for students to discuss their thinking with peers. • Select, sequence and present student work to advance and deepen understanding of correct and increasingly efficient methods. • Develop students' ability to justify methods and compare their responses to the responses of their peers.
MA.K12.MTR.5.1:	Use patterns and structure to help understand and connect mathematical concepts. Mathematicians who use patterns and structure to help understand and connect mathematical concepts: • Focus on relevant details within a problem. • Create plans and procedures to logically order events, steps or ideas to solve problems. • Decompose a complex problem into manageable parts. • Relate previously learned concepts to new concepts. • Look for similarities among problems. • Connect solutions of problems to more complicated large-scale situations. **Clarifications:** Teachers who encourage students to use patterns and structure to help understand and connect mathematical concepts: • Help students recognize the patterns in the world around them and connect these patterns to mathematical concepts. • Support students to develop generalizations based on the similarities found among problems. • Provide opportunities for students to create plans and procedures to solve problems. • Develop students' ability to construct relationships between their current understanding and more sophisticated ways of thinking.
MA.K12.MTR.6.1:	Assess the reasonableness of solutions. Mathematicians who assess the reasonableness of solutions: • Estimate to discover possible solutions. • Use benchmark quantities to determine if a solution makes sense. • Check calculations when solving problems. • Verify possible solutions by explaining the methods used. • Evaluate results based on the given context. **Clarifications:** Teachers who encourage students to assess the reasonableness of solutions: • Have students estimate or predict solutions prior to solving. • Prompt students to continually ask, "Does this solution make sense? How do you know?" • Reinforce that students check their work as they progress within and after a task. • Strengthen students' ability to verify solutions through justifications.
MA.K12.MTR.7.1:	Apply mathematics to real-world contexts. Mathematicians who apply mathematics to real-world contexts: • Connect mathematical concepts to everyday experiences. • Use models and methods to understand, represent and solve problems. • Perform investigations to gather data or determine if a method is appropriate. • Redesign models and methods to improve accuracy or efficiency. **Clarifications:** Teachers who encourage students to apply mathematics to real-world contexts: • Provide opportunities for students to create models, both concrete and abstract, and perform investigations. • Challenge students to question the accuracy of their models and methods. • Support students as they validate conclusions by comparing them to the given situation. • Indicate how various concepts can be applied to other disciplines.
ELA.K12.EE.1.1:	Cite evidence to explain and justify reasoning. **Clarifications:** K-1 Students include textual evidence in their oral communication with guidance and support from adults. The evidence can consist of details from the text without naming the text. During 1st grade, students learn how to incorporate the evidence in their writing. 2-3 Students include relevant textual evidence in their written and oral communication. Students should name the text when they refer to it. In 3rd grade, students should use a combination of direct and indirect citations. 4-5 Students continue with previous skills and reference comments made by speakers and peers. Students cite texts that they've directly

	quoted, paraphrased, or used for information. When writing, students will use the form of citation dictated by the instructor or the style guide referenced by the instructor. 6-8 Students continue with previous skills and use a style guide to create a proper citation. 9-12 Students continue with previous skills and should be aware of existing style guides and the ways in which they differ.
ELA.K12.EE.2.1:	Read and comprehend grade-level complex texts proficiently. **Clarifications:** See Text Complexity for grade-level complexity bands and a text complexity rubric.
ELA.K12.EE.3.1:	Make inferences to support comprehension. **Clarifications:** Students will make inferences before the words infer or inference are introduced. Kindergarten students will answer questions like "Why is the girl smiling?" or make predictions about what will happen based on the title page. Students will use the terms and apply them in 2nd grade and beyond.
ELA.K12.EE.4.1:	Use appropriate collaborative techniques and active listening skills when engaging in discussions in a variety of situations. **Clarifications:** In kindergarten, students learn to listen to one another respectfully. In grades 1-2, students build upon these skills by justifying what they are thinking. For example: "I think _____ because _____." The collaborative conversations are becoming academic conversations. In grades 3-12, students engage in academic conversations discussing claims and justifying their reasoning, refining and applying skills. Students build on ideas, propel the conversation, and support claims and counterclaims with evidence.
ELA.K12.EE.5.1:	Use the accepted rules governing a specific format to create quality work. **Clarifications:** Students will incorporate skills learned into work products to produce quality work. For students to incorporate these skills appropriately, they must receive instruction. A 3rd grade student creating a poster board display must have instruction in how to effectively present information to do quality work.
ELA.K12.EE.6.1:	Use appropriate voice and tone when speaking or writing. **Clarifications:** In kindergarten and 1st grade, students learn the difference between formal and informal language. For example, the way we talk to our friends differs from the way we speak to adults. In 2nd grade and beyond, students practice appropriate social and academic language to discuss texts.
ELD.K12.ELL.SC.1:	English language learners communicate information, ideas and concepts necessary for academic success in the content area of Science.

General Course Information and Notes

VERSION DESCRIPTION

Special Notes:

This course offers students an opportunity to deepen science, mathematics, engineering, and technology skills. The primary content focus will be to expand knowledge of current grade level standards in mathematics and science by applying that content in a real world, hands-on situation involving engineering and technology. For kindergarten, themes will focus on the investigation of number sense, measurement, geometry, earth science, and physical science concepts.

Students will participate in various hands-on STEM activities in this supplemental course to assist in the mastery of current grade level mathematics and science standards.

Instructional Practices
Teaching from a range of complex text is optimized when teachers in all subject areas implement the following strategies on a routine basis:

1. Ensuring wide reading from complex text that varies in length.
2. Making close reading and rereading of texts central to lessons.
3. Emphasizing text-specific complex questions, and cognitively complex tasks, reinforce focus on the text and cultivate independence.
4. Emphasizing students supporting answers based upon evidence from the text.
5. Providing extensive research and writing opportunities (claims and evidence).

Science and Engineering Practices (NRC *Framework for K-12 Science Education, 2010*)

- Asking questions (for science) and defining problems (for engineering).
- Developing and using models.
- Planning and carrying out investigations.
- Analyzing and interpreting data.
- Using mathematics, information and computer technology, and computational thinking.
- Constructing explanations (for science) and designing solutions (for engineering).
- Engaging in argument from evidence.
- Obtaining, evaluating, and communicating information.

English Language Development (ELD) Standards Special Notes Section:

Teachers are required to provide listening, speaking, reading and writing instruction that allows English Language Learners (ELL) to communicate information, ideas and concepts for academic success in science and math. For the given level of English language proficiency and with visual, graphic, or interactive support, students will interact with grade level words, expressions, sentences and discourse to process or produce language necessary for academic success. The ELD standard should specify a relevant content area concept or topic of study chosen by curriculum developers and teachers which maximizes an ELL's need for communication and social skills. To access an ELL supporting document which delineates performance definitions and descriptors, please click on the following link: cpalms.org/uploads/docs/standards/eld/SC.pdf.

GENERAL INFORMATION

Course Number: 5020070

Course Path: Section: Grades PreK to 12 Education Courses > **Grade Group:** Grades PreK to 5 Education Courses > **Subject:** Science > **SubSubject:** General Sciences >

Abbreviated Title: STEM LAB K

Course Length: Year (Y)

Course Attributes:

- Class Size Core Required

Course Status: Draft - Course Pending Approval

Educator Certifications

Elementary Education (Grades K-6)
Prekindergarten/Primary Education (Age 3 through Grade 3)

STEM Lab Grade 1 (#5020080) 2022 - And Beyond

Course Standards

Name	Description
SC.1.E.5.1:	Observe and discuss that there are more stars in the sky than anyone can easily count and that they are not scattered evenly in the sky.
SC.1.E.5.2:	Explore the Law of Gravity by demonstrating that Earth's gravity pulls any object on or near Earth toward it even though nothing is touching the object.
SC.1.E.5.3:	Investigate how magnifiers make things appear bigger and help people see things they could not see without them.
SC.1.L.14.1:	Make observations of living things and their environment using the five senses.
SC.1.L.14.2:	Identify the major parts of plants, including stem, roots, leaves, and flowers.
SC.1.L.14.3:	Differentiate between living and nonliving things.
SC.1.L.16.1:	Make observations that plants and animals closely resemble their parents, but variations exist among individuals within a population.
SC.1.L.17.1:	Through observation, recognize that all plants and animals, including humans, need the basic necessities of air, water, food, and space.
SC.1.N.1.1:	Raise questions about the natural world, investigate them in teams through free exploration, and generate appropriate explanations based on those explorations.
SC.1.N.1.2:	Using the five senses as tools, make careful observations, describe objects in terms of number, shape, texture, size, weight, color, and motion, and compare their observations with others.
SC.1.N.1.3:	Keep records as appropriate - such as pictorial and written records - of investigations conducted.
SC.1.N.1.4:	Ask "how do you know?" in appropriate situations.
SC.1.P.8.1:	Sort objects by observable properties, such as size, shape, color, temperature (hot or cold), weight (heavy or light), texture, and whether objects sink or float.
SC.1.P.12.1:	Demonstrate and describe the various ways that objects can move, such as in a straight line, zigzag, back-and-forth, round-and-round, fast, and slow.
SC.1.P.13.1:	Demonstrate that the way to change the motion of an object is by applying a push or a pull.
SC.K2.CS-CC.1.1:	Identify a variety of digital tools used for communication and collaboration (e.g., online library catalogs and databases).
SC.K2.CS-CC.1.3:	Collaborate and cooperate with peers, teachers, and others using technology to solve problems.
SC.K2.CS-CP.1.1:	Identify different kinds of data (e.g., text, charts, graphs, numbers, pictures, audio, video, and collections of objects).
SC.K2.CS-CP.1.3:	Propose a solution to a problem or question based on an analysis of the data and critical thinking, individually and collaboratively.
SC.K2.CS-CP.1.4:	Create data visualizations (e.g., charts and infographics), individually and collaboratively.
SC.K2.CS-CP.2.2:	Perform a simple task (e.g., making a sandwich and brushing teeth) breaking it into small steps.
SC.K2.CS-CP.3.1:	Create developmentally appropriate multimedia products with support from teachers, family members, or student partners.
SC.K2.CS-CP.3.2:	Prepare a simple presentation of digital products and applications.
SC.K2.CS-CS.2.2:	Solve age-appropriate problems (e.g., puzzles and logical thinking programs) with or without technology (i.e., computational thinking).
SC.K2.CS-CS.2.5:	Create a simple algorithm, individually and collaboratively, without using computers to complete the task (e.g., making a sandwich, getting ready for school).
SC.K2.CS-CS.2.6:	Illustrate thoughts, ideas, and stories in a step-by-step manner using writing tools, digital cameras, and drawing tools.
SC.K2.CS-CS.2.8:	Gather and organize information using concept-mapping tools.
SC.K2.CS-CS.3.2:	Create, review, and revise artifacts that include text, images, and audio using digital tools.
SC.K2.CS-CS.4.2:	Recognize and operate different types of computers, applications and peripherals (e.g., use input/output devices such as a mouse, keyboard, or touch screen; find, navigate, launch a program).
MA.K12.MTR.1.1:	Mathematicians who participate in effortful learning both individually and with others: • Analyze the problem in a way that makes sense given the task. • Ask questions that will help with solving the task. • Build perseverance by modifying methods as needed while solving a challenging task. • Stay engaged and maintain a positive mindset when working to solve tasks. • Help and support each other when attempting a new method or approach. **Clarifications:** Teachers who encourage students to participate actively in effortful learning both individually and with others: • Cultivate a community of growth mindset learners. • Foster perseverance in students by choosing tasks that are challenging. • Develop students' ability to analyze and problem solve. • Recognize students' effort when solving challenging problems.
MA.K12.MTR.2.1:	Demonstrate understanding by representing problems in multiple ways. Mathematicians who demonstrate understanding by representing problems in multiple ways: • Build understanding through modeling and using manipulatives. • Represent solutions to problems in multiple ways using objects, drawings, tables, graphs and equations. • Progress from modeling problems with objects and drawings to using algorithms and equations. • Express connections between concepts and representations. • Choose a representation based on the given context or purpose. **Clarifications:** Teachers who encourage students to demonstrate understanding by representing problems in multiple ways: • Help students make connections between concepts and representations. • Provide opportunities for students to use manipulatives when investigating concepts. • Guide students from concrete to pictorial to abstract representations as understanding progresses.

- Show students that various representations can have different purposes and can be useful in different situations.

MA.K12.MTR.3.1:

Complete tasks with mathematical fluency.
Mathematicians who complete tasks with mathematical fluency:

- Select efficient and appropriate methods for solving problems within the given context.
- Maintain flexibility and accuracy while performing procedures and mental calculations.
- Complete tasks accurately and with confidence.
- Adapt procedures to apply them to a new context.
- Use feedback to improve efficiency when performing calculations.

Clarifications:
Teachers who encourage students to complete tasks with mathematical fluency:

- Provide students with the flexibility to solve problems by selecting a procedure that allows them to solve efficiently and accurately.
- Offer multiple opportunities for students to practice efficient and generalizable methods.
- Provide opportunities for students to reflect on the method they used and determine if a more efficient method could have been used.

MA.K12.MTR.4.1:

Engage in discussions that reflect on the mathematical thinking of self and others.
Mathematicians who engage in discussions that reflect on the mathematical thinking of self and others:

- Communicate mathematical ideas, vocabulary and methods effectively.
- Analyze the mathematical thinking of others.
- Compare the efficiency of a method to those expressed by others.
- Recognize errors and suggest how to correctly solve the task.
- Justify results by explaining methods and processes.
- Construct possible arguments based on evidence.

Clarifications:
Teachers who encourage students to engage in discussions that reflect on the mathematical thinking of self and others:

- Establish a culture in which students ask questions of the teacher and their peers, and error is an opportunity for learning.
- Create opportunities for students to discuss their thinking with peers.
- Select, sequence and present student work to advance and deepen understanding of correct and increasingly efficient methods.
- Develop students' ability to justify methods and compare their responses to the responses of their peers.

MA.K12.MTR.5.1:

Use patterns and structure to help understand and connect mathematical concepts.
Mathematicians who use patterns and structure to help understand and connect mathematical concepts:

- Focus on relevant details within a problem.
- Create plans and procedures to logically order events, steps or ideas to solve problems.
- Decompose a complex problem into manageable parts.
- Relate previously learned concepts to new concepts.
- Look for similarities among problems.
- Connect solutions of problems to more complicated large-scale situations.

Clarifications:
Teachers who encourage students to use patterns and structure to help understand and connect mathematical concepts:

- Help students recognize the patterns in the world around them and connect these patterns to mathematical concepts.
- Support students to develop generalizations based on the similarities found among problems.
- Provide opportunities for students to create plans and procedures to solve problems.
- Develop students' ability to construct relationships between their current understanding and more sophisticated ways of thinking.

MA.K12.MTR.6.1:

Assess the reasonableness of solutions.
Mathematicians who assess the reasonableness of solutions:

- Estimate to discover possible solutions.
- Use benchmark quantities to determine if a solution makes sense.
- Check calculations when solving problems.
- Verify possible solutions by explaining the methods used.
- Evaluate results based on the given context.

Clarifications:
Teachers who encourage students to assess the reasonableness of solutions:

- Have students estimate or predict solutions prior to solving.
- Prompt students to continually ask, "Does this solution make sense? How do you know?"
- Reinforce that students check their work as they progress within and after a task.
- Strengthen students' ability to verify solutions through justifications.

MA.K12.MTR.7.1:

Apply mathematics to real-world contexts.
Mathematicians who apply mathematics to real-world contexts:

- Connect mathematical concepts to everyday experiences.
- Use models and methods to understand, represent and solve problems.
- Perform investigations to gather data or determine if a method is appropriate. • Redesign models and methods to improve accuracy or efficiency.

Clarifications:
Teachers who encourage students to apply mathematics to real-world contexts:

- Provide opportunities for students to create models, both concrete and abstract, and perform investigations.
- Challenge students to question the accuracy of their models and methods.
- Support students as they validate conclusions by comparing them to the given situation.
- Indicate how various concepts can be applied to other disciplines.

ELA.K12.EE.1.1:	Cite evidence to explain and justify reasoning. **Clarifications:** K-1 Students include textual evidence in their oral communication with guidance and support from adults. The evidence can consist of details from the text without naming the text. During 1st grade, students learn how to incorporate the evidence in their writing. 2-3 Students include relevant textual evidence in their written and oral communication. Students should name the text when they refer to it. In 3rd grade, students should use a combination of direct and indirect citations. 4-5 Students continue with previous skills and reference comments made by speakers and peers. Students cite texts that they've directly quoted, paraphrased, or used for information. When writing, students will use the form of citation dictated by the instructor or the style guide referenced by the instructor. 6-8 Students continue with previous skills and use a style guide to create a proper citation. 9-12 Students continue with previous skills and should be aware of existing style guides and the ways in which they differ.
ELA.K12.EE.2.1:	Read and comprehend grade-level complex texts proficiently. **Clarifications:** See Text Complexity for grade-level complexity bands and a text complexity rubric.
ELA.K12.EE.3.1:	Make inferences to support comprehension. **Clarifications:** Students will make inferences before the words infer or inference are introduced. Kindergarten students will answer questions like "Why is the girl smiling?" or make predictions about what will happen based on the title page. Students will use the terms and apply them in 2nd grade and beyond.
ELA.K12.EE.4.1:	Use appropriate collaborative techniques and active listening skills when engaging in discussions in a variety of situations. **Clarifications:** In kindergarten, students learn to listen to one another respectfully. In grades 1-2, students build upon these skills by justifying what they are thinking. For example: "I think _____ because _____." The collaborative conversations are becoming academic conversations. In grades 3-12, students engage in academic conversations discussing claims and justifying their reasoning, refining and applying skills. Students build on ideas, propel the conversation, and support claims and counterclaims with evidence.
ELA.K12.EE.5.1:	Use the accepted rules governing a specific format to create quality work. **Clarifications:** Students will incorporate skills learned into work products to produce quality work. For students to incorporate these skills appropriately, they must receive instruction. A 3rd grade student creating a poster board display must have instruction in how to effectively present information to do quality work.
ELA.K12.EE.6.1:	Use appropriate voice and tone when speaking or writing. **Clarifications:** In kindergarten and 1st grade, students learn the difference between formal and informal language. For example, the way we talk to our friends differs from the way we speak to adults. In 2nd grade and beyond, students practice appropriate social and academic language to discuss texts.
ELD.K12.ELL.SC.1:	English language learners communicate information, ideas and concepts necessary for academic success in the content area of Science.

General Course Information and Notes

VERSION DESCRIPTION

This course offers students an opportunity to deepen science, mathematics, engineering, and technology skills. The primary content focus will be to expand knowledge of current grade level standards in mathematics and science by applying that content in a real world, hands-on situation involving engineering and technology. For first grade, themes will focus on the investigation of number sense, measurement, geometry, earth science, life science, and physical science concepts.

Students will participate in various hands-on STEM activities in this supplemental course to assist in the mastery of current grade level mathematics and science standards.

Instructional Practices
Teaching from a range of complex text is optimized when teachers in all subject areas implement the following strategies on a routine basis:

1. Ensuring wide reading from complex text that varies in length.
2. Making close reading and rereading of texts central to lessons.
3. Emphasizing text-specific complex questions, and cognitively complex tasks, reinforce focus on the text and cultivate independence.
4. Emphasizing students supporting answers based upon evidence from the text.
5. Providing extensive research and writing opportunities (claims and evidence).

Science and Engineering Practices (NRC *Framework for K-12 Science Education, 2010*)

- Asking questions (for science) and defining problems (for engineering).
- Developing and using models.
- Planning and carrying out investigations.
- Analyzing and interpreting data.
- Using mathematics, information and computer technology, and computational thinking.
- Constructing explanations (for science) and designing solutions (for engineering).
- Engaging in argument from evidence.
- Obtaining, evaluating, and communicating information.

English Language Development (ELD) Standards Special Notes Section:

Teachers are required to provide listening, speaking, reading and writing instruction that allows English Language Learners (ELL) to communicate information, ideas and concepts for academic success in science and math. For the given level of English language proficiency and with visual, graphic, or interactive support, students will interact with grade level words, expressions, sentences and discourse to process or produce language necessary for academic success. The ELD standard should specify a relevant content area concept or topic of study chosen by curriculum developers and teachers which maximizes an ELL's need for communication and social skills. To access an ELL supporting document which delineates performance definitions and descriptors, please click on the following link: cpalms.org/uploads/docs/standards/eld/SC.pdf.

GENERAL INFORMATION

Course Number: 5020080

Course Path: Section: Grades PreK to 12 Education Courses > **Grade Group:** Grades PreK to 5 Education Courses > **Subject:** Science > **SubSubject:** General Sciences >

Abbreviated Title: STEM Lab 1

Course Length: Year (Y)

Course Attributes:

- Class Size Core Required

Course Status: Draft - Course Pending Approval

Educator Certifications

Elementary Education (Elementary Grades 1-6)
Elementary Education (Grades K-6)

STEM Lab Grade 2 (#5020090) 2022 - And Beyond

Course Standards

Name	Description
SC.2.E.6.1:	Recognize that Earth is made up of rocks. Rocks come in many sizes and shapes.
SC.2.E.6.2:	Describe how small pieces of rock and dead plant and animal parts can be the basis of soil and explain the process by which soil is formed.
SC.2.E.6.3:	Classify soil types based on color, texture (size of particles), the ability to retain water, and the ability to support the growth of plants.
SC.2.E.7.1:	Compare and describe changing patterns in nature that repeat themselves, such as weather conditions including temperature and precipitation, day to day and season to season.
SC.2.E.7.2:	Investigate by observing and measuring, that the Sun's energy directly and indirectly warms the water, land, and air.
SC.2.E.7.3:	Investigate, observe and describe how water left in an open container disappears (evaporates), but water in a closed container does not disappear (evaporate).
SC.2.E.7.4:	Investigate that air is all around us and that moving air is wind.
SC.2.N.1.1:	Raise questions about the natural world, investigate them in teams through free exploration and systematic observations, and generate appropriate explanations based on those explorations.
SC.2.N.1.2:	Compare the observations made by different groups using the same tools.
SC.2.N.1.3:	Ask "how do you know?" in appropriate situations and attempt reasonable answers when asked the same question by others.
SC.2.N.1.4:	Explain how particular scientific investigations should yield similar conclusions when repeated.
SC.2.N.1.5:	Distinguish between empirical observation (what you see, hear, feel, smell, or taste) and ideas or inferences (what you think).
SC.2.N.1.6:	Explain how scientists alone or in groups are always investigating new ways to solve problems.
SC.2.P.8.1:	Observe and measure objects in terms of their properties, including size, shape, color, temperature, weight, texture, sinking or floating in water, and attraction and repulsion of magnets.
SC.2.P.8.2:	Identify objects and materials as solid, liquid, or gas.
SC.2.P.8.3:	Recognize that solids have a definite shape and that liquids and gases take the shape of their container.
SC.2.P.8.4:	Observe and describe water in its solid, liquid, and gaseous states.
SC.2.P.8.5:	Measure and compare temperatures taken every day at the same time.
SC.2.P.8.6:	Measure and compare the volume of liquids using containers of various shapes and sizes.
SC.2.P.9.1:	Investigate that materials can be altered to change some of their properties, but not all materials respond the same way to any one alteration.
SC.2.P.10.1:	Discuss that people use electricity or other forms of energy to cook their food, cool or warm their homes, and power their cars.
SC.2.P.13.1:	Investigate the effect of applying various pushes and pulls on different objects.
SC.2.P.13.2:	Demonstrate that magnets can be used to make some things move without touching them.
SC.2.P.13.3:	Recognize that objects are pulled toward the ground unless something holds them up.
SC.2.P.13.4:	Demonstrate that the greater the force (push or pull) applied to an object, the greater the change in motion of the object.
SC.K2.CS-CC.1.2:	Conduct basic keyword searches, and exchange information and feedback with teachers and other students (e.g., e-mail and text messaging).
SC.K2.CS-CC.1.3:	Collaborate and cooperate with peers, teachers, and others using technology to solve problems.
SC.K2.CS-CC.1.4:	Provide and accept constructive criticism on a collaborative project.
SC.K2.CS-CP.2.1:	Define a computer program as a set of commands created by people to do something.
SC.K2.CS-CP.2.4:	Construct a simple program using tools that do not require a textual programming language (e.g. block-based programming language).
SC.K2.CS-CP.3.1:	Create developmentally appropriate multimedia products with support from teachers, family members, or student partners.
SC.K2.CS-CP.3.2:	Prepare a simple presentation of digital products and applications.
SC.K2.CS-CS.1.1:	Define simulation and identify the concepts illustrated by a simple simulation (e.g., growth, human health, and the butterfly life cycle).
SC.K2.CS-CS.1.3:	Describe how models represent a real-life system (e.g., globe or map).
SC.K2.CS-CS.2.1:	Arrange or sort information into useful order, such as sorting students by birth date, with or without technology.
SC.K2.CS-CS.2.2:	Solve age-appropriate problems (e.g., puzzles and logical thinking programs) with or without technology (i.e., computational thinking).
SC.K2.CS-CS.2.4:	Define an algorithm as a sequence of defined steps.
SC.K2.CS-CS.2.6:	Illustrate thoughts, ideas, and stories in a step-by-step manner using writing tools, digital cameras, and drawing tools.
SC.K2.CS-CS.2.7:	Develop and present an algorithm using tangible materials.
SC.K2.CS-CS.3.1:	Create a digital artifact (independently and collaboratively) that clearly expresses thoughts and ideas.
SC.K2.CS-CS.3.2:	Create, review, and revise artifacts that include text, images, and audio using digital tools.
SC.K2.CS-CS.4.3:	Explain that a computer program is running when a program or command is executed.
MA.K12.MTR.1.1:	Mathematicians who participate in effortful learning both individually and with others: • Analyze the problem in a way that makes sense given the task. • Ask questions that will help with solving the task. • Build perseverance by modifying methods as needed while solving a challenging task. • Stay engaged and maintain a positive mindset when working to solve tasks. • Help and support each other when attempting a new method or approach. **Clarifications:** Teachers who encourage students to participate actively in effortful learning both individually and with others: • Cultivate a community of growth mindset learners. • Foster perseverance in students by choosing tasks that are challenging. • Develop students' ability to analyze and problem solve. • Recognize students' effort when solving challenging problems.
	Demonstrate understanding by representing problems in multiple ways.

Mathematicians who demonstrate understanding by representing problems in multiple ways:

- Build understanding through modeling and using manipulatives.
- Represent solutions to problems in multiple ways using objects, drawings, tables, graphs and equations.
- Progress from modeling problems with objects and drawings to using algorithms and equations.
- Express connections between concepts and representations.

MA.K12.MTR.2.1:

- Choose a representation based on the given context or purpose.

Clarifications:
Teachers who encourage students to demonstrate understanding by representing problems in multiple ways:

- Help students make connections between concepts and representations.
- Provide opportunities for students to use manipulatives when investigating concepts.
- Guide students from concrete to pictorial to abstract representations as understanding progresses.
- Show students that various representations can have different purposes and can be useful in different situations.

Complete tasks with mathematical fluency.
Mathematicians who complete tasks with mathematical fluency:

- Select efficient and appropriate methods for solving problems within the given context.
- Maintain flexibility and accuracy while performing procedures and mental calculations.
- Complete tasks accurately and with confidence.
- Adapt procedures to apply them to a new context.

MA.K12.MTR.3.1:

- Use feedback to improve efficiency when performing calculations.

Clarifications:
Teachers who encourage students to complete tasks with mathematical fluency:

- Provide students with the flexibility to solve problems by selecting a procedure that allows them to solve efficiently and accurately.
- Offer multiple opportunities for students to practice efficient and generalizable methods.
- Provide opportunities for students to reflect on the method they used and determine if a more efficient method could have been used.

Engage in discussions that reflect on the mathematical thinking of self and others.
Mathematicians who engage in discussions that reflect on the mathematical thinking of self and others:

- Communicate mathematical ideas, vocabulary and methods effectively.
- Analyze the mathematical thinking of others.
- Compare the efficiency of a method to those expressed by others.
- Recognize errors and suggest how to correctly solve the task.
- Justify results by explaining methods and processes.

MA.K12.MTR.4.1:

- Construct possible arguments based on evidence.

Clarifications:
Teachers who encourage students to engage in discussions that reflect on the mathematical thinking of self and others:

- Establish a culture in which students ask questions of the teacher and their peers, and error is an opportunity for learning.
- Create opportunities for students to discuss their thinking with peers.
- Select, sequence and present student work to advance and deepen understanding of correct and increasingly efficient methods.
- Develop students' ability to justify methods and compare their responses to the responses of their peers.

Use patterns and structure to help understand and connect mathematical concepts.
Mathematicians who use patterns and structure to help understand and connect mathematical concepts:

- Focus on relevant details within a problem.
- Create plans and procedures to logically order events, steps or ideas to solve problems.
- Decompose a complex problem into manageable parts.
- Relate previously learned concepts to new concepts.
- Look for similarities among problems.

MA.K12.MTR.5.1:

- Connect solutions of problems to more complicated large-scale situations.

Clarifications:
Teachers who encourage students to use patterns and structure to help understand and connect mathematical concepts:

- Help students recognize the patterns in the world around them and connect these patterns to mathematical concepts.
- Support students to develop generalizations based on the similarities found among problems.
- Provide opportunities for students to create plans and procedures to solve problems.
- Develop students' ability to construct relationships between their current understanding and more sophisticated ways of thinking.

Assess the reasonableness of solutions.
Mathematicians who assess the reasonableness of solutions:

- Estimate to discover possible solutions.
- Use benchmark quantities to determine if a solution makes sense.
- Check calculations when solving problems.
- Verify possible solutions by explaining the methods used.

MA.K12.MTR.6.1:

- Evaluate results based on the given context.

Clarifications:
Teachers who encourage students to assess the reasonableness of solutions:

- Have students estimate or predict solutions prior to solving.
- Prompt students to continually ask, "Does this solution make sense? How do you know?"
- Reinforce that students check their work as they progress within and after a task.
- Strengthen students' ability to verify solutions through justifications.

	Apply mathematics to real-world contexts. Mathematicians who apply mathematics to real-world contexts: • Connect mathematical concepts to everyday experiences. • Use models and methods to understand, represent and solve problems. • Perform investigations to gather data or determine if a method is appropriate. • Redesign models and methods to improve accuracy or efficiency.
MA.K12.MTR.7.1:	**Clarifications:** Teachers who encourage students to apply mathematics to real-world contexts: • Provide opportunities for students to create models, both concrete and abstract, and perform investigations. • Challenge students to question the accuracy of their models and methods. • Support students as they validate conclusions by comparing them to the given situation. • Indicate how various concepts can be applied to other disciplines.
ELA.K12.EE.1.1:	Cite evidence to explain and justify reasoning. **Clarifications:** K-1 Students include textual evidence in their oral communication with guidance and support from adults. The evidence can consist of details from the text without naming the text. During 1st grade, students learn how to incorporate the evidence in their writing. 2-3 Students include relevant textual evidence in their written and oral communication. Students should name the text when they refer to it. In 3rd grade, students should use a combination of direct and indirect citations. 4-5 Students continue with previous skills and reference comments made by speakers and peers. Students cite texts that they've directly quoted, paraphrased, or used for information. When writing, students will use the form of citation dictated by the instructor or the style guide referenced by the instructor. 6-8 Students continue with previous skills and use a style guide to create a proper citation. 9-12 Students continue with previous skills and should be aware of existing style guides and the ways in which they differ.
ELA.K12.EE.2.1:	Read and comprehend grade-level complex texts proficiently. **Clarifications:** See Text Complexity for grade-level complexity bands and a text complexity rubric.
ELA.K12.EE.3.1:	Make inferences to support comprehension. **Clarifications:** Students will make inferences before the words infer or inference are introduced. Kindergarten students will answer questions like "Why is the girl smiling?" or make predictions about what will happen based on the title page. Students will use the terms and apply them in 2nd grade and beyond.
ELA.K12.EE.4.1:	Use appropriate collaborative techniques and active listening skills when engaging in discussions in a variety of situations. **Clarifications:** In kindergarten, students learn to listen to one another respectfully. In grades 1-2, students build upon these skills by justifying what they are thinking. For example: "I think _____ because _____." The collaborative conversations are becoming academic conversations. In grades 3-12, students engage in academic conversations discussing claims and justifying their reasoning, refining and applying skills. Students build on ideas, propel the conversation, and support claims and counterclaims with evidence.
ELA.K12.EE.5.1:	Use the accepted rules governing a specific format to create quality work. **Clarifications:** Students will incorporate skills learned into work products to produce quality work. For students to incorporate these skills appropriately, they must receive instruction. A 3rd grade student creating a poster board display must have instruction in how to effectively present information to do quality work.
ELA.K12.EE.6.1:	Use appropriate voice and tone when speaking or writing. **Clarifications:** In kindergarten and 1st grade, students learn the difference between formal and informal language. For example, the way we talk to our friends differs from the way we speak to adults. In 2nd grade and beyond, students practice appropriate social and academic language to discuss texts.
ELD.K12.ELL.SC.1:	English language learners communicate information, ideas and concepts necessary for academic success in the content area of Science.

General Course Information and Notes

VERSION DESCRIPTION

This course offers students an opportunity to deepen science, mathematics, engineering, and technology skills. The primary content focus will be to expand knowledge of current grade level standards in mathematics and science by applying that content in a real world, hands-on situation involving engineering and technology. For second grade, themes will focus on the investigation of number sense, measurement, earth science, and physical science concepts.

Students will participate in various hands-on STEM activities in this supplemental course to assist in the mastery of current grade level mathematics and science standards.

Instructional Practices
Teaching from a range of complex text is optimized when teachers in all subject areas implement the following strategies on a routine basis:

1. Ensuring wide reading from complex text that varies in length.
2. Making close reading and rereading of texts central to lessons.
3. Emphasizing text-specific complex questions, and cognitively complex tasks, reinforce focus on the text and cultivate independence.
4. Emphasizing students supporting answers based upon evidence from the text.

5. Providing extensive research and writing opportunities (claims and evidence).

Science and Engineering Practices (NRC *Framework for K-12 Science Education, 2010*)

- Asking questions (for science) and defining problems (for engineering).
- Developing and using models.
- Planning and carrying out investigations.
- Analyzing and interpreting data.
- Using mathematics, information and computer technology, and computational thinking.
- Constructing explanations (for science) and designing solutions (for engineering).
- Engaging in argument from evidence.
- Obtaining, evaluating, and communicating information.

English Language Development (ELD) Standards Special Notes Section:

Teachers are required to provide listening, speaking, reading and writing instruction that allows English Language Learners (ELL) to communicate information, ideas and concepts for academic success in science and math. For the given level of English language proficiency and with visual, graphic, or interactive support, students will interact with grade level words, expressions, sentences and discourse to process or produce language necessary for academic success. The ELD standard should specify a relevant content area concept or topic of study chosen by curriculum developers and teachers which maximizes an ELL's need for communication and social skills. To access an ELL supporting document which delineates performance definitions and descriptors, please click on the following link: cpalms.org/uploads/docs/standards/eld/SC.pdf.

GENERAL INFORMATION

Course Number: 5020090

Course Path: Section: Grades PreK to 12 Education Courses > **Grade Group:** Grades PreK to 5 Education Courses > **Subject:** Science > **SubSubject:** General Sciences >

Abbreviated Title: STEM LAB 2

Course Length: Year (Y)

Course Attributes:

- Class Size Core Required

Course Status: Draft - Course Pending Approval

Educator Certifications

Elementary Education (Elementary Grades 1-6)
Elementary Education (Grades K-6)

STEM Lab Grade 3 (#5020100) 2022 - And Beyond

Course Standards

Name	Description
SC.3.L.14.1:	Describe structures in plants and their roles in food production, support, water and nutrient transport, and reproduction.
SC.3.L.14.2:	Investigate and describe how plants respond to stimuli (heat, light, gravity), such as the way plant stems grow toward light and their roots grow downward in response to gravity.
SC.3.L.15.1:	Classify animals into major groups (mammals, birds, reptiles, amphibians, fish, arthropods, vertebrates and invertebrates, those having live births and those which lay eggs) according to their physical characteristics and behaviors.
SC.3.L.15.2:	Classify flowering and nonflowering plants into major groups such as those that produce seeds, or those like ferns and mosses that produce spores, according to their physical characteristics.
SC.3.L.17.1:	Describe how animals and plants respond to changing seasons.
SC.3.L.17.2:	Recognize that plants use energy from the Sun, air, and water to make their own food.
SC.3.N.1.1:	Raise questions about the natural world, investigate them individually and in teams through free exploration and systematic investigations, and generate appropriate explanations based on those explorations.
SC.3.N.1.2:	Compare the observations made by different groups using the same tools and seek reasons to explain the differences across groups.
SC.3.N.1.3:	Keep records as appropriate, such as pictorial, written, or simple charts and graphs, of investigations conducted.
SC.3.N.1.4:	Recognize the importance of communication among scientists.
SC.3.N.1.5:	Recognize that scientists question, discuss, and check each other's evidence and explanations.
SC.3.N.1.6:	Infer based on observation.
SC.3.N.1.7:	Explain that empirical evidence is information, such as observations or measurements, that is used to help validate explanations of natural phenomena.
SC.3.N.3.1:	Recognize that words in science can have different or more specific meanings than their use in everyday language; for example, energy, cell, heat/cold, and evidence.
SC.3.N.3.2:	Recognize that scientists use models to help understand and explain how things work.
SC.3.N.3.3:	Recognize that all models are approximations of natural phenomena; as such, they do not perfectly account for all observations.
SC.3.P.8.1:	Measure and compare temperatures of various samples of solids and liquids.
SC.3.P.8.2:	Measure and compare the mass and volume of solids and liquids.
SC.3.P.8.3:	Compare materials and objects according to properties such as size, shape, color, texture, and hardness.
SC.3.P.9.1:	Describe the changes water undergoes when it changes state through heating and cooling by using familiar scientific terms such as melting, freezing, boiling, evaporation, and condensation.
SC.3.P.10.1:	Identify some basic forms of energy such as light, heat, sound, electrical, and mechanical.
SC.3.P.10.2:	Recognize that energy has the ability to cause motion or create change.
SC.3.P.10.3:	Demonstrate that light travels in a straight line until it strikes an object or travels from one medium to another.
SC.3.P.10.4:	Demonstrate that light can be reflected, refracted, and absorbed.
SC.3.P.11.1:	Investigate, observe, and explain that things that give off light often also give off heat.
SC.3.P.11.2:	Investigate, observe, and explain that heat is produced when one object rubs against another, such as rubbing one's hands together.
SC.35.CS-CC.1.1:	Identify technology tools for individual and collaborative data collection, writing, communication, and publishing activities.
SC.35.CS-CC.1.2:	Describe key ideas and details while working individually or collaboratively using digital tools and media-rich resources in a way that informs, persuades, and/or entertains.
SC.35.CS-CC.1.3:	Identify ways that technology can foster teamwork, and collaboration can support problem solving and innovation.
SC.35.CS-CP.1.2:	Identify and describe examples of databases from everyday life (e.g., library catalogs, school records, telephone directories, and contact lists).
SC.35.CS-CP.1.3:	Identify, research, and collect a data set on a topic, issue, problem, or question using age-appropriate technologies.
SC.35.CS-CP.1.4:	Collect, organize, graph, and analyze data to answer a question using a database or spreadsheet.
SC.35.CS-CP.2.4:	Explain that programs need known initial conditions (e.g., set initial score to zero in a game, initialize variables, or initial values set by hardware input).
SC.35.CS-CP.2.5:	Detect and correct program errors, including those involving arithmetic operators, conditionals, and repetition, using interactive debugging.
SC.35.CS-CP.3.1:	Write, communicate and publish activities using technology tools.
SC.35.CS-CP.3.2:	Present digitally created products, either individually and collaboratively, where a topic, concept, or skill is carefully analyzed or thoughtfully explored.
SC.35.CS-CS.1.1:	Identify the concepts illustrated by a simulation (e.g., ecosystem, predator/prey, and invasive species).
SC.35.CS-CS.1.3:	Answer a question, individually and collaboratively, using data from a simulation.
SC.35.CS-CS.1.4:	Create a simple model of a system (e.g., flower or solar system) and explain what the model shows and does not show.
SC.35.CS-CS.2.1:	Solve age-appropriate problems using information organized using digital graphic organizers (e.g., concept maps and Venn-diagrams).
SC.35.CS-CS.2.3:	Explain the process of arranging or sorting information into useful order as well as the purpose for doing so.
SC.35.CS-CS.3.1:	Manipulate and publish multimedia artifacts using digital tools (local and online).
SC.35.CS-CS.3.2:	Create an artifact (independently and collaboratively) that answers a research question clearly communicating thoughts and ideas.
SC.35.CS-CS.6.1:	Describe how hardware applications (e.g., Global Positioning System (GPS) navigation for driving directions, text-to-speech translation, and language translation) can enable everyone to do things they could not do otherwise.
SC.35.CS-PC.2.6:	Communicate about technology using appropriate terminology.
SC.35.CS-PC.3.1:	Identify digital information resources used to answer research questions (e.g., online library catalog, online encyclopedias, databases, and websites).
SC.35.CS-PC.3.2:	Gather, organize, and analyze information from digital resources.
SC.35.CS-PC.3.3:	Compare digital resources for accuracy, relevancy, and appropriateness.
SC.35.CS-PC.4.1:	Describe the difference between digital artifacts that are open or free and those that are protected by copyright.
	Mathematicians who participate in effortful learning both individually and with others: • Analyze the problem in a way that makes sense given the task. • Ask questions that will help with solving the task.

- Build perseverance by modifying methods as needed while solving a challenging task.
- Stay engaged and maintain a positive mindset when working to solve tasks.
- Help and support each other when attempting a new method or approach.

MA.K12.MTR.1.1:

Clarifications:
Teachers who encourage students to participate actively in effortful learning both individually and with others:
- Cultivate a community of growth mindset learners.
- Foster perseverance in students by choosing tasks that are challenging.
- Develop students' ability to analyze and problem solve.
- Recognize students' effort when solving challenging problems.

Demonstrate understanding by representing problems in multiple ways.
Mathematicians who demonstrate understanding by representing problems in multiple ways:

- Build understanding through modeling and using manipulatives.
- Represent solutions to problems in multiple ways using objects, drawings, tables, graphs and equations.
- Progress from modeling problems with objects and drawings to using algorithms and equations.
- Express connections between concepts and representations.
- Choose a representation based on the given context or purpose.

MA.K12.MTR.2.1:

Clarifications:
Teachers who encourage students to demonstrate understanding by representing problems in multiple ways:
- Help students make connections between concepts and representations.
- Provide opportunities for students to use manipulatives when investigating concepts.
- Guide students from concrete to pictorial to abstract representations as understanding progresses.
- Show students that various representations can have different purposes and can be useful in different situations.

Complete tasks with mathematical fluency.
Mathematicians who complete tasks with mathematical fluency:

- Select efficient and appropriate methods for solving problems within the given context.
- Maintain flexibility and accuracy while performing procedures and mental calculations.
- Complete tasks accurately and with confidence.
- Adapt procedures to apply them to a new context.
- Use feedback to improve efficiency when performing calculations.

MA.K12.MTR.3.1:

Clarifications:
Teachers who encourage students to complete tasks with mathematical fluency:
- Provide students with the flexibility to solve problems by selecting a procedure that allows them to solve efficiently and accurately.
- Offer multiple opportunities for students to practice efficient and generalizable methods.
- Provide opportunities for students to reflect on the method they used and determine if a more efficient method could have been used.

Engage in discussions that reflect on the mathematical thinking of self and others.
Mathematicians who engage in discussions that reflect on the mathematical thinking of self and others:

- Communicate mathematical ideas, vocabulary and methods effectively.
- Analyze the mathematical thinking of others.
- Compare the efficiency of a method to those expressed by others.
- Recognize errors and suggest how to correctly solve the task.
- Justify results by explaining methods and processes.
- Construct possible arguments based on evidence.

MA.K12.MTR.4.1:

Clarifications:
Teachers who encourage students to engage in discussions that reflect on the mathematical thinking of self and others:
- Establish a culture in which students ask questions of the teacher and their peers, and error is an opportunity for learning.
- Create opportunities for students to discuss their thinking with peers.
- Select, sequence and present student work to advance and deepen understanding of correct and increasingly efficient methods.
- Develop students' ability to justify methods and compare their responses to the responses of their peers.

Use patterns and structure to help understand and connect mathematical concepts.
Mathematicians who use patterns and structure to help understand and connect mathematical concepts:

- Focus on relevant details within a problem.
- Create plans and procedures to logically order events, steps or ideas to solve problems.
- Decompose a complex problem into manageable parts.
- Relate previously learned concepts to new concepts.
- Look for similarities among problems.
- Connect solutions of problems to more complicated large-scale situations.

MA.K12.MTR.5.1:

Clarifications:
Teachers who encourage students to use patterns and structure to help understand and connect mathematical concepts:
- Help students recognize the patterns in the world around them and connect these patterns to mathematical concepts.
- Support students to develop generalizations based on the similarities found among problems.
- Provide opportunities for students to create plans and procedures to solve problems.
- Develop students' ability to construct relationships between their current understanding and more sophisticated ways of thinking.

Assess the reasonableness of solutions.
Mathematicians who assess the reasonableness of solutions:

- Estimate to discover possible solutions.

MA.K12.MTR.6.1:	• Use benchmark quantities to determine if a solution makes sense. • Check calculations when solving problems. • Verify possible solutions by explaining the methods used. • Evaluate results based on the given context. **Clarifications:** Teachers who encourage students to assess the reasonableness of solutions: • Have students estimate or predict solutions prior to solving. • Prompt students to continually ask, "Does this solution make sense? How do you know?" • Reinforce that students check their work as they progress within and after a task. • Strengthen students' ability to verify solutions through justifications.
MA.K12.MTR.7.1:	Apply mathematics to real-world contexts. Mathematicians who apply mathematics to real-world contexts: • Connect mathematical concepts to everyday experiences. • Use models and methods to understand, represent and solve problems. • Perform investigations to gather data or determine if a method is appropriate. • Redesign models and methods to improve accuracy or efficiency. **Clarifications:** Teachers who encourage students to apply mathematics to real-world contexts: • Provide opportunities for students to create models, both concrete and abstract, and perform investigations. • Challenge students to question the accuracy of their models and methods. • Support students as they validate conclusions by comparing them to the given situation. • Indicate how various concepts can be applied to other disciplines.
ELA.K12.EE.1.1:	Cite evidence to explain and justify reasoning. **Clarifications:** K-1 Students include textual evidence in their oral communication with guidance and support from adults. The evidence can consist of details from the text without naming the text. During 1st grade, students learn how to incorporate the evidence in their writing. 2-3 Students include relevant textual evidence in their written and oral communication. Students should name the text when they refer to it. In 3rd grade, students should use a combination of direct and indirect citations. 4-5 Students continue with previous skills and reference comments made by speakers and peers. Students cite texts that they've directly quoted, paraphrased, or used for information. When writing, students will use the form of citation dictated by the instructor or the style guide referenced by the instructor. 6-8 Students continue with previous skills and use a style guide to create a proper citation. 9-12 Students continue with previous skills and should be aware of existing style guides and the ways in which they differ.
ELA.K12.EE.2.1:	Read and comprehend grade-level complex texts proficiently. **Clarifications:** See Text Complexity for grade-level complexity bands and a text complexity rubric.
ELA.K12.EE.3.1:	Make inferences to support comprehension. **Clarifications:** Students will make inferences before the words infer or inference are introduced. Kindergarten students will answer questions like "Why is the girl smiling?" or make predictions about what will happen based on the title page. Students will use the terms and apply them in 2nd grade and beyond.
ELA.K12.EE.4.1:	Use appropriate collaborative techniques and active listening skills when engaging in discussions in a variety of situations. **Clarifications:** In kindergarten, students learn to listen to one another respectfully. In grades 1-2, students build upon these skills by justifying what they are thinking. For example: "I think _____ because _____." The collaborative conversations are becoming academic conversations. In grades 3-12, students engage in academic conversations discussing claims and justifying their reasoning, refining and applying skills. Students build on ideas, propel the conversation, and support claims and counterclaims with evidence.
ELA.K12.EE.5.1:	Use the accepted rules governing a specific format to create quality work. **Clarifications:** Students will incorporate skills learned into work products to produce quality work. For students to incorporate these skills appropriately, they must receive instruction. A 3rd grade student creating a poster board display must have instruction in how to effectively present information to do quality work.
ELA.K12.EE.6.1:	Use appropriate voice and tone when speaking or writing. **Clarifications:** In kindergarten and 1st grade, students learn the difference between formal and informal language. For example, the way we talk to our friends differs from the way we speak to adults. In 2nd grade and beyond, students practice appropriate social and academic language to discuss texts.
ELD.K12.ELL.SC.1:	English language learners communicate information, ideas and concepts necessary for academic success in the content area of Science.

General Course Information and Notes

VERSION DESCRIPTION

This course offers students an opportunity to deepen science, mathematics, engineering, and technology skills. The primary content focus will be to expand knowledge of current grade level standards in mathematics and science by applying that content in a real world, hands-on situation involving engineering and technology. For third grade, themes will focus on the investigation of number sense, measurement, geometry, life science, and physical science concepts.

Students will participate in various hands-on STEM activities in this supplemental course to assist in the mastery of current grade level mathematics and science standards.

Instructional Practices
Teaching from a range of complex text is optimized when teachers in all subject areas implement the following strategies on a routine basis:

1. Ensuring wide reading from complex text that varies in length.
2. Making close reading and rereading of texts central to lessons.
3. Emphasizing text-specific complex questions, and cognitively complex tasks, reinforce focus on the text and cultivate independence.
4. Emphasizing students supporting answers based upon evidence from the text.
5. Providing extensive research and writing opportunities (claims and evidence).

Science and Engineering Practices (NRC *Framework for K-12 Science Education, 2010*)

- Asking questions (for science) and defining problems (for engineering).
- Developing and using models.
- Planning and carrying out investigations.
- Analyzing and interpreting data.
- Using mathematics, information and computer technology, and computational thinking.
- Constructing explanations (for science) and designing solutions (for engineering).
- Engaging in argument from evidence.
- Obtaining, evaluating, and communicating information.

English Language Development (ELD) Standards Special Notes Section:

Teachers are required to provide listening, speaking, reading and writing instruction that allows English Language Learners (ELL) to communicate information, ideas and concepts for academic success in science and math. For the given level of English language proficiency and with visual, graphic, or interactive support, students will interact with grade level words, expressions, sentences and discourse to process or produce language necessary for academic success. The ELD standard should specify a relevant content area concept or topic of study chosen by curriculum developers and teachers which maximizes an ELL's need for communication and social skills. To access an ELL supporting document which delineates performance definitions and descriptors, please click on the following link: cpalms.org/uploads/docs/standards/eld/SC.pdf.

GENERAL INFORMATION

Course Number: 5020100

Course Path: Section: Grades PreK to 12 Education Courses > **Grade Group:** Grades PreK to 5 Education Courses > **Subject:** Science > **SubSubject:** General Sciences >
Abbreviated Title: STEM LAB 3
Course Length: Year (Y)
Course Attributes:
- Class Size Core Required

Course Status: Draft - Course Pending Approval

Educator Certifications

Elementary Education (Elementary Grades 1-6)
Elementary Education (Grades K-6)

STEM Lab Grade 4 (#5020110) 2022 - And Beyond

Course Standards

Name	Description
SC.35.CS-CC.1.1:	Identify technology tools for individual and collaborative data collection, writing, communication, and publishing activities.
SC.35.CS-CC.1.2:	Describe key ideas and details while working individually or collaboratively using digital tools and media-rich resources in a way that informs, persuades, and/or entertains.
SC.35.CS-CC.1.3:	Identify ways that technology can foster teamwork, and collaboration can support problem solving and innovation.
SC.35.CS-CC.1.5:	Explain that providing and receiving feedback from others can improve performance and outcomes for collaborative digital projects.
SC.35.CS-CP.1.2:	Identify and describe examples of databases from everyday life (e.g., library catalogs, school records, telephone directories, and contact lists).
SC.35.CS-CP.1.3:	Identify, research, and collect a data set on a topic, issue, problem, or question using age-appropriate technologies.
SC.35.CS-CP.1.4:	Collect, organize, graph, and analyze data to answer a question using a database or spreadsheet.
SC.35.CS-CP.2.1:	Perform keyboarding skills for communication and the input of data and information.
SC.35.CS-CP.2.2:	Create, test, and modify a program in a graphical environment (e.g., block-based visual programming language), individually and collaboratively.
SC.35.CS-CP.2.4:	Explain that programs need known initial conditions (e.g., set initial score to zero in a game, initialize variables, or initial values set by hardware input).
SC.35.CS-CP.2.5:	Detect and correct program errors, including those involving arithmetic operators, conditionals, and repetition, using interactive debugging.
SC.35.CS-CP.3.1:	Write, communicate and publish activities using technology tools.
SC.35.CS-CP.3.2:	Present digitally created products, either individually and collaboratively, where a topic, concept, or skill is carefully analyzed or thoughtfully explored.
SC.35.CS-CS.1.1:	Identify the concepts illustrated by a simulation (e.g., ecosystem, predator/prey, and invasive species).
SC.35.CS-CS.1.3:	Answer a question, individually and collaboratively, using data from a simulation.
SC.35.CS-CS.1.4:	Create a simple model of a system (e.g., flower or solar system) and explain what the model shows and does not show.
SC.35.CS-CS.2.1:	Solve age-appropriate problems using information organized using digital graphic organizers (e.g., concept maps and Venn-diagrams).
SC.35.CS-CS.2.3:	Explain the process of arranging or sorting information into useful order as well as the purpose for doing so.
SC.35.CS-CS.2.7:	Identify and correct logical errors in algorithms; written, mapped, live action, or digital.
SC.35.CS-CS.2.8:	Systematically test and identify logical errors in algorithms.
SC.35.CS-CS.2.9:	Explain how to correct logical errors in algorithms; written, mapped, live action, or digital.
SC.35.CS-CS.3.1:	Manipulate and publish multimedia artifacts using digital tools (local and online).
SC.35.CS-CS.3.2:	Create an artifact (independently and collaboratively) that answers a research question clearly communicating thoughts and ideas.
SC.35.CS-PC.3.2:	Gather, organize, and analyze information from digital resources.
SC.35.CS-PC.3.3:	Compare digital resources for accuracy, relevancy, and appropriateness.
SC.4.E.6.1:	Identify the three categories of rocks: igneous, (formed from molten rock); sedimentary (pieces of other rocks and fossilized organisms); and metamorphic (formed from heat and pressure).
SC.4.E.6.2:	Identify the physical properties of common earth-forming minerals, including hardness, color, luster, cleavage, and streak color, and recognize the role of minerals in the formation of rocks.
SC.4.E.6.3:	Recognize that humans need resources found on Earth and that these are either renewable or nonrenewable.
SC.4.E.6.4:	Describe the basic differences between physical weathering (breaking down of rock by wind, water, ice, temperature change, and plants) and erosion (movement of rock by gravity, wind, water, and ice).
SC.4.E.6.5:	Investigate how technology and tools help to extend the ability of humans to observe very small things and very large things.
SC.4.E.6.6:	Identify resources available in Florida (water, phosphate, oil, limestone, silicon, wind, and solar energy).
SC.4.L.16.4:	Compare and contrast the major stages in the life cycles of Florida plants and animals, such as those that undergo incomplete and complete metamorphosis, and flowering and nonflowering seed-bearing plants.
SC.4.L.17.2:	Explain that animals, including humans, cannot make their own food and that when animals eat plants or other animals, the energy stored in the food source is passed to them.
SC.4.L.17.3:	Trace the flow of energy from the Sun as it is transferred along the food chain through the producers to the consumers.
SC.4.N.1.1:	Raise questions about the natural world, use appropriate reference materials that support understanding to obtain information (identifying the source), conduct both individual and team investigations through free exploration and systematic investigations, and generate appropriate explanations based on those explorations.
SC.4.N.1.2:	Compare the observations made by different groups using multiple tools and seek reasons to explain the differences across groups.
SC.4.N.1.3:	Explain that science does not always follow a rigidly defined method ("the scientific method") but that science does involve the use of observations and empirical evidence.
SC.4.N.1.4:	Attempt reasonable answers to scientific questions and cite evidence in support.
SC.4.N.1.5:	Compare the methods and results of investigations done by other classmates.
SC.4.N.1.6:	Keep records that describe observations made, carefully distinguishing actual observations from ideas and inferences about the observations.
SC.4.N.1.7:	Recognize and explain that scientists base their explanations on evidence.
SC.4.N.1.8:	Recognize that science involves creativity in designing experiments.
SC.4.P.8.1:	Measure and compare objects and materials based on their physical properties including: mass, shape, volume, color, hardness, texture, odor, taste, attraction to magnets.
SC.4.P.8.2:	Identify properties and common uses of water in each of its states.
SC.4.P.8.3:	Explore the Law of Conservation of Mass by demonstrating that the mass of a whole object is always the same as the sum of the masses of its parts.
SC.4.P.8.4:	Investigate and describe that magnets can attract magnetic materials and attract and repel other magnets.
SC.4.P.9.1:	Identify some familiar changes in materials that result in other materials with different characteristics, such as decaying animal or plant matter, burning, rusting, and cooking.
SC.4.P.10.1:	Observe and describe some basic forms of energy, including light, heat, sound, electrical, and the energy of motion.
SC.4.P.10.2:	Investigate and describe that energy has the ability to cause motion or create change.

SC.4.P.10.3:	Investigate and explain that sound is produced by vibrating objects and that pitch depends on how fast or slow the object vibrates.
SC.4.P.12.1:	Recognize that an object in motion always changes its position and may change its direction.
SC.4.P.12.2:	Investigate and describe that the speed of an object is determined by the distance it travels in a unit of time and that objects can move at different speeds.
MA.K12.MTR.1.1:	Mathematicians who participate in effortful learning both individually and with others: • Analyze the problem in a way that makes sense given the task. • Ask questions that will help with solving the task. • Build perseverance by modifying methods as needed while solving a challenging task. • Stay engaged and maintain a positive mindset when working to solve tasks. • Help and support each other when attempting a new method or approach. **Clarifications:** Teachers who encourage students to participate actively in effortful learning both individually and with others: • Cultivate a community of growth mindset learners. • Foster perseverance in students by choosing tasks that are challenging. • Develop students' ability to analyze and problem solve. • Recognize students' effort when solving challenging problems.
MA.K12.MTR.2.1:	Demonstrate understanding by representing problems in multiple ways. Mathematicians who demonstrate understanding by representing problems in multiple ways: • Build understanding through modeling and using manipulatives. • Represent solutions to problems in multiple ways using objects, drawings, tables, graphs and equations. • Progress from modeling problems with objects and drawings to using algorithms and equations. • Express connections between concepts and representations. • Choose a representation based on the given context or purpose. **Clarifications:** Teachers who encourage students to demonstrate understanding by representing problems in multiple ways: • Help students make connections between concepts and representations. • Provide opportunities for students to use manipulatives when investigating concepts. • Guide students from concrete to pictorial to abstract representations as understanding progresses. • Show students that various representations can have different purposes and can be useful in different situations.
MA.K12.MTR.3.1:	Complete tasks with mathematical fluency. Mathematicians who complete tasks with mathematical fluency: • Select efficient and appropriate methods for solving problems within the given context. • Maintain flexibility and accuracy while performing procedures and mental calculations. • Complete tasks accurately and with confidence. • Adapt procedures to apply them to a new context. • Use feedback to improve efficiency when performing calculations. **Clarifications:** Teachers who encourage students to complete tasks with mathematical fluency: • Provide students with the flexibility to solve problems by selecting a procedure that allows them to solve efficiently and accurately. • Offer multiple opportunities for students to practice efficient and generalizable methods. • Provide opportunities for students to reflect on the method they used and determine if a more efficient method could have been used.
MA.K12.MTR.4.1:	Engage in discussions that reflect on the mathematical thinking of self and others. Mathematicians who engage in discussions that reflect on the mathematical thinking of self and others: • Communicate mathematical ideas, vocabulary and methods effectively. • Analyze the mathematical thinking of others. • Compare the efficiency of a method to those expressed by others. • Recognize errors and suggest how to correctly solve the task. • Justify results by explaining methods and processes. • Construct possible arguments based on evidence. **Clarifications:** Teachers who encourage students to engage in discussions that reflect on the mathematical thinking of self and others: • Establish a culture in which students ask questions of the teacher and their peers, and error is an opportunity for learning. • Create opportunities for students to discuss their thinking with peers. • Select, sequence and present student work to advance and deepen understanding of correct and increasingly efficient methods. • Develop students' ability to justify methods and compare their responses to the responses of their peers.
MA.K12.MTR.5.1:	Use patterns and structure to help understand and connect mathematical concepts. Mathematicians who use patterns and structure to help understand and connect mathematical concepts: • Focus on relevant details within a problem. • Create plans and procedures to logically order events, steps or ideas to solve problems. • Decompose a complex problem into manageable parts. • Relate previously learned concepts to new concepts. • Look for similarities among problems. • Connect solutions of problems to more complicated large-scale situations. **Clarifications:** Teachers who encourage students to use patterns and structure to help understand and connect mathematical concepts: • Help students recognize the patterns in the world around them and connect these patterns to mathematical concepts.

	• Support students to develop generalizations based on the similarities found among problems. • Provide opportunities for students to create plans and procedures to solve problems. • Develop students' ability to construct relationships between their current understanding and more sophisticated ways of thinking.
MA.K12.MTR.6.1:	Assess the reasonableness of solutions. Mathematicians who assess the reasonableness of solutions: • Estimate to discover possible solutions. • Use benchmark quantities to determine if a solution makes sense. • Check calculations when solving problems. • Verify possible solutions by explaining the methods used. • Evaluate results based on the given context. **Clarifications:** Teachers who encourage students to assess the reasonableness of solutions: • Have students estimate or predict solutions prior to solving. • Prompt students to continually ask, "Does this solution make sense? How do you know?" • Reinforce that students check their work as they progress within and after a task. • Strengthen students' ability to verify solutions through justifications.
MA.K12.MTR.7.1:	Apply mathematics to real-world contexts. Mathematicians who apply mathematics to real-world contexts: • Connect mathematical concepts to everyday experiences. • Use models and methods to understand, represent and solve problems. • Perform investigations to gather data or determine if a method is appropriate. • Redesign models and methods to improve accuracy or efficiency. **Clarifications:** Teachers who encourage students to apply mathematics to real-world contexts: • Provide opportunities for students to create models, both concrete and abstract, and perform investigations. • Challenge students to question the accuracy of their models and methods. • Support students as they validate conclusions by comparing them to the given situation. • Indicate how various concepts can be applied to other disciplines.
ELA.K12.EE.1.1:	Cite evidence to explain and justify reasoning. **Clarifications:** K-1 Students include textual evidence in their oral communication with guidance and support from adults. The evidence can consist of details from the text without naming the text. During 1st grade, students learn how to incorporate the evidence in their writing. 2-3 Students include relevant textual evidence in their written and oral communication. Students should name the text when they refer to it. In 3rd grade, students should use a combination of direct and indirect citations. 4-5 Students continue with previous skills and reference comments made by speakers and peers. Students cite texts that they've directly quoted, paraphrased, or used for information. When writing, students will use the form of citation dictated by the instructor or the style guide referenced by the instructor. 6-8 Students continue with previous skills and use a style guide to create a proper citation. 9-12 Students continue with previous skills and should be aware of existing style guides and the ways in which they differ.
ELA.K12.EE.2.1:	Read and comprehend grade-level complex texts proficiently. **Clarifications:** See Text Complexity for grade-level complexity bands and a text complexity rubric.
ELA.K12.EE.3.1:	Make inferences to support comprehension. **Clarifications:** Students will make inferences before the words infer or inference are introduced. Kindergarten students will answer questions like "Why is the girl smiling?" or make predictions about what will happen based on the title page. Students will use the terms and apply them in 2nd grade and beyond.
ELA.K12.EE.4.1:	Use appropriate collaborative techniques and active listening skills when engaging in discussions in a variety of situations. **Clarifications:** In kindergarten, students learn to listen to one another respectfully. In grades 1-2, students build upon these skills by justifying what they are thinking. For example: "I think _____ because _____." The collaborative conversations are becoming academic conversations. In grades 3-12, students engage in academic conversations discussing claims and justifying their reasoning, refining and applying skills. Students build on ideas, propel the conversation, and support claims and counterclaims with evidence.
ELA.K12.EE.5.1:	Use the accepted rules governing a specific format to create quality work. **Clarifications:** Students will incorporate skills learned into work products to produce quality work. For students to incorporate these skills appropriately, they must receive instruction. A 3rd grade student creating a poster board display must have instruction in how to effectively present information to do quality work.
ELA.K12.EE.6.1:	Use appropriate voice and tone when speaking or writing. **Clarifications:** In kindergarten and 1st grade, students learn the difference between formal and informal language. For example, the way we talk to our friends differs from the way we speak to adults. In 2nd grade and beyond, students practice appropriate social and academic language to discuss texts.
ELD.K12.ELL.SC.1:	English language learners communicate information, ideas and concepts necessary for academic success in the content area of Science.

General Course Information and Notes

VERSION DESCRIPTION

This course offers students an opportunity to deepen science, mathematics, engineering, and technology skills. The primary content focus will be to expand knowledge of current grade level standards in mathematics and science by applying that content in a real world, hands-on situation involving engineering and technology. For fourth grade, themes will focus on the investigation of number sense, measurement, geometry, earth science, life science, and physical science concepts.

Students will participate in various hands-on STEM activities in this supplemental course to assist in the mastery of current grade level mathematics and science standards.

Instructional Practices
Teaching from a range of complex text is optimized when teachers in all subject areas implement the following strategies on a routine basis:

1. Ensuring wide reading from complex text that varies in length.
2. Making close reading and rereading of texts central to lessons.
3. Emphasizing text-specific complex questions, and cognitively complex tasks, reinforce focus on the text and cultivate independence.
4. Emphasizing students supporting answers based upon evidence from the text.
5. Providing extensive research and writing opportunities (claims and evidence).

Science and Engineering Practices (NRC *Framework for K-12 Science Education, 2010*)

- Asking questions (for science) and defining problems (for engineering).
- Developing and using models.
- Planning and carrying out investigations.
- Analyzing and interpreting data.
- Using mathematics, information and computer technology, and computational thinking.
- Constructing explanations (for science) and designing solutions (for engineering).
- Engaging in argument from evidence.
- Obtaining, evaluating, and communicating information.

English Language Development (ELD) Standards Special Notes Section:

Teachers are required to provide listening, speaking, reading and writing instruction that allows English Language Learners (ELL) to communicate information, ideas and concepts for academic success in science and math. For the given level of English language proficiency and with visual, graphic, or interactive support, students will interact with grade level words, expressions, sentences and discourse to process or produce language necessary for academic success. The ELD standard should specify a relevant content area concept or topic of study chosen by curriculum developers and teachers which maximizes an ELL's need for communication and social skills. To access an ELL supporting document which delineates performance definitions and descriptors, please click on the following link: cpalms.org/uploads/docs/standards/eld/SC.pdf.

GENERAL INFORMATION

Course Number: 5020110

Course Path: Section: Grades PreK to 12 Education Courses > **Grade Group:** Grades PreK to 5 Education Courses > **Subject:** Science > **SubSubject:** General Sciences >

Abbreviated Title: STEM LAB 4

Course Length: Year (Y)

Course Attributes:

- Class Size Core Required

Course Status: Draft - Course Pending Approval

Educator Certifications

Elementary Education (Elementary Grades 1-6)
Elementary Education (Grades K-6)

STEM Lab Grade 5 (#5020120) 2022 - And Beyond

Course Standards

Name	Description
SC.35.CS-CC.1.1:	Identify technology tools for individual and collaborative data collection, writing, communication, and publishing activities.
SC.35.CS-CC.1.2:	Describe key ideas and details while working individually or collaboratively using digital tools and media-rich resources in a way that informs, persuades, and/or entertains.
SC.35.CS-CC.1.3:	Identify ways that technology can foster teamwork, and collaboration can support problem solving and innovation.
SC.35.CS-CC.1.5:	Explain that providing and receiving feedback from others can improve performance and outcomes for collaborative digital projects.
SC.35.CS-CP.1.2:	Identify and describe examples of databases from everyday life (e.g., library catalogs, school records, telephone directories, and contact lists).
SC.35.CS-CP.1.3:	Identify, research, and collect a data set on a topic, issue, problem, or question using age-appropriate technologies.
SC.35.CS-CP.1.4:	Collect, organize, graph, and analyze data to answer a question using a database or spreadsheet.
SC.35.CS-CP.2.1:	Perform keyboarding skills for communication and the input of data and information.
SC.35.CS-CP.2.2:	Create, test, and modify a program in a graphical environment (e.g., block-based visual programming language), individually and collaboratively.
SC.35.CS-CP.2.4:	Explain that programs need known initial conditions (e.g., set initial score to zero in a game, initialize variables, or initial values set by hardware input).
SC.35.CS-CP.2.5:	Detect and correct program errors, including those involving arithmetic operators, conditionals, and repetition, using interactive debugging.
SC.35.CS-CS.1.1:	Identify the concepts illustrated by a simulation (e.g., ecosystem, predator/prey, and invasive species).
SC.35.CS-CS.1.3:	Answer a question, individually and collaboratively, using data from a simulation.
SC.35.CS-CS.2.1:	Solve age-appropriate problems using information organized using digital graphic organizers (e.g., concept maps and Venn-diagrams).
SC.35.CS-CS.2.3:	Explain the process of arranging or sorting information into useful order as well as the purpose for doing so.
SC.35.CS-CS.2.5:	Explain that there are several possible algorithms for searching within a dataset (such as finding a specific word in a word list or card in a deck of cards).
SC.35.CS-CS.2.6:	Write an algorithm to solve a grade-level appropriate problem (e.g., move a character through a maze, instruct a character to draw a specific shape, have a character start, repeat or end activity as required or upon a specific event), individually or collaboratively.
SC.35.CS-CS.2.7:	Identify and correct logical errors in algorithms; written, mapped, live action, or digital.
SC.35.CS-CS.2.8:	Systematically test and identify logical errors in algorithms.
SC.35.CS-CS.2.9:	Explain how to correct logical errors in algorithms; written, mapped, live action, or digital.
SC.35.CS-CS.3.1:	Manipulate and publish multimedia artifacts using digital tools (local and online).
SC.35.CS-CS.3.2:	Create an artifact (independently and collaboratively) that answers a research question clearly communicating thoughts and ideas.
SC.35.CS-CS.6.2:	Compare and contrast human and computer performance on similar tasks (e.g., sorting alphabetically or finding a path across a cluttered room) to understand which is best suited to the task.
SC.5.N.1.1:	Define a problem, use appropriate reference materials to support scientific understanding, plan and carry out scientific investigations of various types such as: systematic observations, experiments requiring the identification of variables, collecting and organizing data, interpreting data in charts, tables, and graphics, analyze information, make predictions, and defend conclusions.
SC.5.N.1.2:	Explain the difference between an experiment and other types of scientific investigation.
SC.5.N.1.3:	Recognize and explain the need for repeated experimental trials.
SC.5.N.1.4:	Identify a control group and explain its importance in an experiment.
SC.5.N.1.5:	Recognize and explain that authentic scientific investigation frequently does not parallel the steps of "the scientific method."
SC.5.N.1.6:	Recognize and explain the difference between personal opinion/interpretation and verified observation.
SC.5.P.8.1:	Compare and contrast the basic properties of solids, liquids, and gases, such as mass, volume, color, texture, and temperature.
SC.5.P.8.2:	Investigate and identify materials that will dissolve in water and those that will not and identify the conditions that will speed up or slow down the dissolving process.
SC.5.P.8.3:	Demonstrate and explain that mixtures of solids can be separated based on observable properties of their parts such as particle size, shape, color, and magnetic attraction.
SC.5.P.8.4:	Explore the scientific theory of atoms (also called atomic theory) by recognizing that all matter is composed of parts that are too small to be seen without magnification.
SC.5.P.9.1:	Investigate and describe that many physical and chemical changes are affected by temperature.
SC.5.P.10.1:	Investigate and describe some basic forms of energy, including light, heat, sound, electrical, chemical, and mechanical.
SC.5.P.10.2:	Investigate and explain that energy has the ability to cause motion or create change.
SC.5.P.10.3:	Investigate and explain that an electrically-charged object can attract an uncharged object and can either attract or repel another charged object without any contact between the objects.
SC.5.P.10.4:	Investigate and explain that electrical energy can be transformed into heat, light, and sound energy, as well as the energy of motion.
SC.5.P.11.1:	Investigate and illustrate the fact that the flow of electricity requires a closed circuit (a complete loop).
SC.5.P.11.2:	Identify and classify materials that conduct electricity and materials that do not.
SC.5.P.13.1:	Identify familiar forces that cause objects to move, such as pushes or pulls, including gravity acting on falling objects.
SC.5.P.13.2:	Investigate and describe that the greater the force applied to it, the greater the change in motion of a given object.
SC.5.P.13.3:	Investigate and describe that the more mass an object has, the less effect a given force will have on the object's motion.
SC.5.P.13.4:	Investigate and explain that when a force is applied to an object but it does not move, it is because another opposing force is being applied by something in the environment so that the forces are balanced.
	Mathematicians who participate in effortful learning both individually and with others: • Analyze the problem in a way that makes sense given the task. • Ask questions that will help with solving the task. • Build perseverance by modifying methods as needed while solving a challenging task. • Stay engaged and maintain a positive mindset when working to solve tasks. • Help and support each other when attempting a new method or approach.

MA.K12.MTR.1.1:

Clarifications:
Teachers who encourage students to participate actively in effortful learning both individually and with others:

- Cultivate a community of growth mindset learners.
- Foster perseverance in students by choosing tasks that are challenging.
- Develop students' ability to analyze and problem solve.
- Recognize students' effort when solving challenging problems.

Demonstrate understanding by representing problems in multiple ways.
Mathematicians who demonstrate understanding by representing problems in multiple ways:

- Build understanding through modeling and using manipulatives.
- Represent solutions to problems in multiple ways using objects, drawings, tables, graphs and equations.
- Progress from modeling problems with objects and drawings to using algorithms and equations.
- Express connections between concepts and representations.

MA.K12.MTR.2.1:

- Choose a representation based on the given context or purpose.

Clarifications:
Teachers who encourage students to demonstrate understanding by representing problems in multiple ways:

- Help students make connections between concepts and representations.
- Provide opportunities for students to use manipulatives when investigating concepts.
- Guide students from concrete to pictorial to abstract representations as understanding progresses.
- Show students that various representations can have different purposes and can be useful in different situations.

Complete tasks with mathematical fluency.
Mathematicians who complete tasks with mathematical fluency:

- Select efficient and appropriate methods for solving problems within the given context.
- Maintain flexibility and accuracy while performing procedures and mental calculations.
- Complete tasks accurately and with confidence.
- Adapt procedures to apply them to a new context.

MA.K12.MTR.3.1:

- Use feedback to improve efficiency when performing calculations.

Clarifications:
Teachers who encourage students to complete tasks with mathematical fluency:

- Provide students with the flexibility to solve problems by selecting a procedure that allows them to solve efficiently and accurately.
- Offer multiple opportunities for students to practice efficient and generalizable methods.
- Provide opportunities for students to reflect on the method they used and determine if a more efficient method could have been used.

Engage in discussions that reflect on the mathematical thinking of self and others.
Mathematicians who engage in discussions that reflect on the mathematical thinking of self and others:

- Communicate mathematical ideas, vocabulary and methods effectively.
- Analyze the mathematical thinking of others.
- Compare the efficiency of a method to those expressed by others.
- Recognize errors and suggest how to correctly solve the task.
- Justify results by explaining methods and processes.

MA.K12.MTR.4.1:

- Construct possible arguments based on evidence.

Clarifications:
Teachers who encourage students to engage in discussions that reflect on the mathematical thinking of self and others:

- Establish a culture in which students ask questions of the teacher and their peers, and error is an opportunity for learning.
- Create opportunities for students to discuss their thinking with peers.
- Select, sequence and present student work to advance and deepen understanding of correct and increasingly efficient methods.
- Develop students' ability to justify methods and compare their responses to the responses of their peers.

Use patterns and structure to help understand and connect mathematical concepts.
Mathematicians who use patterns and structure to help understand and connect mathematical concepts:

- Focus on relevant details within a problem.
- Create plans and procedures to logically order events, steps or ideas to solve problems.
- Decompose a complex problem into manageable parts.
- Relate previously learned concepts to new concepts.
- Look for similarities among problems.

MA.K12.MTR.5.1:

- Connect solutions of problems to more complicated large-scale situations.

Clarifications:
Teachers who encourage students to use patterns and structure to help understand and connect mathematical concepts:

- Help students recognize the patterns in the world around them and connect these patterns to mathematical concepts.
- Support students to develop generalizations based on the similarities found among problems.
- Provide opportunities for students to create plans and procedures to solve problems.
- Develop students' ability to construct relationships between their current understanding and more sophisticated ways of thinking.

Assess the reasonableness of solutions.
Mathematicians who assess the reasonableness of solutions:

- Estimate to discover possible solutions.
- Use benchmark quantities to determine if a solution makes sense.
- Check calculations when solving problems.
- Verify possible solutions by explaining the methods used.

MA.K12.MTR.6.1:	• Evaluate results based on the given context. **Clarifications:** Teachers who encourage students to assess the reasonableness of solutions: • Have students estimate or predict solutions prior to solving. • Prompt students to continually ask, "Does this solution make sense? How do you know?" • Reinforce that students check their work as they progress within and after a task. • Strengthen students' ability to verify solutions through justifications.
MA.K12.MTR.7.1:	Apply mathematics to real-world contexts. Mathematicians who apply mathematics to real-world contexts: • Connect mathematical concepts to everyday experiences. • Use models and methods to understand, represent and solve problems. • Perform investigations to gather data or determine if a method is appropriate. • Redesign models and methods to improve accuracy or efficiency. **Clarifications:** Teachers who encourage students to apply mathematics to real-world contexts: • Provide opportunities for students to create models, both concrete and abstract, and perform investigations. • Challenge students to question the accuracy of their models and methods. • Support students as they validate conclusions by comparing them to the given situation. • Indicate how various concepts can be applied to other disciplines.
ELA.K12.EE.1.1:	Cite evidence to explain and justify reasoning. **Clarifications:** K-1 Students include textual evidence in their oral communication with guidance and support from adults. The evidence can consist of details from the text without naming the text. During 1st grade, students learn how to incorporate the evidence in their writing. 2-3 Students include relevant textual evidence in their written and oral communication. Students should name the text when they refer to it. In 3rd grade, students should use a combination of direct and indirect citations. 4-5 Students continue with previous skills and reference comments made by speakers and peers. Students cite texts that they've directly quoted, paraphrased, or used for information. When writing, students will use the form of citation dictated by the instructor or the style guide referenced by the instructor. 6-8 Students continue with previous skills and use a style guide to create a proper citation. 9-12 Students continue with previous skills and should be aware of existing style guides and the ways in which they differ.
ELA.K12.EE.2.1:	Read and comprehend grade-level complex texts proficiently. **Clarifications:** See Text Complexity for grade-level complexity bands and a text complexity rubric.
ELA.K12.EE.3.1:	Make inferences to support comprehension. **Clarifications:** Students will make inferences before the words infer or inference are introduced. Kindergarten students will answer questions like "Why is the girl smiling?" or make predictions about what will happen based on the title page. Students will use the terms and apply them in 2nd grade and beyond.
ELA.K12.EE.4.1:	Use appropriate collaborative techniques and active listening skills when engaging in discussions in a variety of situations. **Clarifications:** In kindergarten, students learn to listen to one another respectfully. In grades 1-2, students build upon these skills by justifying what they are thinking. For example: "I think _____ because _____." The collaborative conversations are becoming academic conversations. In grades 3-12, students engage in academic conversations discussing claims and justifying their reasoning, refining and applying skills. Students build on ideas, propel the conversation, and support claims and counterclaims with evidence.
ELA.K12.EE.5.1:	Use the accepted rules governing a specific format to create quality work. **Clarifications:** Students will incorporate skills learned into work products to produce quality work. For students to incorporate these skills appropriately, they must receive instruction. A 3rd grade student creating a poster board display must have instruction in how to effectively present information to do quality work.
ELA.K12.EE.6.1:	Use appropriate voice and tone when speaking or writing. **Clarifications:** In kindergarten and 1st grade, students learn the difference between formal and informal language. For example, the way we talk to our friends differs from the way we speak to adults. In 2nd grade and beyond, students practice appropriate social and academic language to discuss texts.
ELD.K12.ELL.SC.1:	English language learners communicate information, ideas and concepts necessary for academic success in the content area of Science.

General Course Information and Notes

VERSION DESCRIPTION

This course offers students an opportunity to deepen science, mathematics, engineering, and technology skills. The primary content focus will be to expand knowledge of current grade level standards in mathematics and science by applying that content in a real world, hands-on situation involving engineering and technology. For fifth grade, themes will focus on the investigation of number sense, measurement, geometry, and physical science concepts.

Students will participate in various hands-on STEM activities in this supplemental course to assist in the mastery of current grade level mathematics and science standards.

Instructional Practices
Teaching from a range of complex text is optimized when teachers in all subject areas implement the following strategies on a routine basis:

1. Ensuring wide reading from complex text that varies in length.
2. Making close reading and rereading of texts central to lessons.
3. Emphasizing text-specific complex questions, and cognitively complex tasks, reinforce focus on the text and cultivate independence.
4. Emphasizing students supporting answers based upon evidence from the text.
5. Providing extensive research and writing opportunities (claims and evidence).

Science and Engineering Practices (NRC *Framework for K-12 Science Education, 2010*)

- Asking questions (for science) and defining problems (for engineering).
- Developing and using models.
- Planning and carrying out investigations.
- Analyzing and interpreting data.
- Using mathematics, information and computer technology, and computational thinking.
- Constructing explanations (for science) and designing solutions (for engineering).
- Engaging in argument from evidence.
- Obtaining, evaluating, and communicating information.

English Language Development (ELD) Standards Special Notes Section:

Teachers are required to provide listening, speaking, reading and writing instruction that allows English Language Learners (ELL) to communicate information, ideas and concepts for academic success in science and math. For the given level of English language proficiency and with visual, graphic, or interactive support, students will interact with grade level words, expressions, sentences and discourse to process or produce language necessary for academic success. The ELD standard should specify a relevant content area concept or topic of study chosen by curriculum developers and teachers which maximizes an ELL's need for communication and social skills. To access an ELL supporting document which delineates performance definitions and descriptors, please click on the following link: cpalms.org/uploads/docs/standards/eld/SC.pdf.

GENERAL INFORMATION

Course Number: 5020120

Course Path: Section: Grades PreK to 12 Education Courses > **Grade Group:** Grades PreK to 5 Education Courses > **Subject:** Science > **SubSubject:** General Sciences >

Abbreviated Title: STEM LAB 5

Course Length: Year (Y)

Course Attributes:

- Class Size Core Required

Course Status: Draft - Course Pending Approval

Educator Certifications

Elementary Education (Elementary Grades 1-6)
Elementary Education (Grades K-6)

M/J United States History (#2100010) 2022 - And Beyond

Course Standards

Name	Description
SS.8.A.1.1:	Provide supporting details for an answer from text, interview for oral history, check validity of information from research/text, and identify strong vs. weak arguments. **Clarifications:** Students should be encouraged to utilize FINDS (Focus, Investigage, Note, Develop, Score), Florida's research process model accessible at: fldoe.org/bii/Library_Media/pdf/12TotalFINDS.pdf.
SS.8.A.1.2:	Analyze charts, graphs, maps, photographs and timelines; analyze political cartoons; determine cause and effect.
SS.8.A.1.3:	Analyze current events relevant to American History topics through a variety of electronic and print media resources. **Clarifications:** Examples may include, but are not limited to, articles, editorials, journals, periodicals, reports, websites, videos, and podcasts.
SS.8.A.1.4:	Differentiate fact from opinion, utilize appropriate historical research and fiction/nonfiction support materials.
SS.8.A.1.5:	Identify, within both primary and secondary sources, the author, audience, format, and purpose of significant historical documents. **Clarifications:** Examples of primary and secondary sources may be found on various websites such as the site for The Kinsey Collection.
SS.8.A.1.6:	Compare interpretations of key events and issues throughout American History. **Clarifications:** Examples may include, but are not limited to, historiography.
SS.8.A.1.7:	View historic events through the eyes of those who were there as shown in their art, writings, music, and artifacts.
SS.8.A.2.1:	Compare the relationships among the British, French, Spanish, and Dutch in their struggle for colonization of North America. **Clarifications:** This benchmark implies a study of the ways that economic, political, cultural, and religious competition between these Atlantic powers shaped early colonial America.
SS.8.A.2.2:	Compare the characteristics of the New England, Middle, and Southern colonies. **Clarifications:** Examples may include, but are not limited to, colonial governments, geographic influences, occupations, religion, education, settlement patterns, and social patterns.
SS.8.A.2.3:	Differentiate economic systems of New England, Middle and Southern colonies including indentured servants and slaves as labor sources. **Clarifications:** Examples may include, but are not limited to, subsistence farming, cash crop farming, and maritime industries.
SS.8.A.2.4:	Identify the impact of key colonial figures on the economic, political, and social development of the colonies. **Clarifications:** Examples may include, but are not limited to, John Smith, William Penn, Roger Williams, Anne Hutchinson, John Winthrop, Jonathan Edwards, William Bradford, Nathaniel Bacon, John Peter Zenger, and Lord Calvert.
SS.8.A.2.5:	Discuss the impact of colonial settlement on Native American populations. **Clarifications:** Examples may include, but are not limited to, war, disease, loss of land, westward displacement of tribes causing increased conflict between tribes, and dependence on trade for Western goods, including guns.
SS.8.A.2.6:	Examine the causes, course, and consequences of the French and Indian War. **Clarifications:** Examples may include, but are not limited to, ongoing conflict between France and England, territorial disputes, trade competition, Ft. Duquesne, Ft. Quebec, Treaty of Paris, heavy British debt.
SS.8.A.2.7:	Describe the contributions of key groups (Africans, Native Americans, women, and children) to the society and culture of colonial America.
SS.8.A.3.1:	Explain the consequences of the French and Indian War in British policies for the American colonies from 1763 - 1774. **Clarifications:** Examples may include, but are not limited to, Proclamation of 1763, Sugar Act, Quartering Act, Stamp Act, Declaratory Act, Townshend Acts, Tea Act, Quebec Act, and Coercive Acts.
SS.8.A.3.2:	Explain American colonial reaction to British policy from 1763 - 1774. **Clarifications:** Examples may include, but are not limited to, written protests, boycotts, unrest leading to the Boston Massacre, Boston Tea Party, First Continental Congress, Stamp Act Congress, Committees of Correspondence.
SS.8.A.3.3:	Recognize the contributions of the Founding Fathers (John Adams, Sam Adams, Benjamin Franklin, John Hancock, Alexander Hamilton, Thomas Jefferson, James Madison, George Mason, George Washington) during American Revolutionary efforts. **Clarifications:** Examples may also include, but are not limited to, Thomas Paine, John Jay, Peter Salem.
	Examine the contributions of influential groups to both the American and British war efforts during the American Revolutionary War and their effects on the outcome of the war.

SS.8.A.3.4:	**Clarifications:** Examples may include, but are not limited to, foreign alliances, freedmen, Native Americans, slaves, women, soldiers, Hessians.
SS.8.A.3.5:	Describe the influence of individuals on social and political developments during the Revolutionary era. **Clarifications:** Examples may include, but are not limited to, James Otis, Mercy Otis Warren, Abigail Adams, Benjamin Banneker, Lemuel Haynes, Phyllis Wheatley.
SS.8.A.3.6:	Examine the causes, course, and consequences of the American Revolution. **Clarifications:** Examples may include, but are not limited to, Battles of Lexington and Concord, Common Sense, Second Continental Congress, Battle of Bunker Hill, Battle of Cowpens, Battle of Trenton, Olive Branch Petition, Declaration of Independence, winter at Valley Forge, Battles of Saratoga and Yorktown, Treaty of Paris.
SS.8.A.3.7:	Examine the structure, content, and consequences of the Declaration of Independence.
SS.8.A.3.8:	Examine individuals and groups that affected political and social motivations during the American Revolution. **Clarifications:** Examples may include, but are not limited to, Ethan Allen and the Green Mountain Boys, the Committees of Correspondence, Sons of Liberty, Daughters of Liberty, the Black Regiment (in churches), Patrick Henry, Patriots, Loyalists, individual colonial militias, and undecideds.
SS.8.A.3.9:	Evaluate the structure, strengths, and weaknesses of the Articles of Confederation and its aspects that led to the Constitutional Convention.
SS.8.A.3.10:	Examine the course and consequences of the Constitutional Convention (New Jersey Plan, Virginia Plan, Great Compromise, Three-Fifths Compromise, compromises regarding taxation and slave trade, Electoral College, state vs. federal power, empowering a president).
SS.8.A.3.11:	Analyze support and opposition (Federalists, Federalist Papers, AntiFederalists, Bill of Rights) to ratification of the U.S. Constitution.
SS.8.A.3.12:	Examine the influences of George Washington's presidency in the formation of the new nation. **Clarifications:** Examples may include, but are not limited to, personal motivations, military experience, political influence, establishing Washington, D.C. as the nation's capital, rise of the party system, setting of precedents (e.g., the Cabinet), Farewell Address.
SS.8.A.3.13:	Explain major domestic and international economic, military, political, and socio-cultural events of John Adams's presidency. **Clarifications:** Examples may include, but aren ot limited to, XYZ Affairs, Alien and Sedition Acts, Land Act of 1800, the quasi-war, the Midnight Judges.
SS.8.A.3.14:	Explain major domestic and international economic, military, political, and socio-cultural events of Thomas Jefferson's presidency. **Clarifications:** Examples may include, but are not limited to, Election of 1800, birth of political parties, Marbury v. Madison, judicial review, Jefferson's First Inaugural Address, Judiciary Act of 1801, Louisiana Purchase, Barbary War, Lewis and Clark Expedition, Hamilton and Burr conflict/duel, Embargo of 1807.
SS.8.A.3.15:	Examine this time period (1763-1815) from the perspective of historically under-represented groups (children, indentured servants, Native Americans, slaves, women, working class).
SS.8.A.3.16:	Examine key events in Florida history as each impacts this era of American history. **Clarifications:** Examples may include, but are not limited to, Treaty of Paris, British rule, Second Spanish Period.
SS.8.A.4.1:	Examine the causes, course, and consequences of United States westward expansion and its growing diplomatic assertiveness (War of 1812, Convention of 1818, Adams-Onis Treaty, Missouri Compromise, Monroe Doctrine, Trail of Tears, Texas annexation, Manifest Destiny, Oregon Territory, Mexican American War/Mexican Cession, California Gold Rush, Compromise of 1850, Kansas Nebraska Act, Gadsden Purchase).
SS.8.A.4.2:	Describe the debate surrounding the spread of slavery into western territories and Florida. **Clarifications:** Examples may include, but are not limited to, abolitionist movement, Ft. Mose, Missouri Compromise, Bleeding Kansas, Kansas-Nebraska Act, Compromise of 1850.
SS.8.A.4.3:	Examine the experiences and perspectives of significant individuals and groups during this era of American History. **Clarifications:** Examples may include, but are not limited to, Lewis and Clark, Sacajawea, York, Pike, Native Americans, Buffalo Soldiers, Mexicanos, Chinese immigrants, Irish immigrants, children, slaves, women, Alexis de Tocqueville, political parties.
SS.8.A.4.4:	Discuss the impact of westward expansion on cultural practices and migration patterns of Native American and African slave populations.
SS.8.A.4.5:	Explain the causes, course, and consequences of the 19th century transportation revolution on the growth of the nation's economy. **Clarifications:** Examples may include, but are not limited to, roads, canals, bridges, steamboats, railroads.
SS.8.A.4.6:	Identify technological improvements (inventions/inventors) that contributed to industrial growth. **Clarifications:** Examples may include, but are not limited to, Fitch/steamboat, Slater/textile mill machinery, Whitney/cotton gin, interchangeable parts, McCoy/industrial lubrication, Fulton/commercial steamboat, Lowell/ mechanized cotton mill, Isaac Singer/sewing machine.
SS.8.A.4.7:	Explain the causes, course, and consequences (industrial growth, subsequent effect on children and women) of New England's textile industry.
SS.8.A.4.8:	Describe the influence of individuals on social and political developments of this era in American History. **Clarifications:** Examples may include, but are not limited to, Daniel Boone, Tecumseh, Black Hawk, John Marshall, James Madison, Dolly Madison, Andrew Jackson, John C. Calhoun, Henry Clay, Daniel Webster, James Polk, Susan B. Anthony, Elizabeth Cady Stanton, William Lloyd Garrison, Frederick Douglass, Horace Mann, Dorothea Dix, Lucretia Mott, Sojourner Truth, Harriet Tubman.
SS.8.A.4.9:	Analyze the causes, course and consequences of the Second Great Awakening on social reform movements. **Clarifications:** Examples may include, but are not limited to, abolition, women's rights, temperance, education, prison and mental health reform, Charles Grandison Finney, the Beecher family.

SS.8.A.4.10:	Analyze the impact of technological advancements on the agricultural economy and slave labor. **Clarifications:** Examples may include, but are not limited to, cotton gin, steel plow, rapid growth of slave trade.
SS.8.A.4.11:	Examine the aspects of slave culture including plantation life, resistance efforts, and the role of the slaves' spiritual system.
SS.8.A.4.12:	Examine the effects of the 1804 Haitian Revolution on the United States acquisition of the Louisiana Territory.
SS.8.A.4.13:	Explain the consequences of landmark Supreme Court decisions (McCulloch v. Maryland [1819], Gibbons v. Odgen [1824], Cherokee Nation v. Georgia [1831], and Worcester v. Georgia [1832]) significant to this era of American history.
SS.8.A.4.14:	Examine the causes, course, and consequences of the women's suffrage movement (1848 Seneca Falls Convention, Declaration of Sentiments).
SS.8.A.4.15:	Examine the causes, course, and consequences of literature movements (Transcendentalism) significant to this era of American history.
SS.8.A.4.16:	Identify key ideas and influences of Jacksonian democracy. **Clarifications:** Examples may include, but are not limited to, political participation, political parties, constitutional government, spoils system, National Bank veto, Maysville Road veto, tariff battles, Indian Removal Act, nullification crisis.
SS.8.A.4.17:	Examine key events and peoples in Florida history as each impacts this era of American history. **Clarifications:** Examples may include, but are not limited to, Andrew Jackson's military expeditions to end Indian uprisings, developing relationships between the Seminole and runaway slaves, Adams-Onis Treaty, Florida becoming a United States territory, combining former East and West Floridas, establishing first state capital, Florida's constitution, Florida's admittance to the Union as 27th state.
SS.8.A.4.18:	Examine the experiences and perspectives of different ethnic, national, and religious groups in Florida, explaining their contributions to Florida's and America's society and culture during the Territorial Period. **Clarifications:** Examples may include, but are not limited to, Osceola, white settlers, U.S. troops, Black Seminoles, southern plantation and slave owners, Seminole Wars, Treaty of Moultrie Creek, Seminole relocation, Chief Billy Bowlegs, Florida Crackers.
SS.8.A.5.1:	Explain the causes, course, and consequence of the Civil War (sectionalism, slavery, states' rights, balance of power in the Senate).
SS.8.A.5.2:	Analyze the role of slavery in the development of sectional conflict. **Clarifications:** Examples may include, but are not limited to, Abolition Movement, Nat Turner's Rebellion, Black Codes, Missouri Compromise, Compromise of 1850, Uncle Tom's Cabin, Kansas-Nebraska Act, Dred Scott v. Sandford, Lincoln-Douglas Debates, raid on Harper's Ferry, Underground Railroad, Presidential Election of 1860, Southern secession.
SS.8.A.5.3:	Explain major domestic and international economic, military, political, and socio-cultural events of Abraham Lincoln's presidency. **Clarifications:** Examples may include, but aren ot limited to, sectionalism, states' rights, slavery, Civil War, attempts at foreign alliances, Emancipation Proclamation, Gettysburg Address, suspension of habeas corpus, First and Second Inaugural Addresses.
SS.8.A.5.4:	Identify the division (Confederate and Union States, Border states, western territories) of the United States at the outbreak of the Civil War.
SS.8.A.5.5:	Compare Union and Confederate strengths and weaknesses. **Clarifications:** Examples may include, but aren ot limited to, technology, resources, alliances, geography, military leaders-Lincoln, Davis, Grant, Lee, Jackson, Sherman.
SS.8.A.5.6:	Compare significant Civil War battles and events and their effects on civilian populations. **Clarifications:** Examples may include, but are not limited to, Fort Sumter, Bull Run, Monitor v. Merrimack, Antietam, Vicksburg, Gettysburg, Emancipation Proclamation, Sherman's March, Lee's surrender at Appomattox.
SS.8.A.5.7:	Examine key events and peoples in Florida history as each impacts this era of American history. **Clarifications:** Examples may include, but are not limited to, slavery, influential planters, Florida's secession and Confederate membership, women, children, pioneer environment, Union occupation, Battle of Olustee and role of 54th Massachusetts regiment, Battle at Natural Bridge.
SS.8.A.5.8:	Explain and evaluate the policies, practices, and consequences of Reconstruction (presidential and congressional reconstruction, Johnson's impeachment, Civil Rights Act of 1866, the 13th, 14th, and 15th Amendments, opposition of Southern whites to Reconstruction, accomplishments and failures of Radical Reconstruction, presidential election of 1876, end of Reconstruction, rise of Jim Crow laws, rise of Ku Klux Klan).
SS.8.C.1.1:	Identify the constitutional provisions for establishing citizenship.
SS.8.C.1.2:	Compare views of self-government and the rights and responsibilities of citizens held by Patriots, Loyalists, and other colonists.
SS.8.C.1.3:	Recognize the role of civic virtue in the lives of citizens and leaders from the colonial period through Reconstruction.
SS.8.C.1.4:	Identify the evolving forms of civic and political participation from the colonial period through Reconstruction.
SS.8.C.1.5:	Apply the rights and principles contained in the Constitution and Bill of Rights to the lives of citizens today.
SS.8.C.1.6:	Evaluate how amendments to the Constitution have expanded voting rights from our nation's early history to present day.
SS.8.C.2.1:	Evaluate and compare the essential ideals and principles of American constitutional government expressed in primary sources from the colonial period to Reconstruction.
SS.8.E.1.1:	Examine motivating economic factors that influenced the development of the United States economy over time including scarcity, supply and demand, opportunity costs, incentives, profits, and entrepreneurial aspects. **Clarifications:** Examples areTriangular Trade, colonial development - New England, Middle, and Southern colonies - Revolutionary War, Manifest Destiny, compromises over slavery issues, the Civil War, Reconstruction.
SS.8.E.2.1:	Analyze contributions of entrepreneurs, inventors, and other key individuals from various gender, social, and ethnic backgrounds in the development of the United States economy.
SS.8.E.2.2:	Explain the economic impact of government policies. **Clarifications:** Examples are mercantilism, colonial establishment, Articles of Confederation, Constitution, compromises over slavery.

SS.8.E.2.3:	Assess the role of Africans and other minority groups in the economic development of the United States.
SS.8.E.3.1:	Evaluate domestic and international interdependence. **Clarifications:** Examples are triangular trade routes and regional exchange of resources.
SS.8.G.1.1:	Use maps to explain physical and cultural attributes of major regions throughout American history.
SS.8.G.1.2:	Use appropriate geographic tools and terms to identify and describe significant places and regions in American history.
SS.8.G.2.1:	Identify the physical elements and the human elements that define and differentiate regions as relevant to American history. **Clarifications:** Examples of physical elements are climate, terrain, resources. Examples of human elements are religion, government, economy, language, demography.
SS.8.G.2.2:	Use geographic terms and tools to analyze case studies of regional issues in different parts of the United States that have had critical economic, physical, or political ramifications. **Clarifications:** Examples are cataclysmic natural disasters, shipwrecks.
SS.8.G.2.3:	Use geographic terms and tools to analyze case studies of how selected regions of the United States have changed over time.
SS.8.G.3.1:	Locate and describe in geographic terms the major ecosystems of the United States.
SS.8.G.3.2:	Use geographic terms and tools to explain differing perspectives on the use of renewable and non-renewable resources in the United States and Florida over time.
SS.8.G.4.1:	Interpret population growth and other demographic data for any given place in the United States throughout its history.
SS.8.G.4.2:	Use geographic terms and tools to analyze the effects throughout American history of migration to and within the United States, both on the place of origin and destination.
SS.8.G.4.3:	Use geographic terms and tools to explain cultural diffusion throughout the United States as it expanded its territory.
SS.8.G.4.4:	Interpret databases, case studies, and maps to describe the role that regions play in influencing trade, migration patterns, and cultural/political interaction in the United States throughout time.
SS.8.G.4.5:	Use geographic terms and tools to analyze case studies of the development, growth, and changing nature of cities and urban centers in the United States over time.
SS.8.G.4.6:	Use political maps to describe changes in boundaries and governance throughout American history.
SS.8.G.5.1:	Describe human dependence on the physical environment and natural resources to satisfy basic needs in local environments in the United States.
SS.8.G.5.2:	Describe the impact of human modifications on the physical environment and ecosystems of the United States throughout history. **Clarifications:** Examples are deforestation, urbanization, agriculture.
SS.8.G.6.1:	Use appropriate maps and other graphic representations to analyze geographic problems and changes over time throughout American history.
SS.8.G.6.2:	Illustrate places and events in U.S. history through the use of narratives and graphic representations. **Clarifications:** Examples are maps, graphs, tables.
MA.K12.MTR.1.1:	Mathematicians who participate in effortful learning both individually and with others: • Analyze the problem in a way that makes sense given the task. • Ask questions that will help with solving the task. • Build perseverance by modifying methods as needed while solving a challenging task. • Stay engaged and maintain a positive mindset when working to solve tasks. • Help and support each other when attempting a new method or approach. **Clarifications:** Teachers who encourage students to participate actively in effortful learning both individually and with others: • Cultivate a community of growth mindset learners. • Foster perseverance in students by choosing tasks that are challenging. • Develop students' ability to analyze and problem solve. • Recognize students' effort when solving challenging problems.
MA.K12.MTR.2.1:	Demonstrate understanding by representing problems in multiple ways. Mathematicians who demonstrate understanding by representing problems in multiple ways: • Build understanding through modeling and using manipulatives. • Represent solutions to problems in multiple ways using objects, drawings, tables, graphs and equations. • Progress from modeling problems with objects and drawings to using algorithms and equations. • Express connections between concepts and representations. • Choose a representation based on the given context or purpose. **Clarifications:** Teachers who encourage students to demonstrate understanding by representing problems in multiple ways: • Help students make connections between concepts and representations. • Provide opportunities for students to use manipulatives when investigating concepts. • Guide students from concrete to pictorial to abstract representations as understanding progresses. • Show students that various representations can have different purposes and can be useful in different situations.
MA.K12.MTR.3.1:	Complete tasks with mathematical fluency. Mathematicians who complete tasks with mathematical fluency: • Select efficient and appropriate methods for solving problems within the given context. • Maintain flexibility and accuracy while performing procedures and mental calculations. • Complete tasks accurately and with confidence. • Adapt procedures to apply them to a new context. • Use feedback to improve efficiency when performing calculations.

	Clarifications: Teachers who encourage students to complete tasks with mathematical fluency: • Provide students with the flexibility to solve problems by selecting a procedure that allows them to solve efficiently and accurately. • Offer multiple opportunities for students to practice efficient and generalizable methods. • Provide opportunities for students to reflect on the method they used and determine if a more efficient method could have been used.
MA.K12.MTR.4.1:	Engage in discussions that reflect on the mathematical thinking of self and others. Mathematicians who engage in discussions that reflect on the mathematical thinking of self and others: • Communicate mathematical ideas, vocabulary and methods effectively. • Analyze the mathematical thinking of others. • Compare the efficiency of a method to those expressed by others. • Recognize errors and suggest how to correctly solve the task. • Justify results by explaining methods and processes. • Construct possible arguments based on evidence. **Clarifications:** Teachers who encourage students to engage in discussions that reflect on the mathematical thinking of self and others: • Establish a culture in which students ask questions of the teacher and their peers, and error is an opportunity for learning. • Create opportunities for students to discuss their thinking with peers. • Select, sequence and present student work to advance and deepen understanding of correct and increasingly efficient methods. • Develop students' ability to justify methods and compare their responses to the responses of their peers.
MA.K12.MTR.5.1:	Use patterns and structure to help understand and connect mathematical concepts. Mathematicians who use patterns and structure to help understand and connect mathematical concepts: • Focus on relevant details within a problem. • Create plans and procedures to logically order events, steps or ideas to solve problems. • Decompose a complex problem into manageable parts. • Relate previously learned concepts to new concepts. • Look for similarities among problems. • Connect solutions of problems to more complicated large-scale situations. **Clarifications:** Teachers who encourage students to use patterns and structure to help understand and connect mathematical concepts: • Help students recognize the patterns in the world around them and connect these patterns to mathematical concepts. • Support students to develop generalizations based on the similarities found among problems. • Provide opportunities for students to create plans and procedures to solve problems. • Develop students' ability to construct relationships between their current understanding and more sophisticated ways of thinking.
MA.K12.MTR.6.1:	Assess the reasonableness of solutions. Mathematicians who assess the reasonableness of solutions: • Estimate to discover possible solutions. • Use benchmark quantities to determine if a solution makes sense. • Check calculations when solving problems. • Verify possible solutions by explaining the methods used. • Evaluate results based on the given context. **Clarifications:** Teachers who encourage students to assess the reasonableness of solutions: • Have students estimate or predict solutions prior to solving. • Prompt students to continually ask, "Does this solution make sense? How do you know?" • Reinforce that students check their work as they progress within and after a task. • Strengthen students' ability to verify solutions through justifications.
MA.K12.MTR.7.1:	Apply mathematics to real-world contexts. Mathematicians who apply mathematics to real-world contexts: • Connect mathematical concepts to everyday experiences. • Use models and methods to understand, represent and solve problems. • Perform investigations to gather data or determine if a method is appropriate. • Redesign models and methods to improve accuracy or efficiency. **Clarifications:** Teachers who encourage students to apply mathematics to real-world contexts: • Provide opportunities for students to create models, both concrete and abstract, and perform investigations. • Challenge students to question the accuracy of their models and methods. • Support students as they validate conclusions by comparing them to the given situation. • Indicate how various concepts can be applied to other disciplines.
ELA.K12.EE.1.1:	Cite evidence to explain and justify reasoning. **Clarifications:** K-1 Students include textual evidence in their oral communication with guidance and support from adults. The evidence can consist of details from the text without naming the text. During 1st grade, students learn how to incorporate the evidence in their writing. 2-3 Students include relevant textual evidence in their written and oral communication. Students should name the text when they refer to it. In 3rd grade, students should use a combination of direct and indirect citations. 4-5 Students continue with previous skills and reference comments made by speakers and peers. Students cite texts that they've directly quoted, paraphrased, or used for information. When writing, students will use the form of citation dictated by the instructor or the style guide referenced by the instructor.

	6-8 Students continue with previous skills and use a style guide to create a proper citation. 9-12 Students continue with previous skills and should be aware of existing style guides and the ways in which they differ.
ELA.K12.EE.2.1:	Read and comprehend grade-level complex texts proficiently. **Clarifications:** See Text Complexity for grade-level complexity bands and a text complexity rubric.
ELA.K12.EE.3.1:	Make inferences to support comprehension. **Clarifications:** Students will make inferences before the words infer or inference are introduced. Kindergarten students will answer questions like "Why is the girl smiling?" or make predictions about what will happen based on the title page. Students will use the terms and apply them in 2nd grade and beyond.
ELA.K12.EE.4.1:	Use appropriate collaborative techniques and active listening skills when engaging in discussions in a variety of situations. **Clarifications:** In kindergarten, students learn to listen to one another respectfully. In grades 1-2, students build upon these skills by justifying what they are thinking. For example: "I think _____ because _____." The collaborative conversations are becoming academic conversations. In grades 3-12, students engage in academic conversations discussing claims and justifying their reasoning, refining and applying skills. Students build on ideas, propel the conversation, and support claims and counterclaims with evidence.
ELA.K12.EE.5.1:	Use the accepted rules governing a specific format to create quality work. **Clarifications:** Students will incorporate skills learned into work products to produce quality work. For students to incorporate these skills appropriately, they must receive instruction. A 3rd grade student creating a poster board display must have instruction in how to effectively present information to do quality work.
ELA.K12.EE.6.1:	Use appropriate voice and tone when speaking or writing. **Clarifications:** In kindergarten and 1st grade, students learn the difference between formal and informal language. For example, the way we talk to our friends differs from the way we speak to adults. In 2nd grade and beyond, students practice appropriate social and academic language to discuss texts.
ELD.K12.ELL.SI.1:	English language learners communicate for social and instructional purposes within the school setting.
ELD.K12.ELL.SS.1:	English language learners communicate information, ideas and concepts necessary for academic success in the content area of Social Studies.
HE.8.C.2.4:	Critique school and public health policies that influence health promotion and disease prevention. **Clarifications:** Speed-limit laws, immunization requirements, universal precautions, zero tolerance, report bullying, and cell phone/texting laws.

General Course Information and Notes

GENERAL NOTES

Primary content emphasis for this course pertains to the study of American history from the Exploration and Colonization period to the Reconstruction Period following the Civil War. Students will be exposed to the historical, geographic, political, economic, and sociological events which influenced the development of the United States and the resulting impact on world history. So that students can clearly see the relationship between cause and effect in historical events, students should have the opportunity to explore those fundamental ideas and events which occurred after Reconstruction.

Special Notes:

Additional content that may be contained in the NAEP Grade 8 United States History assessment includes material from all time periods on the following topics:

- Change and Continuity in American Democracy: Ideas, Institutions, Events, Key Figures, and Controversies
- The Gathering and Interactions of Peoples, Cultures, and Ideas
- Economic and Technological Changes and Their Relationship to Society, Ideas, and the Environment
- The Changing Role of America in the World

The NAEP frameworks for United States History may be accessed at nagb.org/content/nagb/assets/documents/publications/frameworks/historyframework.pdf

Instructional Practices

Teaching from well-written, grade-level instructional materials enhances students' content area knowledge and also strengthens their ability to comprehend longer, complex reading passages on any topic for any reason. Using the following instructional practices also helps student learning:

1. Reading assignments from longer text passages as well as shorter ones when text is extremely complex.

2. Making close reading and rereading of texts central to lessons.

3. Asking high-level, text-specific questions and requiring high-level, complex tasks and assignments.

4. Requiring students to support answers with evidence from the text.

5. Providing extensive text-based research and writing opportunities (claims and evidence).

Florida's Benchmarks for Excellent Student Thinking (B.E.S.T.) Standards
This course includes Florida's B.E.S.T. ELA Expectations (EE) and Mathematical Thinking and Reasoning Standards (MTRs) for students. Florida educators should intentionally embed these standards within the content and their instruction as applicable. For guidance on the implementation of the EEs and MTRs, please visit cpalms.org/Standards/BEST_Standards.aspx and select the appropriate B.E.S.T. Standards package.

English Language Development ELD Standards Special Notes Section:
Teachers are required to provide listening, speaking, reading and writing instruction that allows English language learners (ELL) to communicate information, ideas and concepts for academic success in the content area of Social Studies. For the given level of English language proficiency and with visual, graphic, or interactive support, students will interact with grade level words, expressions, sentences and discourse to process or produce language necessary for academic success. The ELD standard should specify a relevant content area concept or topic of study chosen by curriculum developers and teachers which maximizes an ELL's need for communication and social skills. To access an ELL supporting document which delineates performance definitions and descriptors, please click on the following link: cpalms.org/uploads/docs/standards/eld/SS.pdf

Additional Instructional Resources:
Kinsey Collection: thekinseycollection.com/the-kinsey-collection-on-itunes-u/
A.V.E. for Success Collection: fasa.net/4DCGI/cms/review.html?Action=CMS_Document&DocID=139

GENERAL INFORMATION

Course Number: 2100010

Course Path: Section: Grades PreK to 12 Education Courses > **Grade Group:** Grades 6 to 8 Education Courses > **Subject:** Social Studies > **SubSubject:** American and Western Hemispheric Histories >
Abbreviated Title: M/J US HIST
Course Length: Year (Y)
Course Attributes:
- Class Size Core Required

Course Level: 2

Course Status: Draft - Course Pending Approval
Grade Level(s): 6,7,8

Educator Certifications

History (Grades 6-12)
Middle Grades Integrated Curriculum (Middle Grades 5-9)
Social Science (Grades 5-9)
Social Science (Grades 6-12)
Elementary Education (Grades K-6)
Elementary Education (Elementary Grades 1-6)

M/J United States History & Career Planning (#2100015) 2022 - And Beyond

Course Standards

Name	Description
SS.8.A.1.1:	Provide supporting details for an answer from text, interview for oral history, check validity of information from research/text, and identify strong vs. weak arguments. **Clarifications:** Students should be encouraged to utilize FINDS (Focus, Investigage, Note, Develop, Score), Florida's research process model accessible at: fldoe.org/bii/Library_Media/pdf/12TotalFINDS.pdf.
SS.8.A.1.2:	Analyze charts, graphs, maps, photographs and timelines; analyze political cartoons; determine cause and effect.
SS.8.A.1.3:	Analyze current events relevant to American History topics through a variety of electronic and print media resources. **Clarifications:** Examples may include, but are not limited to, articles, editorials, journals, periodicals, reports, websites, videos, and podcasts.
SS.8.A.1.4:	Differentiate fact from opinion, utilize appropriate historical research and fiction/nonfiction support materials.
SS.8.A.1.5:	Identify, within both primary and secondary sources, the author, audience, format, and purpose of significant historical documents. **Clarifications:** Examples of primary and secondary sources may be found on various websites such as the site for The Kinsey Collection.
SS.8.A.1.6:	Compare interpretations of key events and issues throughout American History. **Clarifications:** Examples may include, but are not limited to, historiography.
SS.8.A.1.7:	View historic events through the eyes of those who were there as shown in their art, writings, music, and artifacts.
SS.8.A.2.1:	Compare the relationships among the British, French, Spanish, and Dutch in their struggle for colonization of North America. **Clarifications:** This benchmark implies a study of the ways that economic, political, cultural, and religious competition between these Atlantic powers shaped early colonial America.
SS.8.A.2.2:	Compare the characteristics of the New England, Middle, and Southern colonies. **Clarifications:** Examples may include, but are not limited to, colonial governments, geographic influences, occupations, religion, education, settlement patterns, and social patterns.
SS.8.A.2.3:	Differentiate economic systems of New England, Middle and Southern colonies including indentured servants and slaves as labor sources. **Clarifications:** Examples may include, but are not limited to, subsistence farming, cash crop farming, and maritime industries.
SS.8.A.2.4:	Identify the impact of key colonial figures on the economic, political, and social development of the colonies. **Clarifications:** Examples may include, but are not limited to, John Smith, William Penn, Roger Williams, Anne Hutchinson, John Winthrop, Jonathan Edwards, William Bradford, Nathaniel Bacon, John Peter Zenger, and Lord Calvert.
SS.8.A.2.5:	Discuss the impact of colonial settlement on Native American populations. **Clarifications:** Examples may include, but are not limited to, war, disease, loss of land, westward displacement of tribes causing increased conflict between tribes, and dependence on trade for Western goods, including guns.
SS.8.A.2.6:	Examine the causes, course, and consequences of the French and Indian War. **Clarifications:** Examples may include, but are not limited to, ongoing conflict between France and England, territorial disputes, trade competition, Ft. Duquesne, Ft. Quebec, Treaty of Paris, heavy British debt.
SS.8.A.2.7:	Describe the contributions of key groups (Africans, Native Americans, women, and children) to the society and culture of colonial America.
SS.8.A.3.1:	Explain the consequences of the French and Indian War in British policies for the American colonies from 1763 - 1774. **Clarifications:** Examples may include, but are not limited to, Proclamation of 1763, Sugar Act, Quartering Act, Stamp Act, Declaratory Act, Townshend Acts, Tea Act, Quebec Act, and Coercive Acts.
SS.8.A.3.2:	Explain American colonial reaction to British policy from 1763 - 1774. **Clarifications:** Examples may include, but are not limited to, written protests, boycotts, unrest leading to the Boston Massacre, Boston Tea Party, First Continental Congress, Stamp Act Congress, Committees of Correspondence.
SS.8.A.3.3:	Recognize the contributions of the Founding Fathers (John Adams, Sam Adams, Benjamin Franklin, John Hancock, Alexander Hamilton, Thomas Jefferson, James Madison, George Mason, George Washington) during American Revolutionary efforts. **Clarifications:** Examples may also include, but are not limited to, Thomas Paine, John Jay, Peter Salem.

SS.8.A.3.4:	Examine the contributions of influential groups to both the American and British war efforts during the American Revolutionary War and their effects on the outcome of the war. **Clarifications:** Examples may include, but are not limited to, foreign alliances, freedmen, Native Americans, slaves, women, soldiers, Hessians.
SS.8.A.3.5:	Describe the influence of individuals on social and political developments during the Revolutionary era. **Clarifications:** Examples may include, but are not limited to, James Otis, Mercy Otis Warren, Abigail Adams, Benjamin Banneker, Lemuel Haynes, Phyllis Wheatley.
SS.8.A.3.6:	Examine the causes, course, and consequences of the American Revolution. **Clarifications:** Examples may include, but are not limited to, Battles of Lexington and Concord, Common Sense, Second Continental Congress, Battle of Bunker Hill, Battle of Cowpens, Battle of Trenton, Olive Branch Petition, Declaration of Independence, winter at Valley Forge, Battles of Saratoga and Yorktown, Treaty of Paris.
SS.8.A.3.7:	Examine the structure, content, and consequences of the Declaration of Independence.
SS.8.A.3.8:	Examine individuals and groups that affected political and social motivations during the American Revolution. **Clarifications:** Examples may include, but are not limited to, Ethan Allen and the Green Mountain Boys, the Committees of Correspondence, Sons of Liberty, Daughters of Liberty, the Black Regiment (in churches), Patrick Henry, Patriots, Loyalists, individual colonial militias, and undecideds.
SS.8.A.3.9:	Evaluate the structure, strengths, and weaknesses of the Articles of Confederation and its aspects that led to the Constitutional Convention.
SS.8.A.3.10:	Examine the course and consequences of the Constitutional Convention (New Jersey Plan, Virginia Plan, Great Compromise, Three-Fifths Compromise, compromises regarding taxation and slave trade, Electoral College, state vs. federal power, empowering a president).
SS.8.A.3.11:	Analyze support and opposition (Federalists, Federalist Papers, AntiFederalists, Bill of Rights) to ratification of the U.S. Constitution.
SS.8.A.3.12:	Examine the influences of George Washington's presidency in the formation of the new nation. **Clarifications:** Examples may include, but are not limited to, personal motivations, military experience, political influence, establishing Washington, D.C. as the nation's capital, rise of the party system, setting of precedents (e.g., the Cabinet), Farewell Address.
SS.8.A.3.13:	Explain major domestic and international economic, military, political, and socio-cultural events of John Adams's presidency. **Clarifications:** Examples may include, but aren ot limited to, XYZ Affairs, Alien and Sedition Acts, Land Act of 1800, the quasi-war, the Midnight Judges.
SS.8.A.3.14:	Explain major domestic and international economic, military, political, and socio-cultural events of Thomas Jefferson's presidency. **Clarifications:** Examples may include, but are not limited to, Election of 1800, birth of political parties, Marbury v. Madison, judicial review, Jefferson's First Inaugural Address, Judiciary Act of 1801, Louisiana Purchase, Barbary War, Lewis and Clark Expedition, Hamilton and Burr conflict/duel, Embargo of 1807.
SS.8.A.3.15:	Examine this time period (1763-1815) from the perspective of historically under-represented groups (children, indentured servants, Native Americans, slaves, women, working class).
SS.8.A.3.16:	Examine key events in Florida history as each impacts this era of American history. **Clarifications:** Examples may include, but are not limited to, Treaty of Paris, British rule, Second Spanish Period.
SS.8.A.4.1:	Examine the causes, course, and consequences of United States westward expansion and its growing diplomatic assertiveness (War of 1812, Convention of 1818, Adams-Onis Treaty, Missouri Compromise, Monroe Doctrine, Trail of Tears, Texas annexation, Manifest Destiny, Oregon Territory, Mexican American War/Mexican Cession, California Gold Rush, Compromise of 1850, Kansas Nebraska Act, Gadsden Purchase).
SS.8.A.4.2:	Describe the debate surrounding the spread of slavery into western territories and Florida. **Clarifications:** Examples may include, but are not limited to, abolitionist movement, Ft. Mose, Missouri Compromise, Bleeding Kansas, Kansas-Nebraska Act, Compromise of 1850.
SS.8.A.4.3:	Examine the experiences and perspectives of significant individuals and groups during this era of American History. **Clarifications:** Examples may include, but are not limited to, Lewis and Clark, Sacajawea, York, Pike, Native Americans, Buffalo Soldiers, Mexicanos, Chinese immigrants, Irish immigrants, children, slaves, women, Alexis de Tocqueville, political parties.
SS.8.A.4.4:	Discuss the impact of westward expansion on cultural practices and migration patterns of Native American and African slave populations.
SS.8.A.4.5:	Explain the causes, course, and consequences of the 19th century transportation revolution on the growth of the nation's economy. **Clarifications:** Examples may include, but are not limited to, roads, canals, bridges, steamboats, railroads.
SS.8.A.4.6:	Identify technological improvements (inventions/inventors) that contributed to industrial growth. **Clarifications:** Examples may include, but are not limited to, Fitch/steamboat, Slater/textile mill machinery, Whitney/cotton gin, interchangeable parts, McCoy/industrial lubrication, Fulton/commercial steamboat, Lowell/ mechanized cotton mill, Isaac Singer/sewing machine.
SS.8.A.4.7:	Explain the causes, course, and consequences (industrial growth, subsequent effect on children and women) of New England's textile industry.
SS.8.A.4.8:	Describe the influence of individuals on social and political developments of this era in American History. **Clarifications:** Examples may include, but are not limited to, Daniel Boone, Tecumseh, Black Hawk, John Marshall, James Madison, Dolly Madison, Andrew Jackson, John C. Calhoun, Henry Clay, Daniel Webster, James Polk, Susan B. Anthony, Elizabeth Cady Stanton, William Lloyd Garrison, Frederick Douglass, Horace Mann, Dorothea Dix, Lucretia Mott, Sojourner Truth, Harriet Tubman.
SS.8.A.4.9:	Analyze the causes, course and consequences of the Second Great Awakening on social reform movements. **Clarifications:** Examples may include, but are not limited to, abolition, women's rights, temperance, education, prison and mental health reform, Charles

	Grandison Finney, the Beecher family.
SS.8.A.4.10:	Analyze the impact of technological advancements on the agricultural economy and slave labor. **Clarifications:** Examples may include, but are not limited to, cotton gin, steel plow, rapid growth of slave trade.
SS.8.A.4.11:	Examine the aspects of slave culture including plantation life, resistance efforts, and the role of the slaves' spiritual system.
SS.8.A.4.12:	Examine the effects of the 1804 Haitian Revolution on the United States acquisition of the Louisiana Territory.
SS.8.A.4.13:	Explain the consequences of landmark Supreme Court decisions (McCulloch v. Maryland [1819], Gibbons v. Odgen [1824], Cherokee Nation v. Georgia [1831], and Worcester v. Georgia [1832]) significant to this era of American history.
SS.8.A.4.14:	Examine the causes, course, and consequences of the women's suffrage movement (1848 Seneca Falls Convention, Declaration of Sentiments).
SS.8.A.4.15:	Examine the causes, course, and consequences of literature movements (Transcendentalism) significant to this era of American history.
SS.8.A.4.16:	Identify key ideas and influences of Jacksonian democracy. **Clarifications:** Examples may include, but are not limited to, political participation, political parties, constitutional government, spoils system, National Bank veto, Maysville Road veto, tariff battles, Indian Removal Act, nullification crisis.
SS.8.A.4.17:	Examine key events and peoples in Florida history as each impacts this era of American history. **Clarifications:** Examples may include, but are not limited to, Andrew Jackson's military expeditions to end Indian uprisings, developing relationships between the Seminole and runaway slaves, Adams-Onis Treaty, Florida becoming a United States territory, combining former East and West Floridas, establishing first state capital, Florida's constitution, Florida's admittance to the Union as 27th state.
SS.8.A.4.18:	Examine the experiences and perspectives of different ethnic, national, and religious groups in Florida, explaining their contributions to Florida's and America's society and culture during the Territorial Period. **Clarifications:** Examples may include, but are not limited to, Osceola, white settlers, U.S. troops, Black Seminoles, southern plantation and slave owners, Seminole Wars, Treaty of Moultrie Creek, Seminole relocation, Chief Billy Bowlegs, Florida Crackers.
SS.8.A.5.1:	Explain the causes, course, and consequence of the Civil War (sectionalism, slavery, states' rights, balance of power in the Senate).
SS.8.A.5.2:	Analyze the role of slavery in the development of sectional conflict. **Clarifications:** Examples may include, but are not limited to, Abolition Movement, Nat Turner's Rebellion, Black Codes, Missouri Compromise, Compromise of 1850, Uncle Tom's Cabin, Kansas-Nebraska Act, Dred Scott v. Sandford, Lincoln-Douglas Debates, raid on Harper's Ferry, Underground Railroad, Presidential Election of 1860, Southern secession.
SS.8.A.5.3:	Explain major domestic and international economic, military, political, and socio-cultural events of Abraham Lincoln's presidency. **Clarifications:** Examples may include, but aren ot limited to, sectionalism, states' rights, slavery, Civil War, attempts at foreign alliances, Emancipation Proclamation, Gettysburg Address, suspension of habeas corpus, First and Second Inaugural Addresses.
SS.8.A.5.4:	Identify the division (Confederate and Union States, Border states, western territories) of the United States at the outbreak of the Civil War.
SS.8.A.5.5:	Compare Union and Confederate strengths and weaknesses. **Clarifications:** Examples may include, but aren ot limited to, technology, resources, alliances, geography, military leaders-Lincoln, Davis, Grant, Lee, Jackson, Sherman.
SS.8.A.5.6:	Compare significant Civil War battles and events and their effects on civilian populations. **Clarifications:** Examples may include, but are not limited to, Fort Sumter, Bull Run, Monitor v. Merrimack, Antietam, Vicksburg, Gettysburg, Emancipation Proclamation, Sherman's March, Lee's surrender at Appomattox.
SS.8.A.5.7:	Examine key events and peoples in Florida history as each impacts this era of American history. **Clarifications:** Examples may include, but are not limited to, slavery, influential planters, Florida's secession and Confederate membership, women, children, pioneer environment, Union occupation, Battle of Olustee and role of 54th Massachusetts regiment, Battle at Natural Bridge.
SS.8.A.5.8:	Explain and evaluate the policies, practices, and consequences of Reconstruction (presidential and congressional reconstruction, Johnson's impeachment, Civil Rights Act of 1866, the 13th, 14th, and 15th Amendments, opposition of Southern whites to Reconstruction, accomplishments and failures of Radical Reconstruction, presidential election of 1876, end of Reconstruction, rise of Jim Crow laws, rise of Ku Klux Klan).
SS.8.C.1.1:	Identify the constitutional provisions for establishing citizenship.
SS.8.C.1.2:	Compare views of self-government and the rights and responsibilities of citizens held by Patriots, Loyalists, and other colonists.
SS.8.C.1.3:	Recognize the role of civic virtue in the lives of citizens and leaders from the colonial period through Reconstruction.
SS.8.C.1.4:	Identify the evolving forms of civic and political participation from the colonial period through Reconstruction.
SS.8.C.1.5:	Apply the rights and principles contained in the Constitution and Bill of Rights to the lives of citizens today.
SS.8.C.1.6:	Evaluate how amendments to the Constitution have expanded voting rights from our nation's early history to present day.
SS.8.C.2.1:	Evaluate and compare the essential ideals and principles of American constitutional government expressed in primary sources from the colonial period to Reconstruction.
SS.8.E.1.1:	Examine motivating economic factors that influenced the development of the United States economy over time including scarcity, supply and demand, opportunity costs, incentives, profits, and entrepreneurial aspects. **Clarifications:** Examples areTriangular Trade, colonial development - New England, Middle, and Southern colonies - Revolutionary War, Manifest Destiny, compromises over slavery issues, the Civil War, Reconstruction.
SS.8.E.2.1:	Analyze contributions of entrepreneurs, inventors, and other key individuals from various gender, social, and ethnic backgrounds in the development of the United States economy.
SS.8.E.2.2:	Explain the economic impact of government policies. **Clarifications:**

	Examples are mercantilism, colonial establishment, Articles of Confederation, Constitution, compromises over slavery.
SS.8.E.2.3:	Assess the role of Africans and other minority groups in the economic development of the United States.
SS.8.E.3.1:	Evaluate domestic and international interdependence. **Clarifications:** Examples are triangular trade routes and regional exchange of resources.
SS.8.G.1.1:	Use maps to explain physical and cultural attributes of major regions throughout American history.
SS.8.G.1.2:	Use appropriate geographic tools and terms to identify and describe significant places and regions in American history.
SS.8.G.2.1:	Identify the physical elements and the human elements that define and differentiate regions as relevant to American history. **Clarifications:** Examples of physical elements are climate, terrain, resources. Examples of human elements are religion, government, economy, language, demography.
SS.8.G.2.2:	Use geographic terms and tools to analyze case studies of regional issues in different parts of the United States that have had critical economic, physical, or political ramifications. **Clarifications:** Examples are cataclysmic natural disasters, shipwrecks.
SS.8.G.2.3:	Use geographic terms and tools to analyze case studies of how selected regions of the United States have changed over time.
SS.8.G.3.1:	Locate and describe in geographic terms the major ecosystems of the United States.
SS.8.G.3.2:	Use geographic terms and tools to explain differing perspectives on the use of renewable and non-renewable resources in the United States and Florida over time.
SS.8.G.4.1:	Interpret population growth and other demographic data for any given place in the United States throughout its history.
SS.8.G.4.2:	Use geographic terms and tools to analyze the effects throughout American history of migration to and within the United States, both on the place of origin and destination.
SS.8.G.4.3:	Use geographic terms and tools to explain cultural diffusion throughout the United States as it expanded its territory.
SS.8.G.4.4:	Interpret databases, case studies, and maps to describe the role that regions play in influencing trade, migration patterns, and cultural/political interaction in the United States throughout time.
SS.8.G.4.5:	Use geographic terms and tools to analyze case studies of the development, growth, and changing nature of cities and urban centers in the United States over time.
SS.8.G.4.6:	Use political maps to describe changes in boundaries and governance throughout American history.
SS.8.G.5.1:	Describe human dependence on the physical environment and natural resources to satisfy basic needs in local environments in the United States.
SS.8.G.5.2:	Describe the impact of human modifications on the physical environment and ecosystems of the United States throughout history. **Clarifications:** Examples are deforestation, urbanization, agriculture.
SS.8.G.6.1:	Use appropriate maps and other graphic representations to analyze geographic problems and changes over time throughout American history.
SS.8.G.6.2:	Illustrate places and events in U.S. history through the use of narratives and graphic representations. **Clarifications:** Examples are maps, graphs, tables.
MA.K12.MTR.1.1:	Mathematicians who participate in effortful learning both individually and with others: • Analyze the problem in a way that makes sense given the task. • Ask questions that will help with solving the task. • Build perseverance by modifying methods as needed while solving a challenging task. • Stay engaged and maintain a positive mindset when working to solve tasks. • Help and support each other when attempting a new method or approach. **Clarifications:** Teachers who encourage students to participate actively in effortful learning both individually and with others: • Cultivate a community of growth mindset learners. • Foster perseverance in students by choosing tasks that are challenging. • Develop students' ability to analyze and problem solve. • Recognize students' effort when solving challenging problems.
MA.K12.MTR.2.1:	Demonstrate understanding by representing problems in multiple ways. Mathematicians who demonstrate understanding by representing problems in multiple ways: • Build understanding through modeling and using manipulatives. • Represent solutions to problems in multiple ways using objects, drawings, tables, graphs and equations. • Progress from modeling problems with objects and drawings to using algorithms and equations. • Express connections between concepts and representations. • Choose a representation based on the given context or purpose. **Clarifications:** Teachers who encourage students to demonstrate understanding by representing problems in multiple ways: • Help students make connections between concepts and representations. • Provide opportunities for students to use manipulatives when investigating concepts. • Guide students from concrete to pictorial to abstract representations as understanding progresses. • Show students that various representations can have different purposes and can be useful in different situations.
	Complete tasks with mathematical fluency. Mathematicians who complete tasks with mathematical fluency: • Select efficient and appropriate methods for solving problems within the given context. • Maintain flexibility and accuracy while performing procedures and mental calculations. • Complete tasks accurately and with confidence.

MA.K12.MTR.3.1:	• Adapt procedures to apply them to a new context. • Use feedback to improve efficiency when performing calculations. **Clarifications:** Teachers who encourage students to complete tasks with mathematical fluency: • Provide students with the flexibility to solve problems by selecting a procedure that allows them to solve efficiently and accurately. • Offer multiple opportunities for students to practice efficient and generalizable methods. • Provide opportunities for students to reflect on the method they used and determine if a more efficient method could have been used.
MA.K12.MTR.4.1:	Engage in discussions that reflect on the mathematical thinking of self and others. Mathematicians who engage in discussions that reflect on the mathematical thinking of self and others: • Communicate mathematical ideas, vocabulary and methods effectively. • Analyze the mathematical thinking of others. • Compare the efficiency of a method to those expressed by others. • Recognize errors and suggest how to correctly solve the task. • Justify results by explaining methods and processes. • Construct possible arguments based on evidence. **Clarifications:** Teachers who encourage students to engage in discussions that reflect on the mathematical thinking of self and others: • Establish a culture in which students ask questions of the teacher and their peers, and error is an opportunity for learning. • Create opportunities for students to discuss their thinking with peers. • Select, sequence and present student work to advance and deepen understanding of correct and increasingly efficient methods. • Develop students' ability to justify methods and compare their responses to the responses of their peers.
MA.K12.MTR.5.1:	Use patterns and structure to help understand and connect mathematical concepts. Mathematicians who use patterns and structure to help understand and connect mathematical concepts: • Focus on relevant details within a problem. • Create plans and procedures to logically order events, steps or ideas to solve problems. • Decompose a complex problem into manageable parts. • Relate previously learned concepts to new concepts. • Look for similarities among problems. • Connect solutions of problems to more complicated large-scale situations. **Clarifications:** Teachers who encourage students to use patterns and structure to help understand and connect mathematical concepts: • Help students recognize the patterns in the world around them and connect these patterns to mathematical concepts. • Support students to develop generalizations based on the similarities found among problems. • Provide opportunities for students to create plans and procedures to solve problems. • Develop students' ability to construct relationships between their current understanding and more sophisticated ways of thinking.
MA.K12.MTR.6.1:	Assess the reasonableness of solutions. Mathematicians who assess the reasonableness of solutions: • Estimate to discover possible solutions. • Use benchmark quantities to determine if a solution makes sense. • Check calculations when solving problems. • Verify possible solutions by explaining the methods used. • Evaluate results based on the given context. **Clarifications:** Teachers who encourage students to assess the reasonableness of solutions: • Have students estimate or predict solutions prior to solving. • Prompt students to continually ask, "Does this solution make sense? How do you know?" • Reinforce that students check their work as they progress within and after a task. • Strengthen students' ability to verify solutions through justifications.
MA.K12.MTR.7.1:	Apply mathematics to real-world contexts. Mathematicians who apply mathematics to real-world contexts: • Connect mathematical concepts to everyday experiences. • Use models and methods to understand, represent and solve problems. • Perform investigations to gather data or determine if a method is appropriate. • Redesign models and methods to improve accuracy or efficiency. **Clarifications:** Teachers who encourage students to apply mathematics to real-world contexts: • Provide opportunities for students to create models, both concrete and abstract, and perform investigations. • Challenge students to question the accuracy of their models and methods. • Support students as they validate conclusions by comparing them to the given situation. • Indicate how various concepts can be applied to other disciplines.
ELA.K12.EE.1.1:	Cite evidence to explain and justify reasoning. **Clarifications:** K-1 Students include textual evidence in their oral communication with guidance and support from adults. The evidence can consist of details from the text without naming the text. During 1st grade, students learn how to incorporate the evidence in their writing. 2-3 Students include relevant textual evidence in their written and oral communication. Students should name the text when they refer to it. In 3rd grade, students should use a combination of direct and indirect citations. 4-5 Students continue with previous skills and reference comments made by speakers and peers. Students cite texts that they've directly

	quoted, paraphrased, or used for information. When writing, students will use the form of citation dictated by the instructor or the style guide referenced by the instructor. 6-8 Students continue with previous skills and use a style guide to create a proper citation. 9-12 Students continue with previous skills and should be aware of existing style guides and the ways in which they differ.
ELA.K12.EE.2.1:	Read and comprehend grade-level complex texts proficiently. **Clarifications:** See Text Complexity for grade-level complexity bands and a text complexity rubric.
ELA.K12.EE.3.1:	Make inferences to support comprehension. **Clarifications:** Students will make inferences before the words infer or inference are introduced. Kindergarten students will answer questions like "Why is the girl smiling?" or make predictions about what will happen based on the title page. Students will use the terms and apply them in 2nd grade and beyond.
ELA.K12.EE.4.1:	Use appropriate collaborative techniques and active listening skills when engaging in discussions in a variety of situations. **Clarifications:** In kindergarten, students learn to listen to one another respectfully. In grades 1-2, students build upon these skills by justifying what they are thinking. For example: "I think _____ because _____." The collaborative conversations are becoming academic conversations. In grades 3-12, students engage in academic conversations discussing claims and justifying their reasoning, refining and applying skills. Students build on ideas, propel the conversation, and support claims and counterclaims with evidence.
ELA.K12.EE.5.1:	Use the accepted rules governing a specific format to create quality work. **Clarifications:** Students will incorporate skills learned into work products to produce quality work. For students to incorporate these skills appropriately, they must receive instruction. A 3rd grade student creating a poster board display must have instruction in how to effectively present information to do quality work.
ELA.K12.EE.6.1:	Use appropriate voice and tone when speaking or writing. **Clarifications:** In kindergarten and 1st grade, students learn the difference between formal and informal language. For example, the way we talk to our friends differs from the way we speak to adults. In 2nd grade and beyond, students practice appropriate social and academic language to discuss texts.
ELD.K12.ELL.SI.1:	English language learners communicate for social and instructional purposes within the school setting.
ELD.K12.ELL.SS.1:	English language learners communicate information, ideas and concepts necessary for academic success in the content area of Social Studies.
HE.8.C.2.4:	Critique school and public health policies that influence health promotion and disease prevention. **Clarifications:** Speed-limit laws, immunization requirements, universal precautions, zero tolerance, report bullying, and cell phone/texting laws.

General Course Information and Notes

GENERAL NOTES

Primary content emphasis for this course pertains to the study of American history from the Exploration and Colonization period to the Reconstruction Period following the Civil War. Students will be exposed to the historical, geographic, political, economic, and sociological events which influenced the development of the United States and the resulting impact on world history. So that students can clearly see the relationship between cause and effect in historical events, students should have the opportunity to explore those fundamental ideas and events which occurred after Reconstruction.

Career and Education Planning – Per section 1003.4156, Florida Statutes, the Career and Education Planning course must result in a completed, personalized academic and career plan for the student, that may be revised as the student progresses through middle and high school; must emphasize the importance of entrepreneurship and employability skills; and must include information from the Department of Economic Opportunity's economic security report as described in Section 445.07, Florida Statutes. The required, personalized academic and career plan must inform students of high school graduation requirements, including diploma designations (Section 1003.4285, Florida Statutes); requirements for a Florida Bright Futures Scholarship; state university and Florida College System institution admission requirements; and, available opportunities to earn college credit in high school utilizing acceleration mechanisms. For additional information on the Middle School Career and Education Planning courses, visit fldoe.org/academics/college-career-planning/educators-toolkit/index.stml.

Career and Education Planning Course Standards – Students will:

1.0 Describe the influences that societal, economic, and technological changes have on employment trends and future training.

2.0 Develop skills to locate, evaluate, and interpret career information.

3.0 Identify and demonstrate processes for making short and long term goals.

4.0 Demonstrate employability skills such as working in a group, problem-solving and organizational skills, and the importance of entrepreneurship.

5.0 Understand the relationship between educational achievement and career choices/postsecondary options.

6.0 Identify a career cluster and related pathways through an interest assessment that match career and education goals.

7.0 Develop a career and education plan that includes short and long-term goals, high school program of study, and postsecondary/career goals.

8.0 Demonstrate knowledge of technology and its application in career fields/clusters.

Special Notes:

Additional content that may be contained in the NAEP Grade 8 United States History assessment includes material from all time periods on the following topics:

- Change and Continuity in American Democracy: Ideas, Institutions, Events, Key Figures, and Controversies
- The Gathering and Interactions of Peoples, Cultures, and Ideas
- Economic and Technological Changes and Their Relationship to Society, Ideas, and the Environment
- The Changing Role of America in the World

The NAEP frameworks for United States History may be accessed at nagb.org/content/nagb/assets/documents/publications/frameworks/historyframework.pdf

Instructional Practices

Teaching from well-written, grade-level instructional materials enhances students' content area knowledge and also strengthens their ability to comprehend longer, complex reading passages on any topic for any reason. Using the following instructional practices also helps student learning:

1. Reading assignments from longer text passages as well as shorter ones when text is extremely complex.

2. Making close reading and rereading of texts central to lessons.

3. Asking high-level, text-specific questions and requiring high-level, complex tasks and assignments.

4. Requiring students to support answers with evidence from the text.

5. Providing extensive text-based research and writing opportunities (claims and evidence).

Florida's Benchmarks for Excellent Student Thinking (B.E.S.T.) Standards
This course includes Florida's B.E.S.T. ELA Expectations (EE) and Mathematical Thinking and Reasoning Standards (MTRs) for students. Florida educators should intentionally embed these standards within the content and their instruction as applicable. For guidance on the implementation of the EEs and MTRs, please visit cpalms.org/Standards/BEST_Standards.aspx and select the appropriate B.E.S.T. Standards package.

English Language Development ELD Standards Special Notes Section:
Teachers are required to provide listening, speaking, reading and writing instruction that allows English language learners (ELL) to communicate information, ideas and concepts for academic success in the content area of Social Studies. For the given level of English language proficiency and with visual, graphic, or interactive support, students will interact with grade level words, expressions, sentences and discourse to process or produce language necessary for academic success. The ELD standard should specify a relevant content area concept or topic of study chosen by curriculum developers and teachers which maximizes an ELL's need for communication and social skills. To access an ELL supporting document which delineates performance definitions and descriptors, please click on the following link: cpalms.org/uploads/docs/standards/eld/SS.pdf

Additional Instructional Resources:
Kinsey Collection: thekinseycollection.com/the-kinsey-collection-on-itunes-u/

GENERAL INFORMATION

Course Number: 2100015

Course Path: Section: Grades PreK to 12 Education Courses > **Grade Group:** Grades 6 to 8 Education Courses > **Subject:** Social Studies > **SubSubject:** American and Western Hemispheric Histories >

Abbreviated Title: M/J US HIST&CAR PLAN

Course Length: Year (Y)

Course Attributes:

- Class Size Core Required

Course Level: 2

Course Status: Draft - Course Pending Approval

Grade Level(s): 6,7,8

Educator Certifications

History (Grades 6-12)
Middle Grades Integrated Curriculum (Middle Grades 5-9)
Social Science (Grades 5-9)
Social Science (Grades 6-12)
Elementary Education (Elementary Grades 1-6)
Elementary Education (Grades K-6)

M/J United States History Advanced (#2100020) 2022 - And Beyond

Course Standards

Name	Description
SS.8.A.1.1:	Provide supporting details for an answer from text, interview for oral history, check validity of information from research/text, and identify strong vs. weak arguments. **Clarifications:** Students should be encouraged to utilize FINDS (Focus, Investigage, Note, Develop, Score), Florida's research process model accessible at: fldoe.org/bii/Library_Media/pdf/12TotalFINDS.pdf.
SS.8.A.1.2:	Analyze charts, graphs, maps, photographs and timelines; analyze political cartoons; determine cause and effect.
SS.8.A.1.3:	Analyze current events relevant to American History topics through a variety of electronic and print media resources. **Clarifications:** Examples may include, but are not limited to, articles, editorials, journals, periodicals, reports, websites, videos, and podcasts.
SS.8.A.1.4:	Differentiate fact from opinion, utilize appropriate historical research and fiction/nonfiction support materials.
SS.8.A.1.5:	Identify, within both primary and secondary sources, the author, audience, format, and purpose of significant historical documents. **Clarifications:** Examples of primary and secondary sources may be found on various websites such as the site for The Kinsey Collection.
SS.8.A.1.6:	Compare interpretations of key events and issues throughout American History. **Clarifications:** Examples may include, but are not limited to, historiography.
SS.8.A.1.7:	View historic events through the eyes of those who were there as shown in their art, writings, music, and artifacts.
SS.8.A.2.1:	Compare the relationships among the British, French, Spanish, and Dutch in their struggle for colonization of North America. **Clarifications:** This benchmark implies a study of the ways that economic, political, cultural, and religious competition between these Atlantic powers shaped early colonial America.
SS.8.A.2.2:	Compare the characteristics of the New England, Middle, and Southern colonies. **Clarifications:** Examples may include, but are not limited to, colonial governments, geographic influences, occupations, religion, education, settlement patterns, and social patterns.
SS.8.A.2.3:	Differentiate economic systems of New England, Middle and Southern colonies including indentured servants and slaves as labor sources. **Clarifications:** Examples may include, but are not limited to, subsistence farming, cash crop farming, and maritime industries.
SS.8.A.2.4:	Identify the impact of key colonial figures on the economic, political, and social development of the colonies. **Clarifications:** Examples may include, but are not limited to, John Smith, William Penn, Roger Williams, Anne Hutchinson, John Winthrop, Jonathan Edwards, William Bradford, Nathaniel Bacon, John Peter Zenger, and Lord Calvert.
SS.8.A.2.5:	Discuss the impact of colonial settlement on Native American populations. **Clarifications:** Examples may include, but are not limited to, war, disease, loss of land, westward displacement of tribes causing increased conflict between tribes, and dependence on trade for Western goods, including guns.
SS.8.A.2.6:	Examine the causes, course, and consequences of the French and Indian War. **Clarifications:** Examples may include, but are not limited to, ongoing conflict between France and England, territorial disputes, trade competition, Ft. Duquesne, Ft. Quebec, Treaty of Paris, heavy British debt.
SS.8.A.2.7:	Describe the contributions of key groups (Africans, Native Americans, women, and children) to the society and culture of colonial America.
SS.8.A.3.1:	Explain the consequences of the French and Indian War in British policies for the American colonies from 1763 - 1774. **Clarifications:** Examples may include, but are not limited to, Proclamation of 1763, Sugar Act, Quartering Act, Stamp Act, Declaratory Act, Townshend Acts, Tea Act, Quebec Act, and Coercive Acts.
SS.8.A.3.2:	Explain American colonial reaction to British policy from 1763 - 1774. **Clarifications:** Examples may include, but are not limited to, written protests, boycotts, unrest leading to the Boston Massacre, Boston Tea Party, First Continental Congress, Stamp Act Congress, Committees of Correspondence.
SS.8.A.3.3:	Recognize the contributions of the Founding Fathers (John Adams, Sam Adams, Benjamin Franklin, John Hancock, Alexander Hamilton, Thomas Jefferson, James Madison, George Mason, George Washington) during American Revolutionary efforts. **Clarifications:** Examples may also include, but are not limited to, Thomas Paine, John Jay, Peter Salem.
	Examine the contributions of influential groups to both the American and British war efforts during the American Revolutionary War and their effects on the outcome of the war.

SS.8.A.3.4:	**Clarifications:** Examples may include, but are not limited to, foreign alliances, freedmen, Native Americans, slaves, women, soldiers, Hessians.
SS.8.A.3.5:	Describe the influence of individuals on social and political developments during the Revolutionary era. **Clarifications:** Examples may include, but are not limited to, James Otis, Mercy Otis Warren, Abigail Adams, Benjamin Banneker, Lemuel Haynes, Phyllis Wheatley.
SS.8.A.3.6:	Examine the causes, course, and consequences of the American Revolution. **Clarifications:** Examples may include, but are not limited to, Battles of Lexington and Concord, Common Sense, Second Continental Congress, Battle of Bunker Hill, Battle of Cowpens, Battle of Trenton, Olive Branch Petition, Declaration of Independence, winter at Valley Forge, Battles of Saratoga and Yorktown, Treaty of Paris.
SS.8.A.3.7:	Examine the structure, content, and consequences of the Declaration of Independence.
SS.8.A.3.8:	Examine individuals and groups that affected political and social motivations during the American Revolution. **Clarifications:** Examples may include, but are not limited to, Ethan Allen and the Green Mountain Boys, the Committees of Correspondence, Sons of Liberty, Daughters of Liberty, the Black Regiment (in churches), Patrick Henry, Patriots, Loyalists, individual colonial militias, and undecideds.
SS.8.A.3.9:	Evaluate the structure, strengths, and weaknesses of the Articles of Confederation and its aspects that led to the Constitutional Convention.
SS.8.A.3.10:	Examine the course and consequences of the Constitutional Convention (New Jersey Plan, Virginia Plan, Great Compromise, Three-Fifths Compromise, compromises regarding taxation and slave trade, Electoral College, state vs. federal power, empowering a president).
SS.8.A.3.11:	Analyze support and opposition (Federalists, Federalist Papers, AntiFederalists, Bill of Rights) to ratification of the U.S. Constitution.
SS.8.A.3.12:	Examine the influences of George Washington's presidency in the formation of the new nation. **Clarifications:** Examples may include, but are not limited to, personal motivations, military experience, political influence, establishing Washington, D.C. as the nation's capital, rise of the party system, setting of precedents (e.g., the Cabinet), Farewell Address.
SS.8.A.3.13:	Explain major domestic and international economic, military, political, and socio-cultural events of John Adams's presidency. **Clarifications:** Examples may include, but aren ot limited to, XYZ Affairs, Alien and Sedition Acts, Land Act of 1800, the quasi-war, the Midnight Judges.
SS.8.A.3.14:	Explain major domestic and international economic, military, political, and socio-cultural events of Thomas Jefferson's presidency. **Clarifications:** Examples may include, but are not limited to, Election of 1800, birth of political parties, Marbury v. Madison, judicial review, Jefferson's First Inaugural Address, Judiciary Act of 1801, Louisiana Purchase, Barbary War, Lewis and Clark Expedition, Hamilton and Burr conflict/duel, Embargo of 1807.
SS.8.A.3.15:	Examine this time period (1763-1815) from the perspective of historically under-represented groups (children, indentured servants, Native Americans, slaves, women, working class).
SS.8.A.3.16:	Examine key events in Florida history as each impacts this era of American history. **Clarifications:** Examples may include, but are not limited to, Treaty of Paris, British rule, Second Spanish Period.
SS.8.A.4.1:	Examine the causes, course, and consequences of United States westward expansion and its growing diplomatic assertiveness (War of 1812, Convention of 1818, Adams-Onis Treaty, Missouri Compromise, Monroe Doctrine, Trail of Tears, Texas annexation, Manifest Destiny, Oregon Territory, Mexican American War/Mexican Cession, California Gold Rush, Compromise of 1850, Kansas Nebraska Act, Gadsden Purchase).
SS.8.A.4.2:	Describe the debate surrounding the spread of slavery into western territories and Florida. **Clarifications:** Examples may include, but are not limited to, abolitionist movement, Ft. Mose, Missouri Compromise, Bleeding Kansas, Kansas-Nebraska Act, Compromise of 1850.
SS.8.A.4.3:	Examine the experiences and perspectives of significant individuals and groups during this era of American History. **Clarifications:** Examples may include, but are not limited to, Lewis and Clark, Sacajawea, York, Pike, Native Americans, Buffalo Soldiers, Mexicanos, Chinese immigrants, Irish immigrants, children, slaves, women, Alexis de Tocqueville, political parties.
SS.8.A.4.4:	Discuss the impact of westward expansion on cultural practices and migration patterns of Native American and African slave populations.
SS.8.A.4.5:	Explain the causes, course, and consequences of the 19th century transportation revolution on the growth of the nation's economy. **Clarifications:** Examples may include, but are not limited to, roads, canals, bridges, steamboats, railroads.
SS.8.A.4.6:	Identify technological improvements (inventions/inventors) that contributed to industrial growth. **Clarifications:** Examples may include, but are not limited to, Fitch/steamboat, Slater/textile mill machinery, Whitney/cotton gin, interchangeable parts, McCoy/industrial lubrication, Fulton/commercial steamboat, Lowell/ mechanized cotton mill, Isaac Singer/sewing machine.
SS.8.A.4.7:	Explain the causes, course, and consequences (industrial growth, subsequent effect on children and women) of New England's textile industry.
SS.8.A.4.8:	Describe the influence of individuals on social and political developments of this era in American History. **Clarifications:** Examples may include, but are not limited to, Daniel Boone, Tecumseh, Black Hawk, John Marshall, James Madison, Dolly Madison, Andrew Jackson, John C. Calhoun, Henry Clay, Daniel Webster, James Polk, Susan B. Anthony, Elizabeth Cady Stanton, William Lloyd Garrison, Frederick Douglass, Horace Mann, Dorothea Dix, Lucretia Mott, Sojourner Truth, Harriet Tubman.
SS.8.A.4.9:	Analyze the causes, course and consequences of the Second Great Awakening on social reform movements. **Clarifications:** Examples may include, but are not limited to, abolition, women's rights, temperance, education, prison and mental health reform, Charles Grandison Finney, the Beecher family.

SS.8.A.4.10:	Analyze the impact of technological advancements on the agricultural economy and slave labor. **Clarifications:** Examples may include, but are not limited to, cotton gin, steel plow, rapid growth of slave trade.
SS.8.A.4.11:	Examine the aspects of slave culture including plantation life, resistance efforts, and the role of the slaves' spiritual system.
SS.8.A.4.12:	Examine the effects of the 1804 Haitian Revolution on the United States acquisition of the Louisiana Territory.
SS.8.A.4.13:	Explain the consequences of landmark Supreme Court decisions (McCulloch v. Maryland [1819], Gibbons v. Odgen [1824], Cherokee Nation v. Georgia [1831], and Worcester v. Georgia [1832]) significant to this era of American history.
SS.8.A.4.14:	Examine the causes, course, and consequences of the women's suffrage movement (1848 Seneca Falls Convention, Declaration of Sentiments).
SS.8.A.4.15:	Examine the causes, course, and consequences of literature movements (Transcendentalism) significant to this era of American history.
SS.8.A.4.16:	Identify key ideas and influences of Jacksonian democracy. **Clarifications:** Examples may include, but are not limited to, political participation, political parties, constitutional government, spoils system, National Bank veto, Maysville Road veto, tariff battles, Indian Removal Act, nullification crisis.
SS.8.A.4.17:	Examine key events and peoples in Florida history as each impacts this era of American history. **Clarifications:** Examples may include, but are not limited to, Andrew Jackson's military expeditions to end Indian uprisings, developing relationships between the Seminole and runaway slaves, Adams-Onis Treaty, Florida becoming a United States territory, combining former East and West Floridas, establishing first state capital, Florida's constitution, Florida's admittance to the Union as 27th state.
SS.8.A.4.18:	Examine the experiences and perspectives of different ethnic, national, and religious groups in Florida, explaining their contributions to Florida's and America's society and culture during the Territorial Period. **Clarifications:** Examples may include, but are not limited to, Osceola, white settlers, U.S. troops, Black Seminoles, southern plantation and slave owners, Seminole Wars, Treaty of Moultrie Creek, Seminole relocation, Chief Billy Bowlegs, Florida Crackers.
SS.8.A.5.1:	Explain the causes, course, and consequence of the Civil War (sectionalism, slavery, states' rights, balance of power in the Senate).
SS.8.A.5.2:	Analyze the role of slavery in the development of sectional conflict. **Clarifications:** Examples may include, but are not limited to, Abolition Movement, Nat Turner's Rebellion, Black Codes, Missouri Compromise, Compromise of 1850, Uncle Tom's Cabin, Kansas-Nebraska Act, Dred Scott v. Sandford, Lincoln-Douglas Debates, raid on Harper's Ferry, Underground Railroad, Presidential Election of 1860, Southern secession.
SS.8.A.5.3:	Explain major domestic and international economic, military, political, and socio-cultural events of Abraham Lincoln's presidency. **Clarifications:** Examples may include, but aren ot limited to, sectionalism, states' rights, slavery, Civil War, attempts at foreign alliances, Emancipation Proclamation, Gettysburg Address, suspension of habeas corpus, First and Second Inaugural Addresses.
SS.8.A.5.4:	Identify the division (Confederate and Union States, Border states, western territories) of the United States at the outbreak of the Civil War.
SS.8.A.5.5:	Compare Union and Confederate strengths and weaknesses. **Clarifications:** Examples may include, but aren ot limited to, technology, resources, alliances, geography, military leaders-Lincoln, Davis, Grant, Lee, Jackson, Sherman.
SS.8.A.5.6:	Compare significant Civil War battles and events and their effects on civilian populations. **Clarifications:** Examples may include, but are not limited to, Fort Sumter, Bull Run, Monitor v. Merrimack, Antietam, Vicksburg, Gettysburg, Emancipation Proclamation, Sherman's March, Lee's surrender at Appomattox.
SS.8.A.5.7:	Examine key events and peoples in Florida history as each impacts this era of American history. **Clarifications:** Examples may include, but are not limited to, slavery, influential planters, Florida's secession and Confederate membership, women, children, pioneer environment, Union occupation, Battle of Olustee and role of 54th Massachusetts regiment, Battle at Natural Bridge.
SS.8.A.5.8:	Explain and evaluate the policies, practices, and consequences of Reconstruction (presidential and congressional reconstruction, Johnson's impeachment, Civil Rights Act of 1866, the 13th, 14th, and 15th Amendments, opposition of Southern whites to Reconstruction, accomplishments and failures of Radical Reconstruction, presidential election of 1876, end of Reconstruction, rise of Jim Crow laws, rise of Ku Klux Klan).
SS.8.C.1.1:	Identify the constitutional provisions for establishing citizenship.
SS.8.C.1.2:	Compare views of self-government and the rights and responsibilities of citizens held by Patriots, Loyalists, and other colonists.
SS.8.C.1.3:	Recognize the role of civic virtue in the lives of citizens and leaders from the colonial period through Reconstruction.
SS.8.C.1.4:	Identify the evolving forms of civic and political participation from the colonial period through Reconstruction.
SS.8.C.1.5:	Apply the rights and principles contained in the Constitution and Bill of Rights to the lives of citizens today.
SS.8.C.1.6:	Evaluate how amendments to the Constitution have expanded voting rights from our nation's early history to present day.
SS.8.C.2.1:	Evaluate and compare the essential ideals and principles of American constitutional government expressed in primary sources from the colonial period to Reconstruction.
SS.8.E.1.1:	Examine motivating economic factors that influenced the development of the United States economy over time including scarcity, supply and demand, opportunity costs, incentives, profits, and entrepreneurial aspects. **Clarifications:** Examples areTriangular Trade, colonial development - New England, Middle, and Southern colonies - Revolutionary War, Manifest Destiny, compromises over slavery issues, the Civil War, Reconstruction.
SS.8.E.2.1:	Analyze contributions of entrepreneurs, inventors, and other key individuals from various gender, social, and ethnic backgrounds in the development of the United States economy.
SS.8.E.2.2:	Explain the economic impact of government policies. **Clarifications:** Examples are mercantilism, colonial establishment, Articles of Confederation, Constitution, compromises over slavery.

SS.8.E.2.3:	Assess the role of Africans and other minority groups in the economic development of the United States.
SS.8.E.3.1:	Evaluate domestic and international interdependence. **Clarifications:** Examples are triangular trade routes and regional exchange of resources.
SS.8.G.1.1:	Use maps to explain physical and cultural attributes of major regions throughout American history.
SS.8.G.1.2:	Use appropriate geographic tools and terms to identify and describe significant places and regions in American history.
SS.8.G.2.1:	Identify the physical elements and the human elements that define and differentiate regions as relevant to American history. **Clarifications:** Examples of physical elements are climate, terrain, resources. Examples of human elements are religion, government, economy, language, demography.
SS.8.G.2.2:	Use geographic terms and tools to analyze case studies of regional issues in different parts of the United States that have had critical economic, physical, or political ramifications. **Clarifications:** Examples are cataclysmic natural disasters, shipwrecks.
SS.8.G.2.3:	Use geographic terms and tools to analyze case studies of how selected regions of the United States have changed over time.
SS.8.G.3.1:	Locate and describe in geographic terms the major ecosystems of the United States.
SS.8.G.3.2:	Use geographic terms and tools to explain differing perspectives on the use of renewable and non-renewable resources in the United States and Florida over time.
SS.8.G.4.1:	Interpret population growth and other demographic data for any given place in the United States throughout its history.
SS.8.G.4.2:	Use geographic terms and tools to analyze the effects throughout American history of migration to and within the United States, both on the place of origin and destination.
SS.8.G.4.3:	Use geographic terms and tools to explain cultural diffusion throughout the United States as it expanded its territory.
SS.8.G.4.4:	Interpret databases, case studies, and maps to describe the role that regions play in influencing trade, migration patterns, and cultural/political interaction in the United States throughout time.
SS.8.G.4.5:	Use geographic terms and tools to analyze case studies of the development, growth, and changing nature of cities and urban centers in the United States over time.
SS.8.G.4.6:	Use political maps to describe changes in boundaries and governance throughout American history.
SS.8.G.5.1:	Describe human dependence on the physical environment and natural resources to satisfy basic needs in local environments in the United States.
SS.8.G.5.2:	Describe the impact of human modifications on the physical environment and ecosystems of the United States throughout history. **Clarifications:** Examples are deforestation, urbanization, agriculture.
SS.8.G.6.1:	Use appropriate maps and other graphic representations to analyze geographic problems and changes over time throughout American history.
SS.8.G.6.2:	Illustrate places and events in U.S. history through the use of narratives and graphic representations. **Clarifications:** Examples are maps, graphs, tables.
MA.K12.MTR.1.1:	Mathematicians who participate in effortful learning both individually and with others: • Analyze the problem in a way that makes sense given the task. • Ask questions that will help with solving the task. • Build perseverance by modifying methods as needed while solving a challenging task. • Stay engaged and maintain a positive mindset when working to solve tasks. • Help and support each other when attempting a new method or approach. **Clarifications:** Teachers who encourage students to participate actively in effortful learning both individually and with others: • Cultivate a community of growth mindset learners. • Foster perseverance in students by choosing tasks that are challenging. • Develop students' ability to analyze and problem solve. • Recognize students' effort when solving challenging problems.
MA.K12.MTR.2.1:	Demonstrate understanding by representing problems in multiple ways. Mathematicians who demonstrate understanding by representing problems in multiple ways: • Build understanding through modeling and using manipulatives. • Represent solutions to problems in multiple ways using objects, drawings, tables, graphs and equations. • Progress from modeling problems with objects and drawings to using algorithms and equations. • Express connections between concepts and representations. • Choose a representation based on the given context or purpose. **Clarifications:** Teachers who encourage students to demonstrate understanding by representing problems in multiple ways: • Help students make connections between concepts and representations. • Provide opportunities for students to use manipulatives when investigating concepts. • Guide students from concrete to pictorial to abstract representations as understanding progresses. • Show students that various representations can have different purposes and can be useful in different situations.
MA.K12.MTR.3.1:	Complete tasks with mathematical fluency. Mathematicians who complete tasks with mathematical fluency: • Select efficient and appropriate methods for solving problems within the given context. • Maintain flexibility and accuracy while performing procedures and mental calculations. • Complete tasks accurately and with confidence. • Adapt procedures to apply them to a new context. • Use feedback to improve efficiency when performing calculations.

	Clarifications: Teachers who encourage students to complete tasks with mathematical fluency: • Provide students with the flexibility to solve problems by selecting a procedure that allows them to solve efficiently and accurately. • Offer multiple opportunities for students to practice efficient and generalizable methods. • Provide opportunities for students to reflect on the method they used and determine if a more efficient method could have been used.
MA.K12.MTR.4.1:	Engage in discussions that reflect on the mathematical thinking of self and others. Mathematicians who engage in discussions that reflect on the mathematical thinking of self and others: • Communicate mathematical ideas, vocabulary and methods effectively. • Analyze the mathematical thinking of others. • Compare the efficiency of a method to those expressed by others. • Recognize errors and suggest how to correctly solve the task. • Justify results by explaining methods and processes. • Construct possible arguments based on evidence. **Clarifications:** Teachers who encourage students to engage in discussions that reflect on the mathematical thinking of self and others: • Establish a culture in which students ask questions of the teacher and their peers, and error is an opportunity for learning. • Create opportunities for students to discuss their thinking with peers. • Select, sequence and present student work to advance and deepen understanding of correct and increasingly efficient methods. • Develop students' ability to justify methods and compare their responses to the responses of their peers.
MA.K12.MTR.5.1:	Use patterns and structure to help understand and connect mathematical concepts. Mathematicians who use patterns and structure to help understand and connect mathematical concepts: • Focus on relevant details within a problem. • Create plans and procedures to logically order events, steps or ideas to solve problems. • Decompose a complex problem into manageable parts. • Relate previously learned concepts to new concepts. • Look for similarities among problems. • Connect solutions of problems to more complicated large-scale situations. **Clarifications:** Teachers who encourage students to use patterns and structure to help understand and connect mathematical concepts: • Help students recognize the patterns in the world around them and connect these patterns to mathematical concepts. • Support students to develop generalizations based on the similarities found among problems. • Provide opportunities for students to create plans and procedures to solve problems. • Develop students' ability to construct relationships between their current understanding and more sophisticated ways of thinking.
MA.K12.MTR.6.1:	Assess the reasonableness of solutions. Mathematicians who assess the reasonableness of solutions: • Estimate to discover possible solutions. • Use benchmark quantities to determine if a solution makes sense. • Check calculations when solving problems. • Verify possible solutions by explaining the methods used. • Evaluate results based on the given context. **Clarifications:** Teachers who encourage students to assess the reasonableness of solutions: • Have students estimate or predict solutions prior to solving. • Prompt students to continually ask, "Does this solution make sense? How do you know?" • Reinforce that students check their work as they progress within and after a task. • Strengthen students' ability to verify solutions through justifications.
MA.K12.MTR.7.1:	Apply mathematics to real-world contexts. Mathematicians who apply mathematics to real-world contexts: • Connect mathematical concepts to everyday experiences. • Use models and methods to understand, represent and solve problems. • Perform investigations to gather data or determine if a method is appropriate. • Redesign models and methods to improve accuracy or efficiency. **Clarifications:** Teachers who encourage students to apply mathematics to real-world contexts: • Provide opportunities for students to create models, both concrete and abstract, and perform investigations. • Challenge students to question the accuracy of their models and methods. • Support students as they validate conclusions by comparing them to the given situation. • Indicate how various concepts can be applied to other disciplines.
ELA.K12.EE.1.1:	Cite evidence to explain and justify reasoning. **Clarifications:** K-1 Students include textual evidence in their oral communication with guidance and support from adults. The evidence can consist of details from the text without naming the text. During 1st grade, students learn how to incorporate the evidence in their writing. 2-3 Students include relevant textual evidence in their written and oral communication. Students should name the text when they refer to it. In 3rd grade, students should use a combination of direct and indirect citations. 4-5 Students continue with previous skills and reference comments made by speakers and peers. Students cite texts that they've directly quoted, paraphrased, or used for information. When writing, students will use the form of citation dictated by the instructor or the style guide referenced by the instructor.

	6-8 Students continue with previous skills and use a style guide to create a proper citation. 9-12 Students continue with previous skills and should be aware of existing style guides and the ways in which they differ.
ELA.K12.EE.2.1:	Read and comprehend grade-level complex texts proficiently. **Clarifications:** See Text Complexity for grade-level complexity bands and a text complexity rubric.
ELA.K12.EE.3.1:	Make inferences to support comprehension. **Clarifications:** Students will make inferences before the words infer or inference are introduced. Kindergarten students will answer questions like "Why is the girl smiling?" or make predictions about what will happen based on the title page. Students will use the terms and apply them in 2nd grade and beyond.
ELA.K12.EE.4.1:	Use appropriate collaborative techniques and active listening skills when engaging in discussions in a variety of situations. **Clarifications:** In kindergarten, students learn to listen to one another respectfully. In grades 1-2, students build upon these skills by justifying what they are thinking. For example: "I think _____ because _____." The collaborative conversations are becoming academic conversations. In grades 3-12, students engage in academic conversations discussing claims and justifying their reasoning, refining and applying skills. Students build on ideas, propel the conversation, and support claims and counterclaims with evidence.
ELA.K12.EE.5.1:	Use the accepted rules governing a specific format to create quality work. **Clarifications:** Students will incorporate skills learned into work products to produce quality work. For students to incorporate these skills appropriately, they must receive instruction. A 3rd grade student creating a poster board display must have instruction in how to effectively present information to do quality work.
ELA.K12.EE.6.1:	Use appropriate voice and tone when speaking or writing. **Clarifications:** In kindergarten and 1st grade, students learn the difference between formal and informal language. For example, the way we talk to our friends differs from the way we speak to adults. In 2nd grade and beyond, students practice appropriate social and academic language to discuss texts.
ELD.K12.ELL.SI.1:	English language learners communicate for social and instructional purposes within the school setting.
ELD.K12.ELL.SS.1:	English language learners communicate information, ideas and concepts necessary for academic success in the content area of Social Studies.
HE.8.C.2.4:	Critique school and public health policies that influence health promotion and disease prevention. **Clarifications:** Speed-limit laws, immunization requirements, universal precautions, zero tolerance, report bullying, and cell phone/texting laws.

General Course Information and Notes

GENERAL NOTES

Primary content emphasis for this course pertains to the study of American history from the Exploration and Colonization period to the Reconstruction Period following the Civil War. Students will be exposed to the historical, geographic, political, economic, and sociological events which influenced the development of the United States and the resulting impact on world history. So that students can clearly see the relationship between cause and effect in historical events, students should have the opportunity to explore those fundamental ideas and events which occurred after Reconstruction.

Honors and Advanced Level Course Note: Advanced courses require a greater demand on students through increased academic rigor. Academic rigor is obtained through the application, analysis, evaluation, and creation of complex ideas that are often abstract and multi-faceted. Students are challenged to think and collaborate critically on the content they are learning. Honors level rigor will be achieved by increasing text complexity through text selection, focus on high-level qualitative measures, and complexity of task. Instruction will be structured to give students a deeper understanding of conceptual themes and organization within and across disciplines. Academic rigor is more than simply assigning to students a greater quantity of work.

Special Notes: Additional content that may be contained in the NAEP Grade 8 United States History assessment includes materialfrom all time periods on the following topics:

- Change and Continuity in American Democracy: Ideas, Institutions, Events, Key Figures, and Controversies
- The Gathering and Interactions of Peoples, Cultures, and Ideas
- Economic and Technological Changes and Their Relationship to Society, Ideas, and the Environment
- The Changing Role of America in the World

The NAEP frameworks for United States History may be accessed at nagb.org/content/nagb/assets/documents/publications/frameworks/historyframework.pdf

Instructional Practices

Teaching from well-written, grade-level instructional materials enhances students' content area knowledge and also strengthens their ability to comprehend longer, complex reading passages on any topic for any reason. Using the following instructional practices also helps student learning:

1. Reading assignments from longer text passages as well as shorter ones when text is extremely complex.

2. Making close reading and rereading of texts central to lessons.

3. Asking high-level, text-specific questions and requiring high-level, complex tasks and assignments.

4. Requiring students to support answers with evidence from the text.

5. Providing extensive text-based research and writing opportunities (claims and evidence).

Florida's Benchmarks for Excellent Student Thinking (B.E.S.T.) Standards
This course includes Florida's B.E.S.T. ELA Expectations (EE) and Mathematical Thinking and Reasoning Standards (MTRs) for students. Florida educators should intentionally embed these standards within the content and their instruction as applicable. For guidance on the implementation of the EEs and MTRs, please visit cpalms.org/Standards/BEST_Standards.aspx and select the appropriate B.E.S.T. Standards package.

English Language Development ELD Standards Special Notes Section:
Teachers are required to provide listening, speaking, reading and writing instruction that allows English language learners (ELL) to communicate information, ideas and concepts for academic success in the content area of Social Studies. For the given level of English language proficiency and with visual, graphic, or interactive support, students will interact with grade level words, expressions, sentences and discourse to process or produce language necessary for academic success. The ELD standard should specify a relevant content area concept or topic of study chosen by curriculum developers and teachers which maximizes an ELL's need for communication and social skills. To access an ELL supporting document which delineates performance definitions and descriptors, please click on the following link: cpalms.org/uploads/docs/standards/eld/SS.pdf

Additional Instructional Resources:
Kinsey Collection: thekinseycollection.com/the-kinsey-collection-on-itunes-u/

QUALIFICATIONS

added elem ed cert options, per commissioner approval on 1/23/18

GENERAL INFORMATION

Course Number: 2100020

Course Path: Section: Grades PreK to 12 Education Courses > **Grade Group:** Grades 6 to 8 Education Courses > **Subject:** Social Studies > **SubSubject:** American and Western Hemispheric Histories >
Abbreviated Title: M/J US HIST ADV
Course Length: Year (Y)
Course Attributes:
- Class Size Core Required

Course Level: 3

Course Status: Draft - Course Pending Approval

Grade Level(s): 6,7,8

Educator Certifications

History (Grades 6-12)
Middle Grades Integrated Curriculum (Middle Grades 5-9)
Social Science (Grades 5-9)
Social Science (Grades 6-12)
Elementary Education (Grades K-6)
Elementary Education (Elementary Grades 1-6)

M/J United States History Advanced & Career Planning (#2100025) 2022 - And Beyond

Course Standards

Name	Description
SS.8.A.1.1:	Provide supporting details for an answer from text, interview for oral history, check validity of information from research/text, and identify strong vs. weak arguments. **Clarifications:** Students should be encouraged to utilize FINDS (Focus, Investigage, Note, Develop, Score), Florida's research process model accessible at: fldoe.org/bii/Library_Media/pdf/12TotalFINDS.pdf.
SS.8.A.1.2:	Analyze charts, graphs, maps, photographs and timelines; analyze political cartoons; determine cause and effect.
SS.8.A.1.3:	Analyze current events relevant to American History topics through a variety of electronic and print media resources. **Clarifications:** Examples may include, but are not limited to, articles, editorials, journals, periodicals, reports, websites, videos, and podcasts.
SS.8.A.1.4:	Differentiate fact from opinion, utilize appropriate historical research and fiction/nonfiction support materials.
SS.8.A.1.5:	Identify, within both primary and secondary sources, the author, audience, format, and purpose of significant historical documents. **Clarifications:** Examples of primary and secondary sources may be found on various websites such as the site for The Kinsey Collection.
SS.8.A.1.6:	Compare interpretations of key events and issues throughout American History. **Clarifications:** Examples may include, but are not limited to, historiography.
SS.8.A.1.7:	View historic events through the eyes of those who were there as shown in their art, writings, music, and artifacts.
SS.8.A.2.1:	Compare the relationships among the British, French, Spanish, and Dutch in their struggle for colonization of North America. **Clarifications:** This benchmark implies a study of the ways that economic, political, cultural, and religious competition between these Atlantic powers shaped early colonial America.
SS.8.A.2.2:	Compare the characteristics of the New England, Middle, and Southern colonies. **Clarifications:** Examples may include, but are not limited to, colonial governments, geographic influences, occupations, religion, education, settlement patterns, and social patterns.
SS.8.A.2.3:	Differentiate economic systems of New England, Middle and Southern colonies including indentured servants and slaves as labor sources. **Clarifications:** Examples may include, but are not limited to, subsistence farming, cash crop farming, and maritime industries.
SS.8.A.2.4:	Identify the impact of key colonial figures on the economic, political, and social development of the colonies. **Clarifications:** Examples may include, but are not limited to, John Smith, William Penn, Roger Williams, Anne Hutchinson, John Winthrop, Jonathan Edwards, William Bradford, Nathaniel Bacon, John Peter Zenger, and Lord Calvert.
SS.8.A.2.5:	Discuss the impact of colonial settlement on Native American populations. **Clarifications:** Examples may include, but are not limited to, war, disease, loss of land, westward displacement of tribes causing increased conflict between tribes, and dependence on trade for Western goods, including guns.
SS.8.A.2.6:	Examine the causes, course, and consequences of the French and Indian War. **Clarifications:** Examples may include, but are not limited to, ongoing conflict between France and England, territorial disputes, trade competition, Ft. Duquesne, Ft. Quebec, Treaty of Paris, heavy British debt.
SS.8.A.2.7:	Describe the contributions of key groups (Africans, Native Americans, women, and children) to the society and culture of colonial America.
SS.8.A.3.1:	Explain the consequences of the French and Indian War in British policies for the American colonies from 1763 - 1774. **Clarifications:** Examples may include, but are not limited to, Proclamation of 1763, Sugar Act, Quartering Act, Stamp Act, Declaratory Act, Townshend Acts, Tea Act, Quebec Act, and Coercive Acts.
SS.8.A.3.2:	Explain American colonial reaction to British policy from 1763 - 1774. **Clarifications:** Examples may include, but are not limited to, written protests, boycotts, unrest leading to the Boston Massacre, Boston Tea Party, First Continental Congress, Stamp Act Congress, Committees of Correspondence.
SS.8.A.3.3:	Recognize the contributions of the Founding Fathers (John Adams, Sam Adams, Benjamin Franklin, John Hancock, Alexander Hamilton, Thomas Jefferson, James Madison, George Mason, George Washington) during American Revolutionary efforts. **Clarifications:** Examples may also include, but are not limited to, Thomas Paine, John Jay, Peter Salem.

SS.8.A.3.4:	Examine the contributions of influential groups to both the American and British war efforts during the American Revolutionary War and their effects on the outcome of the war. **Clarifications:** Examples may include, but are not limited to, foreign alliances, freedmen, Native Americans, slaves, women, soldiers, Hessians.
SS.8.A.3.5:	Describe the influence of individuals on social and political developments during the Revolutionary era. **Clarifications:** Examples may include, but are not limited to, James Otis, Mercy Otis Warren, Abigail Adams, Benjamin Banneker, Lemuel Haynes, Phyllis Wheatley.
SS.8.A.3.6:	Examine the causes, course, and consequences of the American Revolution. **Clarifications:** Examples may include, but are not limited to, Battles of Lexington and Concord, Common Sense, Second Continental Congress, Battle of Bunker Hill, Battle of Cowpens, Battle of Trenton, Olive Branch Petition, Declaration of Independence, winter at Valley Forge, Battles of Saratoga and Yorktown, Treaty of Paris.
SS.8.A.3.7:	Examine the structure, content, and consequences of the Declaration of Independence.
SS.8.A.3.8:	Examine individuals and groups that affected political and social motivations during the American Revolution. **Clarifications:** Examples may include, but are not limited to, Ethan Allen and the Green Mountain Boys, the Committees of Correspondence, Sons of Liberty, Daughters of Liberty, the Black Regiment (in churches), Patrick Henry, Patriots, Loyalists, individual colonial militias, and undecideds.
SS.8.A.3.9:	Evaluate the structure, strengths, and weaknesses of the Articles of Confederation and its aspects that led to the Constitutional Convention.
SS.8.A.3.10:	Examine the course and consequences of the Constitutional Convention (New Jersey Plan, Virginia Plan, Great Compromise, Three-Fifths Compromise, compromises regarding taxation and slave trade, Electoral College, state vs. federal power, empowering a president).
SS.8.A.3.11:	Analyze support and opposition (Federalists, Federalist Papers, AntiFederalists, Bill of Rights) to ratification of the U.S. Constitution.
SS.8.A.3.12:	Examine the influences of George Washington's presidency in the formation of the new nation. **Clarifications:** Examples may include, but are not limited to, personal motivations, military experience, political influence, establishing Washington, D.C. as the nation's capital, rise of the party system, setting of precedents (e.g., the Cabinet), Farewell Address.
SS.8.A.3.13:	Explain major domestic and international economic, military, political, and socio-cultural events of John Adams's presidency. **Clarifications:** Examples may include, but aren ot limited to, XYZ Affairs, Alien and Sedition Acts, Land Act of 1800, the quasi-war, the Midnight Judges.
SS.8.A.3.14:	Explain major domestic and international economic, military, political, and socio-cultural events of Thomas Jefferson's presidency. **Clarifications:** Examples may include, but are not limited to, Election of 1800, birth of political parties, Marbury v. Madison, judicial review, Jefferson's First Inaugural Address, Judiciary Act of 1801, Louisiana Purchase, Barbary War, Lewis and Clark Expedition, Hamilton and Burr conflict/duel, Embargo of 1807.
SS.8.A.3.15:	Examine this time period (1763-1815) from the perspective of historically under-represented groups (children, indentured servants, Native Americans, slaves, women, working class).
SS.8.A.3.16:	Examine key events in Florida history as each impacts this era of American history. **Clarifications:** Examples may include, but are not limited to, Treaty of Paris, British rule, Second Spanish Period.
SS.8.A.4.1:	Examine the causes, course, and consequences of United States westward expansion and its growing diplomatic assertiveness (War of 1812, Convention of 1818, Adams-Onis Treaty, Missouri Compromise, Monroe Doctrine, Trail of Tears, Texas annexation, Manifest Destiny, Oregon Territory, Mexican American War/Mexican Cession, California Gold Rush, Compromise of 1850, Kansas Nebraska Act, Gadsden Purchase).
SS.8.A.4.2:	Describe the debate surrounding the spread of slavery into western territories and Florida. **Clarifications:** Examples may include, but are not limited to, abolitionist movement, Ft. Mose, Missouri Compromise, Bleeding Kansas, Kansas-Nebraska Act, Compromise of 1850.
SS.8.A.4.3:	Examine the experiences and perspectives of significant individuals and groups during this era of American History. **Clarifications:** Examples may include, but are not limited to, Lewis and Clark, Sacajawea, York, Pike, Native Americans, Buffalo Soldiers, Mexicanos, Chinese immigrants, Irish immigrants, children, slaves, women, Alexis de Tocqueville, political parties.
SS.8.A.4.4:	Discuss the impact of westward expansion on cultural practices and migration patterns of Native American and African slave populations.
SS.8.A.4.5:	Explain the causes, course, and consequences of the 19th century transportation revolution on the growth of the nation's economy. **Clarifications:** Examples may include, but are not limited to, roads, canals, bridges, steamboats, railroads.
SS.8.A.4.6:	Identify technological improvements (inventions/inventors) that contributed to industrial growth. **Clarifications:** Examples may include, but are not limited to, Fitch/steamboat, Slater/textile mill machinery, Whitney/cotton gin, interchangeable parts, McCoy/industrial lubrication, Fulton/commercial steamboat, Lowell/ mechanized cotton mill, Isaac Singer/sewing machine.
SS.8.A.4.7:	Explain the causes, course, and consequences (industrial growth, subsequent effect on children and women) of New England's textile industry.
SS.8.A.4.8:	Describe the influence of individuals on social and political developments of this era in American History. **Clarifications:** Examples may include, but are not limited to, Daniel Boone, Tecumseh, Black Hawk, John Marshall, James Madison, Dolly Madison, Andrew Jackson, John C. Calhoun, Henry Clay, Daniel Webster, James Polk, Susan B. Anthony, Elizabeth Cady Stanton, William Lloyd Garrison, Frederick Douglass, Horace Mann, Dorothea Dix, Lucretia Mott, Sojourner Truth, Harriet Tubman.
SS.8.A.4.9:	Analyze the causes, course and consequences of the Second Great Awakening on social reform movements. **Clarifications:** Examples may include, but are not limited to, abolition, women's rights, temperance, education, prison and mental health reform, Charles

	Grandison Finney, the Beecher family.
SS.8.A.4.10:	Analyze the impact of technological advancements on the agricultural economy and slave labor. **Clarifications:** Examples may include, but are not limited to, cotton gin, steel plow, rapid growth of slave trade.
SS.8.A.4.11:	Examine the aspects of slave culture including plantation life, resistance efforts, and the role of the slaves' spiritual system.
SS.8.A.4.12:	Examine the effects of the 1804 Haitian Revolution on the United States acquisition of the Louisiana Territory.
SS.8.A.4.13:	Explain the consequences of landmark Supreme Court decisions (McCulloch v. Maryland [1819], Gibbons v. Odgen [1824], Cherokee Nation v. Georgia [1831], and Worcester v. Georgia [1832]) significant to this era of American history.
SS.8.A.4.14:	Examine the causes, course, and consequences of the women's suffrage movement (1848 Seneca Falls Convention, Declaration of Sentiments).
SS.8.A.4.15:	Examine the causes, course, and consequences of literature movements (Transcendentalism) significant to this era of American history.
SS.8.A.4.16:	Identify key ideas and influences of Jacksonian democracy. **Clarifications:** Examples may include, but are not limited to, political participation, political parties, constitutional government, spoils system, National Bank veto, Maysville Road veto, tariff battles, Indian Removal Act, nullification crisis.
SS.8.A.4.17:	Examine key events and peoples in Florida history as each impacts this era of American history. **Clarifications:** Examples may include, but are not limited to, Andrew Jackson's military expeditions to end Indian uprisings, developing relationships between the Seminole and runaway slaves, Adams-Onis Treaty, Florida becoming a United States territory, combining former East and West Floridas, establishing first state capital, Florida's constitution, Florida's admittance to the Union as 27th state.
SS.8.A.4.18:	Examine the experiences and perspectives of different ethnic, national, and religious groups in Florida, explaining their contributions to Florida's and America's society and culture during the Territorial Period. **Clarifications:** Examples may include, but are not limited to, Osceola, white settlers, U.S. troops, Black Seminoles, southern plantation and slave owners, Seminole Wars, Treaty of Moultrie Creek, Seminole relocation, Chief Billy Bowlegs, Florida Crackers.
SS.8.A.5.1:	Explain the causes, course, and consequence of the Civil War (sectionalism, slavery, states' rights, balance of power in the Senate).
SS.8.A.5.2:	Analyze the role of slavery in the development of sectional conflict. **Clarifications:** Examples may include, but are not limited to, Abolition Movement, Nat Turner's Rebellion, Black Codes, Missouri Compromise, Compromise of 1850, Uncle Tom's Cabin, Kansas-Nebraska Act, Dred Scott v. Sandford, Lincoln-Douglas Debates, raid on Harper's Ferry, Underground Railroad, Presidential Election of 1860, Southern secession.
SS.8.A.5.3:	Explain major domestic and international economic, military, political, and socio-cultural events of Abraham Lincoln's presidency. **Clarifications:** Examples may include, but aren ot limited to, sectionalism, states' rights, slavery, Civil War, attempts at foreign alliances, Emancipation Proclamation, Gettysburg Address, suspension of habeas corpus, First and Second Inaugural Addresses.
SS.8.A.5.4:	Identify the division (Confederate and Union States, Border states, western territories) of the United States at the outbreak of the Civil War.
SS.8.A.5.5:	Compare Union and Confederate strengths and weaknesses. **Clarifications:** Examples may include, but aren ot limited to, technology, resources, alliances, geography, military leaders-Lincoln, Davis, Grant, Lee, Jackson, Sherman.
SS.8.A.5.6:	Compare significant Civil War battles and events and their effects on civilian populations. **Clarifications:** Examples may include, but are not limited to, Fort Sumter, Bull Run, Monitor v. Merrimack, Antietam, Vicksburg, Gettysburg, Emancipation Proclamation, Sherman's March, Lee's surrender at Appomattox.
SS.8.A.5.7:	Examine key events and peoples in Florida history as each impacts this era of American history. **Clarifications:** Examples may include, but are not limited to, slavery, influential planters, Florida's secession and Confederate membership, women, children, pioneer environment, Union occupation, Battle of Olustee and role of 54th Massachusetts regiment, Battle at Natural Bridge.
SS.8.A.5.8:	Explain and evaluate the policies, practices, and consequences of Reconstruction (presidential and congressional reconstruction, Johnson's impeachment, Civil Rights Act of 1866, the 13th, 14th, and 15th Amendments, opposition of Southern whites to Reconstruction, accomplishments and failures of Radical Reconstruction, presidential election of 1876, end of Reconstruction, rise of Jim Crow laws, rise of Ku Klux Klan).
SS.8.C.1.1:	Identify the constitutional provisions for establishing citizenship.
SS.8.C.1.2:	Compare views of self-government and the rights and responsibilities of citizens held by Patriots, Loyalists, and other colonists.
SS.8.C.1.3:	Recognize the role of civic virtue in the lives of citizens and leaders from the colonial period through Reconstruction.
SS.8.C.1.4:	Identify the evolving forms of civic and political participation from the colonial period through Reconstruction.
SS.8.C.1.5:	Apply the rights and principles contained in the Constitution and Bill of Rights to the lives of citizens today.
SS.8.C.1.6:	Evaluate how amendments to the Constitution have expanded voting rights from our nation's early history to present day.
SS.8.C.2.1:	Evaluate and compare the essential ideals and principles of American constitutional government expressed in primary sources from the colonial period to Reconstruction.
SS.8.E.1.1:	Examine motivating economic factors that influenced the development of the United States economy over time including scarcity, supply and demand, opportunity costs, incentives, profits, and entrepreneurial aspects. **Clarifications:** Examples areTriangular Trade, colonial development - New England, Middle, and Southern colonies - Revolutionary War, Manifest Destiny, compromises over slavery issues, the Civil War, Reconstruction.
SS.8.E.2.1:	Analyze contributions of entrepreneurs, inventors, and other key individuals from various gender, social, and ethnic backgrounds in the development of the United States economy.
SS.8.E.2.2:	Explain the economic impact of government policies. **Clarifications:**

	Examples are mercantilism, colonial establishment, Articles of Confederation, Constitution, compromises over slavery.
SS.8.E.2.3:	Assess the role of Africans and other minority groups in the economic development of the United States.
SS.8.E.3.1:	Evaluate domestic and international interdependence. **Clarifications:** Examples are triangular trade routes and regional exchange of resources.
SS.8.G.1.1:	Use maps to explain physical and cultural attributes of major regions throughout American history.
SS.8.G.1.2:	Use appropriate geographic tools and terms to identify and describe significant places and regions in American history.
SS.8.G.2.1:	Identify the physical elements and the human elements that define and differentiate regions as relevant to American history. **Clarifications:** Examples of physical elements are climate, terrain, resources. Examples of human elements are religion, government, economy, language, demography.
SS.8.G.2.2:	Use geographic terms and tools to analyze case studies of regional issues in different parts of the United States that have had critical economic, physical, or political ramifications. **Clarifications:** Examples are cataclysmic natural disasters, shipwrecks.
SS.8.G.2.3:	Use geographic terms and tools to analyze case studies of how selected regions of the United States have changed over time.
SS.8.G.3.1:	Locate and describe in geographic terms the major ecosystems of the United States.
SS.8.G.3.2:	Use geographic terms and tools to explain differing perspectives on the use of renewable and non-renewable resources in the United States and Florida over time.
SS.8.G.4.1:	Interpret population growth and other demographic data for any given place in the United States throughout its history.
SS.8.G.4.2:	Use geographic terms and tools to analyze the effects throughout American history of migration to and within the United States, both on the place of origin and destination.
SS.8.G.4.3:	Use geographic terms and tools to explain cultural diffusion throughout the United States as it expanded its territory.
SS.8.G.4.4:	Interpret databases, case studies, and maps to describe the role that regions play in influencing trade, migration patterns, and cultural/political interaction in the United States throughout time.
SS.8.G.4.5:	Use geographic terms and tools to analyze case studies of the development, growth, and changing nature of cities and urban centers in the United States over time.
SS.8.G.4.6:	Use political maps to describe changes in boundaries and governance throughout American history.
SS.8.G.5.1:	Describe human dependence on the physical environment and natural resources to satisfy basic needs in local environments in the United States.
SS.8.G.5.2:	Describe the impact of human modifications on the physical environment and ecosystems of the United States throughout history. **Clarifications:** Examples are deforestation, urbanization, agriculture.
SS.8.G.6.1:	Use appropriate maps and other graphic representations to analyze geographic problems and changes over time throughout American history.
SS.8.G.6.2:	Illustrate places and events in U.S. history through the use of narratives and graphic representations. **Clarifications:** Examples are maps, graphs, tables.
MA.K12.MTR.1.1:	Mathematicians who participate in effortful learning both individually and with others: • Analyze the problem in a way that makes sense given the task. • Ask questions that will help with solving the task. • Build perseverance by modifying methods as needed while solving a challenging task. • Stay engaged and maintain a positive mindset when working to solve tasks. • Help and support each other when attempting a new method or approach. **Clarifications:** Teachers who encourage students to participate actively in effortful learning both individually and with others: • Cultivate a community of growth mindset learners. • Foster perseverance in students by choosing tasks that are challenging. • Develop students' ability to analyze and problem solve. • Recognize students' effort when solving challenging problems.
MA.K12.MTR.2.1:	Demonstrate understanding by representing problems in multiple ways. Mathematicians who demonstrate understanding by representing problems in multiple ways: • Build understanding through modeling and using manipulatives. • Represent solutions to problems in multiple ways using objects, drawings, tables, graphs and equations. • Progress from modeling problems with objects and drawings to using algorithms and equations. • Express connections between concepts and representations. • Choose a representation based on the given context or purpose. **Clarifications:** Teachers who encourage students to demonstrate understanding by representing problems in multiple ways: • Help students make connections between concepts and representations. • Provide opportunities for students to use manipulatives when investigating concepts. • Guide students from concrete to pictorial to abstract representations as understanding progresses. • Show students that various representations can have different purposes and can be useful in different situations.
	Complete tasks with mathematical fluency. Mathematicians who complete tasks with mathematical fluency: • Select efficient and appropriate methods for solving problems within the given context. • Maintain flexibility and accuracy while performing procedures and mental calculations. • Complete tasks accurately and with confidence.

MA.K12.MTR.3.1:	• Adapt procedures to apply them to a new context. • Use feedback to improve efficiency when performing calculations. **Clarifications:** Teachers who encourage students to complete tasks with mathematical fluency: • Provide students with the flexibility to solve problems by selecting a procedure that allows them to solve efficiently and accurately. • Offer multiple opportunities for students to practice efficient and generalizable methods. • Provide opportunities for students to reflect on the method they used and determine if a more efficient method could have been used.
MA.K12.MTR.4.1:	Engage in discussions that reflect on the mathematical thinking of self and others. Mathematicians who engage in discussions that reflect on the mathematical thinking of self and others: • Communicate mathematical ideas, vocabulary and methods effectively. • Analyze the mathematical thinking of others. • Compare the efficiency of a method to those expressed by others. • Recognize errors and suggest how to correctly solve the task. • Justify results by explaining methods and processes. • Construct possible arguments based on evidence. **Clarifications:** Teachers who encourage students to engage in discussions that reflect on the mathematical thinking of self and others: • Establish a culture in which students ask questions of the teacher and their peers, and error is an opportunity for learning. • Create opportunities for students to discuss their thinking with peers. • Select, sequence and present student work to advance and deepen understanding of correct and increasingly efficient methods. • Develop students' ability to justify methods and compare their responses to the responses of their peers.
MA.K12.MTR.5.1:	Use patterns and structure to help understand and connect mathematical concepts. Mathematicians who use patterns and structure to help understand and connect mathematical concepts: • Focus on relevant details within a problem. • Create plans and procedures to logically order events, steps or ideas to solve problems. • Decompose a complex problem into manageable parts. • Relate previously learned concepts to new concepts. • Look for similarities among problems. • Connect solutions of problems to more complicated large-scale situations. **Clarifications:** Teachers who encourage students to use patterns and structure to help understand and connect mathematical concepts: • Help students recognize the patterns in the world around them and connect these patterns to mathematical concepts. • Support students to develop generalizations based on the similarities found among problems. • Provide opportunities for students to create plans and procedures to solve problems. • Develop students' ability to construct relationships between their current understanding and more sophisticated ways of thinking.
MA.K12.MTR.6.1:	Assess the reasonableness of solutions. Mathematicians who assess the reasonableness of solutions: • Estimate to discover possible solutions. • Use benchmark quantities to determine if a solution makes sense. • Check calculations when solving problems. • Verify possible solutions by explaining the methods used. • Evaluate results based on the given context. **Clarifications:** Teachers who encourage students to assess the reasonableness of solutions: • Have students estimate or predict solutions prior to solving. • Prompt students to continually ask, "Does this solution make sense? How do you know?" • Reinforce that students check their work as they progress within and after a task. • Strengthen students' ability to verify solutions through justifications.
MA.K12.MTR.7.1:	Apply mathematics to real-world contexts. Mathematicians who apply mathematics to real-world contexts: • Connect mathematical concepts to everyday experiences. • Use models and methods to understand, represent and solve problems. • Perform investigations to gather data or determine if a method is appropriate. • Redesign models and methods to improve accuracy or efficiency. **Clarifications:** Teachers who encourage students to apply mathematics to real-world contexts: • Provide opportunities for students to create models, both concrete and abstract, and perform investigations. • Challenge students to question the accuracy of their models and methods. • Support students as they validate conclusions by comparing them to the given situation. • Indicate how various concepts can be applied to other disciplines.
ELA.K12.EE.1.1:	Cite evidence to explain and justify reasoning. **Clarifications:** K-1 Students include textual evidence in their oral communication with guidance and support from adults. The evidence can consist of details from the text without naming the text. During 1st grade, students learn how to incorporate the evidence in their writing. 2-3 Students include relevant textual evidence in their written and oral communication. Students should name the text when they refer to it. In 3rd grade, students should use a combination of direct and indirect citations. 4-5 Students continue with previous skills and reference comments made by speakers and peers. Students cite texts that they've directly

	quoted, paraphrased, or used for information. When writing, students will use the form of citation dictated by the instructor or the style guide referenced by the instructor. 6-8 Students continue with previous skills and use a style guide to create a proper citation. 9-12 Students continue with previous skills and should be aware of existing style guides and the ways in which they differ.
ELA.K12.EE.2.1:	Read and comprehend grade-level complex texts proficiently. **Clarifications:** See Text Complexity for grade-level complexity bands and a text complexity rubric.
ELA.K12.EE.3.1:	Make inferences to support comprehension. **Clarifications:** Students will make inferences before the words infer or inference are introduced. Kindergarten students will answer questions like "Why is the girl smiling?" or make predictions about what will happen based on the title page. Students will use the terms and apply them in 2nd grade and beyond.
ELA.K12.EE.4.1:	Use appropriate collaborative techniques and active listening skills when engaging in discussions in a variety of situations. **Clarifications:** In kindergarten, students learn to listen to one another respectfully. In grades 1-2, students build upon these skills by justifying what they are thinking. For example: "I think _____ because _____." The collaborative conversations are becoming academic conversations. In grades 3-12, students engage in academic conversations discussing claims and justifying their reasoning, refining and applying skills. Students build on ideas, propel the conversation, and support claims and counterclaims with evidence.
ELA.K12.EE.5.1:	Use the accepted rules governing a specific format to create quality work. **Clarifications:** Students will incorporate skills learned into work products to produce quality work. For students to incorporate these skills appropriately, they must receive instruction. A 3rd grade student creating a poster board display must have instruction in how to effectively present information to do quality work.
ELA.K12.EE.6.1:	Use appropriate voice and tone when speaking or writing. **Clarifications:** In kindergarten and 1st grade, students learn the difference between formal and informal language. For example, the way we talk to our friends differs from the way we speak to adults. In 2nd grade and beyond, students practice appropriate social and academic language to discuss texts.
ELD.K12.ELL.SI.1:	English language learners communicate for social and instructional purposes within the school setting.
ELD.K12.ELL.SS.1:	English language learners communicate information, ideas and concepts necessary for academic success in the content area of Social Studies.
HE.8.C.2.4:	Critique school and public health policies that influence health promotion and disease prevention. **Clarifications:** Speed-limit laws, immunization requirements, universal precautions, zero tolerance, report bullying, and cell phone/texting laws.

General Course Information and Notes

GENERAL NOTES

Primary content emphasis for this course pertains to the study of American history from the Exploration and Colonization period to the Reconstruction Period following the Civil War. Students will be exposed to the historical, geographic, political, economic, and sociological events which influenced the development of the United States and the resulting impact on world history. So that students can clearly see the relationship between cause and effect in historical events, students should have the opportunity to explore those fundamental ideas and events which occurred after Reconstruction.

Honors and Advanced Level Course Note: Advanced courses require a greater demand on students through increased academic rigor. Academic rigor is obtained through the application, analysis, evaluation, and creation of complex ideas that are often abstract and multi-faceted. Students are challenged to think and collaborate critically on the content they are learning. Honors level rigor will be achieved by increasing text complexity through text selection, focus on high-level qualitative measures, and complexity of task. Instruction will be structured to give students a deeper understanding of conceptual themes and organization within and across disciplines. Academic rigor is more than simply assigning to students a greater quantity of work.

Career and Education Planning – Per section 1003.4156, Florida Statutes, the Career and Education Planning course must result in a completed, personalized academic and career plan for the student, that may be revised as the student progresses through middle and high school; must emphasize the importance of entrepreneurship and employability skills; and must include information from the Department of Economic Opportunity's economic security report as described in Section 445.07, Florida Statutes. The required, personalized academic and career plan must inform students of high school graduation requirements, including diploma designations (Section 1003.4285, Florida Statutes); requirements for a Florida Bright Futures Scholarship; state university and Florida College System institution admission requirements; and, available opportunities to earn college credit in high school utilizing acceleration mechanisms. For additional information on the Middle School Career and Education Planning courses, visit fldoe.org/academics/college-career-planning/educators-toolkit/index.stml.

Career and Education Planning Course Standards – Students will:

1.0 Describe the influences that societal, economic, and technological changes have on employment trends and future training.

2.0 Develop skills to locate, evaluate, and interpret career information.

3.0 Identify and demonstrate processes for making short and long term goals.

4.0 Demonstrate employability skills such as working in a group, problem-solving and organizational skills, and the importance of entrepreneurship.

5.0 Understand the relationship between educational achievement and career choices/postsecondary options.

6.0 Identify a career cluster and related pathways through an interest assessment that match career and education goals.

7.0 Develop a career and education plan that includes short and long-term goals, high school program of study, and postsecondary/career goals.

8.0 Demonstrate knowledge of technology and its application in career fields/clusters.

Special Notes:

Additional content that may be contained in the NAEP Grade 8 United States History assessment includes material from all time periods on the following topics:

- Change and Continuity in American Democracy: Ideas, Institutions, Events, Key Figures, and Controversies
- The Gathering and Interactions of Peoples, Cultures, and Ideas
- Economic and Technological Changes and Their Relationship to Society, Ideas, and the Environment
- The Changing Role of America in the World

The NAEP frameworks for United States History may be accessed at nagb.org/content/nagb/assets/documents/publications/frameworks/historyframework.pdf

Instructional Practices

Teaching from well-written, grade-level instructional materials enhances students' content area knowledge and also strengthens their ability to comprehend longer, complex reading passages on any topic for any reason. Using the following instructional practices also helps student learning:

1. Reading assignments from longer text passages as well as shorter ones when text is extremely complex.

2. Making close reading and rereading of texts central to lessons.

3. Asking high-level, text-specific questions and requiring high-level, complex tasks and assignments.

4. Requiring students to support answers with evidence from the text.

5. Providing extensive text-based research and writing opportunities (claims and evidence).

Florida's Benchmarks for Excellent Student Thinking (B.E.S.T.) Standards
This course includes Florida's B.E.S.T. ELA Expectations (EE) and Mathematical Thinking and Reasoning Standards (MTRs) for students. Florida educators should intentionally embed these standards within the content and their instruction as applicable. For guidance on the implementation of the EEs and MTRs, please visit cpalms.org/Standards/BEST_Standards.aspx and select the appropriate B.E.S.T. Standards package.

English Language Development ELD Standards Special Notes Section:
Teachers are required to provide listening, speaking, reading and writing instruction that allows English language learners (ELL) to communicate information, ideas and concepts for academic success in the content area of Social Studies. For the given level of English language proficiency and with visual, graphic, or interactive support, students will interact with grade level words, expressions, sentences and discourse to process or produce language necessary for academic success. The ELD standard should specify a relevant content area concept or topic of study chosen by curriculum developers and teachers which maximizes an ELL's need for communication and social skills. To access an ELL supporting document which delineates performance definitions and descriptors, please click on the following link: cpalms.org/uploads/docs/standards/eld/SS.pdf

Additional Instructional Resources:
Kinsey Collection: thekinseycollection.com/the-kinsey-collection-on-itunes-u/

GENERAL INFORMATION

Course Number: 2100025

Course Path: Section: Grades PreK to 12 Education Courses > **Grade Group:** Grades 6 to 8 Education Courses > **Subject:** Social Studies > **SubSubject:** American and Western Hemispheric Histories >
Abbreviated Title: M/J US HIS ADV & C/P
Course Length: Year (Y)
Course Attributes:
- Honors
- Class Size Core Required

Course Level: 3

Course Status: Draft - Course Pending Approval

Grade Level(s): 6,7,8

Educator Certifications

History (Grades 6-12)
Middle Grades Integrated Curriculum (Middle Grades 5-9)
Social Science (Grades 5-9)
Social Science (Grades 6-12)
Elementary Education (Elementary Grades 1-6)
Elementary Education (Grades K-6)

M/J Florida History (#2100030) 2022 - And Beyond

Course Standards

Name	Description
SS.8.A.1.1:	Provide supporting details for an answer from text, interview for oral history, check validity of information from research/text, and identify strong vs. weak arguments. **Clarifications:** Students should be encouraged to utilize FINDS (Focus, Investigage, Note, Develop, Score), Florida's research process model accessible at: fldoe.org/bii/Library_Media/pdf/12TotalFINDS.pdf.
SS.8.A.1.2:	Analyze charts, graphs, maps, photographs and timelines; analyze political cartoons; determine cause and effect.
SS.8.A.1.3:	Analyze current events relevant to American History topics through a variety of electronic and print media resources. **Clarifications:** Examples may include, but are not limited to, articles, editorials, journals, periodicals, reports, websites, videos, and podcasts.
SS.8.A.1.4:	Differentiate fact from opinion, utilize appropriate historical research and fiction/nonfiction support materials.
SS.8.A.1.5:	Identify, within both primary and secondary sources, the author, audience, format, and purpose of significant historical documents. **Clarifications:** Examples of primary and secondary sources may be found on various websites such as the site for The Kinsey Collection.
SS.8.A.1.6:	Compare interpretations of key events and issues throughout American History. **Clarifications:** Examples may include, but are not limited to, historiography.
SS.8.A.1.7:	View historic events through the eyes of those who were there as shown in their art, writings, music, and artifacts.
SS.8.A.2.1:	Compare the relationships among the British, French, Spanish, and Dutch in their struggle for colonization of North America. **Clarifications:** This benchmark implies a study of the ways that economic, political, cultural, and religious competition between these Atlantic powers shaped early colonial America.
SS.8.A.2.3:	Differentiate economic systems of New England, Middle and Southern colonies including indentured servants and slaves as labor sources. **Clarifications:** Examples may include, but are not limited to, subsistence farming, cash crop farming, and maritime industries.
SS.8.A.2.4:	Identify the impact of key colonial figures on the economic, political, and social development of the colonies. **Clarifications:** Examples may include, but are not limited to, John Smith, William Penn, Roger Williams, Anne Hutchinson, John Winthrop, Jonathan Edwards, William Bradford, Nathaniel Bacon, John Peter Zenger, and Lord Calvert.
SS.8.A.2.5:	Discuss the impact of colonial settlement on Native American populations. **Clarifications:** Examples may include, but are not limited to, war, disease, loss of land, westward displacement of tribes causing increased conflict between tribes, and dependence on trade for Western goods, including guns.
SS.8.A.2.7:	Describe the contributions of key groups (Africans, Native Americans, women, and children) to the society and culture of colonial America.
SS.8.A.3.15:	Examine this time period (1763-1815) from the perspective of historically under-represented groups (children, indentured servants, Native Americans, slaves, women, working class).
SS.8.A.3.16:	Examine key events in Florida history as each impacts this era of American history. **Clarifications:** Examples may include, but are not limited to, Treaty of Paris, British rule, Second Spanish Period.
SS.8.A.4.2:	Describe the debate surrounding the spread of slavery into western territories and Florida. **Clarifications:** Examples may include, but are not limited to, abolitionist movement, Ft. Mose, Missouri Compromise, Bleeding Kansas, Kansas-Nebraska Act, Compromise of 1850.
SS.8.A.4.3:	Examine the experiences and perspectives of significant individuals and groups during this era of American History. **Clarifications:** Examples may include, but are not limited to, Lewis and Clark, Sacajawea, York, Pike, Native Americans, Buffalo Soldiers, Mexicanos, Chinese immigrants, Irish immigrants, children, slaves, women, Alexis de Tocqueville, political parties.
SS.8.A.4.4:	Discuss the impact of westward expansion on cultural practices and migration patterns of Native American and African slave populations.
SS.8.A.4.5:	Explain the causes, course, and consequences of the 19th century transportation revolution on the growth of the nation's economy. **Clarifications:** Examples may include, but are not limited to, roads, canals, bridges, steamboats, railroads.
SS.8.A.4.6:	Identify technological improvements (inventions/inventors) that contributed to industrial growth. **Clarifications:** Examples may include, but are not limited to, Fitch/steamboat, Slater/textile mill machinery, Whitney/cotton gin, interchangeable parts, McCoy/industrial lubrication, Fulton/commercial steamboat, Lowell/ mechanized cotton mill, Isaac Singer/sewing machine.
	Describe the influence of individuals on social and political developments of this era in American History.

SS.8.A.4.8:	**Clarifications:** Examples may include, but are not limited to, Daniel Boone, Tecumseh, Black Hawk, John Marshall, James Madison, Dolly Madison, Andrew Jackson, John C. Calhoun, Henry Clay, Daniel Webster, James Polk, Susan B. Anthony, Elizabeth Cady Stanton, William Lloyd Garrison, Frederick Douglass, Horace Mann, Dorothea Dix, Lucretia Mott, Sojourner Truth, Harriet Tubman.
SS.8.A.4.10:	Analyze the impact of technological advancements on the agricultural economy and slave labor. **Clarifications:** Examples may include, but are not limited to, cotton gin, steel plow, rapid growth of slave trade.
SS.8.A.4.11:	Examine the aspects of slave culture including plantation life, resistance efforts, and the role of the slaves' spiritual system.
SS.8.A.4.17:	Examine key events and peoples in Florida history as each impacts this era of American history. **Clarifications:** Examples may include, but are not limited to, Andrew Jackson's military expeditions to end Indian uprisings, developing relationships between the Seminole and runaway slaves, Adams-Onis Treaty, Florida becoming a United States territory, combining former East and West Floridas, establishing first state capital, Florida's constitution, Florida's admittance to the Union as 27th state.
SS.8.A.4.18:	Examine the experiences and perspectives of different ethnic, national, and religious groups in Florida, explaining their contributions to Florida's and America's society and culture during the Territorial Period. **Clarifications:** Examples may include, but are not limited to, Osceola, white settlers, U.S. troops, Black Seminoles, southern plantation and slave owners, Seminole Wars, Treaty of Moultrie Creek, Seminole relocation, Chief Billy Bowlegs, Florida Crackers.
SS.8.A.5.1:	Explain the causes, course, and consequence of the Civil War (sectionalism, slavery, states' rights, balance of power in the Senate).
SS.8.A.5.2:	Analyze the role of slavery in the development of sectional conflict. **Clarifications:** Examples may include, but are not limited to, Abolition Movement, Nat Turner's Rebellion, Black Codes, Missouri Compromise, Compromise of 1850, Uncle Tom's Cabin, Kansas-Nebraska Act, Dred Scott v. Sandford, Lincoln-Douglas Debates, raid on Harper's Ferry, Underground Railroad, Presidential Election of 1860, Southern secession.
SS.8.A.5.7:	Examine key events and peoples in Florida history as each impacts this era of American history. **Clarifications:** Examples may include, but are not limited to, slavery, influential planters, Florida's secession and Confederate membership, women, children, pioneer environment, Union occupation, Battle of Olustee and role of 54th Massachusetts regiment, Battle at Natural Bridge.
SS.8.A.5.8:	Explain and evaluate the policies, practices, and consequences of Reconstruction (presidential and congressional reconstruction, Johnson's impeachment, Civil Rights Act of 1866, the 13th, 14th, and 15th Amendments, opposition of Southern whites to Reconstruction, accomplishments and failures of Radical Reconstruction, presidential election of 1876, end of Reconstruction, rise of Jim Crow laws, rise of Ku Klux Klan).
SS.8.C.1.1:	Identify the constitutional provisions for establishing citizenship.
SS.8.C.1.3:	Recognize the role of civic virtue in the lives of citizens and leaders from the colonial period through Reconstruction.
SS.8.C.1.4:	Identify the evolving forms of civic and political participation from the colonial period through Reconstruction.
SS.8.C.1.6:	Evaluate how amendments to the Constitution have expanded voting rights from our nation's early history to present day.
SS.8.C.2.1:	Evaluate and compare the essential ideals and principles of American constitutional government expressed in primary sources from the colonial period to Reconstruction.
SS.8.E.1.1:	Examine motivating economic factors that influenced the development of the United States economy over time including scarcity, supply and demand, opportunity costs, incentives, profits, and entrepreneurial aspects. **Clarifications:** Examples areTriangular Trade, colonial development - New England, Middle, and Southern colonies - Revolutionary War, Manifest Destiny, compromises over slavery issues, the Civil War, Reconstruction.
SS.8.E.2.1:	Analyze contributions of entrepreneurs, inventors, and other key individuals from various gender, social, and ethnic backgrounds in the development of the United States economy.
SS.8.E.2.2:	Explain the economic impact of government policies. **Clarifications:** Examples are mercantilism, colonial establishment, Articles of Confederation, Constitution, compromises over slavery.
SS.8.E.2.3:	Assess the role of Africans and other minority groups in the economic development of the United States.
SS.8.G.1.1:	Use maps to explain physical and cultural attributes of major regions throughout American history.
SS.8.G.1.2:	Use appropriate geographic tools and terms to identify and describe significant places and regions in American history.
SS.8.G.2.1:	Identify the physical elements and the human elements that define and differentiate regions as relevant to American history. **Clarifications:** Examples of physical elements are climate, terrain, resources. Examples of human elements are religion, government, economy, language, demography.
SS.8.G.2.2:	Use geographic terms and tools to analyze case studies of regional issues in different parts of the United States that have had critical economic, physical, or political ramifications. **Clarifications:** Examples are cataclysmic natural disasters, shipwrecks.
SS.8.G.2.3:	Use geographic terms and tools to analyze case studies of how selected regions of the United States have changed over time.
SS.8.G.3.1:	Locate and describe in geographic terms the major ecosystems of the United States.
SS.8.G.3.2:	Use geographic terms and tools to explain differing perspectives on the use of renewable and non-renewable resources in the United States and Florida over time.
SS.8.G.4.1:	Interpret population growth and other demographic data for any given place in the United States throughout its history.
SS.8.G.4.2:	Use geographic terms and tools to analyze the effects throughout American history of migration to and within the United States, both on the place of origin and destination.
SS.8.G.4.3:	Use geographic terms and tools to explain cultural diffusion throughout the United States as it expanded its territory.
SS.8.G.4.4:	Interpret databases, case studies, and maps to describe the role that regions play in influencing trade, migration patterns, and cultural/political interaction in the United States throughout time.

SS.8.G.4.5:	Use geographic terms and tools to analyze case studies of the development, growth, and changing nature of cities and urban centers in the United States over time.
SS.8.G.4.6:	Use political maps to describe changes in boundaries and governance throughout American history.
SS.8.G.5.1:	Describe human dependence on the physical environment and natural resources to satisfy basic needs in local environments in the United States.
SS.8.G.5.2:	Describe the impact of human modifications on the physical environment and ecosystems of the United States throughout history. **Clarifications:** Examples are deforestation, urbanization, agriculture.
SS.8.G.6.1:	Use appropriate maps and other graphic representations to analyze geographic problems and changes over time throughout American history.
SS.8.G.6.2:	Illustrate places and events in U.S. history through the use of narratives and graphic representations. **Clarifications:** Examples are maps, graphs, tables.
MA.K12.MTR.1.1:	Mathematicians who participate in effortful learning both individually and with others: • Analyze the problem in a way that makes sense given the task. • Ask questions that will help with solving the task. • Build perseverance by modifying methods as needed while solving a challenging task. • Stay engaged and maintain a positive mindset when working to solve tasks. • Help and support each other when attempting a new method or approach. **Clarifications:** Teachers who encourage students to participate actively in effortful learning both individually and with others: • Cultivate a community of growth mindset learners. • Foster perseverance in students by choosing tasks that are challenging. • Develop students' ability to analyze and problem solve. • Recognize students' effort when solving challenging problems.
MA.K12.MTR.2.1:	Demonstrate understanding by representing problems in multiple ways. Mathematicians who demonstrate understanding by representing problems in multiple ways: • Build understanding through modeling and using manipulatives. • Represent solutions to problems in multiple ways using objects, drawings, tables, graphs and equations. • Progress from modeling problems with objects and drawings to using algorithms and equations. • Express connections between concepts and representations. • Choose a representation based on the given context or purpose. **Clarifications:** Teachers who encourage students to demonstrate understanding by representing problems in multiple ways: • Help students make connections between concepts and representations. • Provide opportunities for students to use manipulatives when investigating concepts. • Guide students from concrete to pictorial to abstract representations as understanding progresses. • Show students that various representations can have different purposes and can be useful in different situations.
MA.K12.MTR.3.1:	Complete tasks with mathematical fluency. Mathematicians who complete tasks with mathematical fluency: • Select efficient and appropriate methods for solving problems within the given context. • Maintain flexibility and accuracy while performing procedures and mental calculations. • Complete tasks accurately and with confidence. • Adapt procedures to apply them to a new context. • Use feedback to improve efficiency when performing calculations. **Clarifications:** Teachers who encourage students to complete tasks with mathematical fluency: • Provide students with the flexibility to solve problems by selecting a procedure that allows them to solve efficiently and accurately. • Offer multiple opportunities for students to practice efficient and generalizable methods. • Provide opportunities for students to reflect on the method they used and determine if a more efficient method could have been used.
MA.K12.MTR.4.1:	Engage in discussions that reflect on the mathematical thinking of self and others. Mathematicians who engage in discussions that reflect on the mathematical thinking of self and others: • Communicate mathematical ideas, vocabulary and methods effectively. • Analyze the mathematical thinking of others. • Compare the efficiency of a method to those expressed by others. • Recognize errors and suggest how to correctly solve the task. • Justify results by explaining methods and processes. • Construct possible arguments based on evidence. **Clarifications:** Teachers who encourage students to engage in discussions that reflect on the mathematical thinking of self and others: • Establish a culture in which students ask questions of the teacher and their peers, and error is an opportunity for learning. • Create opportunities for students to discuss their thinking with peers. • Select, sequence and present student work to advance and deepen understanding of correct and increasingly efficient methods. • Develop students' ability to justify methods and compare their responses to the responses of their peers.
	Use patterns and structure to help understand and connect mathematical concepts. Mathematicians who use patterns and structure to help understand and connect mathematical concepts: • Focus on relevant details within a problem.

MA.K12.MTR.5.1:	• Create plans and procedures to logically order events, steps or ideas to solve problems. • Decompose a complex problem into manageable parts. • Relate previously learned concepts to new concepts. • Look for similarities among problems. • Connect solutions of problems to more complicated large-scale situations. **Clarifications:** Teachers who encourage students to use patterns and structure to help understand and connect mathematical concepts: • Help students recognize the patterns in the world around them and connect these patterns to mathematical concepts. • Support students to develop generalizations based on the similarities found among problems. • Provide opportunities for students to create plans and procedures to solve problems. • Develop students' ability to construct relationships between their current understanding and more sophisticated ways of thinking.
MA.K12.MTR.6.1:	Assess the reasonableness of solutions. Mathematicians who assess the reasonableness of solutions: • Estimate to discover possible solutions. • Use benchmark quantities to determine if a solution makes sense. • Check calculations when solving problems. • Verify possible solutions by explaining the methods used. • Evaluate results based on the given context. **Clarifications:** Teachers who encourage students to assess the reasonableness of solutions: • Have students estimate or predict solutions prior to solving. • Prompt students to continually ask, "Does this solution make sense? How do you know?" • Reinforce that students check their work as they progress within and after a task. • Strengthen students' ability to verify solutions through justifications.
MA.K12.MTR.7.1:	Apply mathematics to real-world contexts. Mathematicians who apply mathematics to real-world contexts: • Connect mathematical concepts to everyday experiences. • Use models and methods to understand, represent and solve problems. • Perform investigations to gather data or determine if a method is appropriate. • Redesign models and methods to improve accuracy or efficiency. **Clarifications:** Teachers who encourage students to apply mathematics to real-world contexts: • Provide opportunities for students to create models, both concrete and abstract, and perform investigations. • Challenge students to question the accuracy of their models and methods. • Support students as they validate conclusions by comparing them to the given situation. • Indicate how various concepts can be applied to other disciplines.
ELA.K12.EE.1.1:	Cite evidence to explain and justify reasoning. **Clarifications:** K-1 Students include textual evidence in their oral communication with guidance and support from adults. The evidence can consist of details from the text without naming the text. During 1st grade, students learn how to incorporate the evidence in their writing. 2-3 Students include relevant textual evidence in their written and oral communication. Students should name the text when they refer to it. In 3rd grade, students should use a combination of direct and indirect citations. 4-5 Students continue with previous skills and reference comments made by speakers and peers. Students cite texts that they've directly quoted, paraphrased, or used for information. When writing, students will use the form of citation dictated by the instructor or the style guide referenced by the instructor. 6-8 Students continue with previous skills and use a style guide to create a proper citation. 9-12 Students continue with previous skills and should be aware of existing style guides and the ways in which they differ.
ELA.K12.EE.2.1:	Read and comprehend grade-level complex texts proficiently. **Clarifications:** See Text Complexity for grade-level complexity bands and a text complexity rubric.
ELA.K12.EE.3.1:	Make inferences to support comprehension. **Clarifications:** Students will make inferences before the words infer or inference are introduced. Kindergarten students will answer questions like "Why is the girl smiling?" or make predictions about what will happen based on the title page. Students will use the terms and apply them in 2nd grade and beyond.
ELA.K12.EE.4.1:	Use appropriate collaborative techniques and active listening skills when engaging in discussions in a variety of situations. **Clarifications:** In kindergarten, students learn to listen to one another respectfully. In grades 1-2, students build upon these skills by justifying what they are thinking. For example: "I think _____ because _____." The collaborative conversations are becoming academic conversations. In grades 3-12, students engage in academic conversations discussing claims and justifying their reasoning, refining and applying skills. Students build on ideas, propel the conversation, and support claims and counterclaims with evidence.
ELA.K12.EE.5.1:	Use the accepted rules governing a specific format to create quality work. **Clarifications:** Students will incorporate skills learned into work products to produce quality work. For students to incorporate these skills appropriately, they

	must receive instruction. A 3rd grade student creating a poster board display must have instruction in how to effectively present information to do quality work.
ELA.K12.EE.6.1:	Use appropriate voice and tone when speaking or writing. **Clarifications:** In kindergarten and 1st grade, students learn the difference between formal and informal language. For example, the way we talk to our friends differs from the way we speak to adults. In 2nd grade and beyond, students practice appropriate social and academic language to discuss texts.
ELD.K12.ELL.SI.1:	English language learners communicate for social and instructional purposes within the school setting.
ELD.K12.ELL.SS.1:	English language learners communicate information, ideas and concepts necessary for academic success in the content area of Social Studies.
HE.8.C.2.4:	Critique school and public health policies that influence health promotion and disease prevention. **Clarifications:** Speed-limit laws, immunization requirements, universal precautions, zero tolerance, report bullying, and cell phone/texting laws.

General Course Information and Notes

GENERAL NOTES

M/J Florida - The social studies curriculum for this course consists of the following content area strands: American History, Economics, Civics and Government. The primary content emphasis for this course pertains to the study of the chronological development of the state of Florida by examining the political, economic, social, military and cultural events that affected the state. Students will be exposed to the historical, geographic, political, economic, and sociological events which influenced the progression of Florida including, but not limited to, the evolution of Florida's diverse heritage through Spanish, French, British and American occupations, Florida's Native American population, United States annexation and territorial experience, statehood, Florida's role in sectionalism, Florida's system of slavery, Civil War and Reconstruction, Florida's diverse geographic regions and population groups, state government, modern day Florida's successes and challenges, and the projection of Florida's future development. Students will study methods of historical inquiry and primary and secondary historical documents.

Instructional Practices

Teaching from well-written, grade-level instructional materials enhances students' content area knowledge and also strengthens their ability to comprehend longer, complex reading passages on any topic for any reason. Using the following instructional practices also helps student learning:

1. Reading assignments from longer text passages as well as shorter ones when text is extremely complex.

2. Making close reading and rereading of texts central to lessons.

3. Asking high-level, text-specific questions and requiring high-level, complex tasks and assignments.

4. Requiring students to support answers with evidence from the text.

5. Providing extensive text-based research and writing opportunities (claims and evidence).

Florida's Benchmarks for Excellent Student Thinking (B.E.S.T.) Standards
This course includes Florida's B.E.S.T. ELA Expectations (EE) and Mathematical Thinking and Reasoning Standards (MTRs) for students. Florida educators should intentionally embed these standards within the content and their instruction as applicable. For guidance on the implementation of the EEs and MTRs, please visit cpalms.org/Standards/BEST_Standards.aspx and select the appropriate B.E.S.T. Standards package.

English Language Development ELD Standards Special Notes Section:
Teachers are required to provide listening, speaking, reading and writing instruction that allows English language learners (ELL) to communicate information, ideas and concepts for academic success in the content area of Social Studies. For the given level of English language proficiency and with visual, graphic, or interactive support, students will interact with grade level words, expressions, sentences and discourse to process or produce language necessary for academic success. The ELD standard should specify a relevant content area concept or topic of study chosen by curriculum developers and teachers which maximizes an ELL's need for communication and social skills. To access an ELL supporting document which delineates performance definitions and descriptors, please click on the following link: cpalms.org/uploads/docs/standards/eld/SS.pdf

GENERAL INFORMATION

Course Number: 2100030

Course Path: Section: Grades PreK to 12 Education Courses > **Grade Group:** Grades 6 to 8 Education Courses > **Subject:** Social Studies > **SubSubject:** American and Western Hemispheric Histories >
Abbreviated Title: M/J FLORIDA HIST
Course Length: Year (Y)
Course Attributes:
- Class Size Core Required

Course Level: 2

Course Status: Draft - Course Pending Approval
Grade Level(s): 6,7,8

Educator Certifications

History (Grades 6-12)
Middle Grades Integrated Curriculum (Middle Grades 5-9)
Social Science (Grades 5-9)
Social Science (Grades 6-12)
Elementary Education (Grades K-6)
Elementary Education (Elementary Grades 1-6)

M/J United States History & Civics (#2100045) 2022 - And Beyond

Course Standards

Name	Description
SS.7.C.1.1:	Recognize how Enlightenment ideas including Montesquieu's view of separation of power and John Locke's theories related to natural law and how Locke's social contract influenced the Founding Fathers. **Clarifications:** This benchmark is annually evaluated on the Civics End-of-Course Assessment. For more information on how this benchmark is evaluated view the Civics End-of-Course Assessment Test Item Specifications pages 18-19. Additional resources may be found on the FLDOE End-of-Course (EOC) Assessments webpage and the FLDOE Social Studies webpage.
SS.7.C.1.2:	Trace the impact that the Magna Carta, English Bill of Rights, Mayflower Compact, and Thomas Paine's "Common Sense" had on colonists' views of government. **Clarifications:** This benchmark is annually evaluated on the Civics End-of-Course Assessment. For more information on how this benchmark is evaluated view the Civics End-of-Course Assessment Test Item Specifications pages 20-21. Additional resources may be found on the FLDOE End-of-Course (EOC) Assessments webpage and the FLDOE Social Studies webpage.
SS.7.C.1.3:	Describe how English policies and responses to colonial concerns led to the writing of the Declaration of Independence. **Clarifications:** This benchmark is annually evaluated on the Civics End-of-Course Assessment. For more information on how this benchmark is evaluated view the Civics End-of-Course Assessment Test Item Specifications pages 22-23. Additional resources may be found on the FLDOE End-of-Course (EOC) Assessments webpage and the FLDOE Social Studies webpage.
SS.7.C.1.4:	Analyze the ideas (natural rights, role of the government) and complaints set forth in the Declaration of Independence. **Clarifications:** This benchmark is annually evaluated on the Civics End-of-Course Assessment. For more information on how this benchmark is evaluated view the Civics End-of-Course Assessment Test Item Specifications pages 24-25. Additional resources may be found on the FLDOE End-of-Course (EOC) Assessments webpage and the FLDOE Social Studies webpage.
SS.7.C.1.5:	Identify how the weaknesses of the Articles of Confederation led to the writing of the Constitution. **Clarifications:** This benchmark is annually eavluated on the Civics End-of-Course Assessment. For more information on how this benchmark is evaluated view the Civics End-of-Course Assessment Test Item Specifications page 26. Additional resources may be found on the FLDOE End-of-Course (EOC) Assessments webpage and the FLDOE Social Studies webpage.
SS.7.C.1.6:	Interpret the intentions of the Preamble of the Constitution. **Clarifications:** This benchmark is annually evaluated on the Civics End-of-Course Assessment. For more information on how this benchmark is evaluated view the Civics End-of-Course Assessment Test Item Specifications page 27. Additional resources may be found on the FLDOE End-of-Course (EOC) Assessments webpage and the FLDOE Social Studies webpage.
SS.7.C.1.7:	Describe how the Constitution limits the powers of government through separation of powers and checks and balances. **Clarifications:** This benchmark is annually evaluated on the Civics End-of-Course Assessment. For more information on how this benchmark is evaluated view the Civics End-of-Course Assessment Test Item Specifications pages 28-29. Additional resources may be found on the FLDOE End-of-Course (EOC) Assessments webpage and the FLDOE Social Studies webpage.
SS.7.C.1.8:	Explain the viewpoints of the Federalists and the Anti-Federalists regarding the ratification of the Constitution and inclusion of a bill of rights. **Clarifications:** This benchmark is annually evaluated on the Civics End-of-Course Assessment. For more information on how this benchmark is evaluated view the Civics End-of-Course Assessment Test Item Specifications page 30. Additional resources may be found on the FLDOE End-of-Course (EOC) Assessments webpage and the FLDOE Social Studies webpage.
SS.7.C.1.9:	Define the rule of law and recognize its influence on the development of the American legal, political, and governmental systems. **Clarifications:** This benchmark is annually evaluated on the Civics End-of-Course Assessment. For more information on how this benchmark is evaluated view the Civics End-of-Course Assessment Test Item Specifications page 31. Additional resources may be found on the FLDOE End-of-Course (EOC) Assessments webpage and the FLDOE Social Studies webpage.
SS.7.C.2.1:	Define the term "citizen," and identify legal means of becoming a United States citizen. **Clarifications:** This benchmark is annually evaluated on the Civics End-of-Course Assessment. For more information on how this benchmark is evaluated view the Civics End-of-Course Assessment Test Item Specifications pages 32-33. Additional resources may be found on the FLDOE End-of-Course (EOC) Assessments webpage and the FLDOE Social Studies webpage.

	Evaluate the obligations citizens have to obey laws, pay taxes, defend the nation, and serve on juries.
SS.7.C.2.2:	**Clarifications:** This benchmark is annually evaluated on the Civics End-of-Course Assessment. For more information on how this benchmark is evaluated view the Civics End-of-Course Assessment Test Item Specifications pages 34-35. Additional resources may be found on the FLDOE End-of-Course (EOC) Assessments webpage and the FLDOE Social Studies webpage.
	Experience the responsibilities of citizens at the local, state, or federal levels.
SS.7.C.2.3:	**Clarifications:** Examples are registering or pre-registering to vote, volunteering, communicating with government officials, informing others about current issues, participating in a political campaign/mock election.
	Evaluate rights contained in the Bill of Rights and other amendments to the Constitution.
SS.7.C.2.4:	**Clarifications:** This benchmark is annually evaluated on the Civics End-of-Course Assessment. For more information on how this benchmark is evaluated view the Civics End-of-Course Assessment Test Item Specifications pages 36-37. Additional resources may be found on the FLDOE End-of-Course (EOC) Assessments webpage and the FLDOE Social Studies webpage.
	Distinguish how the Constitution safeguards and limits individual rights.
SS.7.C.2.5:	**Clarifications:** This benchmark is annually evaluated on the Civics End-of-Course Assessment. For more information on how this benchmark is evaluated view the Civics End-of-Course Assessment Test Item Specifications pages 38-39. Additional resources may be found on the FLDOE End-of-Course (EOC) Assessments webpage and the FLDOE Social Studies webpage.
SS.7.C.2.6:	Simulate the trial process and the role of juries in the administration of justice.
SS.7.C.2.7:	Conduct a mock election to demonstrate the voting process and its impact on a school, community, or local level.
	Identify America's current political parties, and illustrate their ideas about government.
SS.7.C.2.8:	**Clarifications:** This benchmark is annually evaluated on the Civics End-of-Course Assessment. For more information on how this benchmark is evaluated view the Civics End-of-Course Assessment Test Item Specifications page 40. Additional resources may be found on the FLDOE End-of-Course (EOC) Assessments webpage and the FLDOE Social Studies webpage.
	Evaluate candidates for political office by analyzing their qualifications, experience, issue-based platforms, debates, and political ads.
SS.7.C.2.9:	**Clarifications:** This benchmark is annually evaluated on the Civics End-of-Course Assessment. For more information on how this benchmark is evaluated view the Civics End-of-Course Assessment Test Item Specifications pages 41-42. Additional resources may be found on the FLDOE End-of-Course (EOC) Assessments webpage and the FLDOE Social Studies webpage.
	Examine the impact of media, individuals, and interest groups on monitoring and influencing government.
SS.7.C.2.10:	**Clarifications:** This benchmark is annually evaluated on the Civics End-of-Course Assessment. For more information on how this benchmark is evaluated view the Civics End-of-Course Assessment Test Item Specifications page 43. Additional resources may be found on the FLDOE End-of-Course (EOC) Assessments webpage and the FLDOE Social Studies webpage.
	Analyze media and political communications (bias, symbolism, propaganda).
SS.7.C.2.11:	**Clarifications:** This benchmark is annually evaluated on the Civics End-of-Course Assessment. For more information on how this benchmark is evaluated view the Civics End-of-Course Assessment Test Item Specifications pages 44-45. Additional resources may be found on the FLDOE End-of-Course (EOC) Assessments webpage and the FLDOE Social Studies webpage.
	Develop a plan to resolve a state or local problem by researching public policy alternatives, identifying appropriate government agencies to address the issue, and determining a course of action.
SS.7.C.2.12:	**Clarifications:** This benchmark is annually evaluated on the Civics End-of-Course Assessment. For more information on how this benchmark is evaluated view the Civics End-of-Course Assessment Test Item Specifications pages 46-47. Additional resources may be found on the FLDOE End-of-Course (EOC) Assessments webpage and the FLDOE Social Studies webpage.
	Examine multiple perspectives on public and current issues.
SS.7.C.2.13:	**Clarifications:** This benchmark is annually evaluated on the Civics End-of-Course Assessment. For more information on how this benchmark is evaluated view the Civics End-of-Course Assessment Test Item Specifications pages 48-49. Additional resources may be found on the FLDOE End-of-Course (EOC) Assessments webpage and the FLDOE Social Studies webpage.
	Conduct a service project to further the public good.
SS.7.C.2.14:	**Clarifications:** The project can be at the school, community, state, national, or international level.
	Compare different forms of government (direct democracy, representative democracy, socialism, communism, monarchy, oligarchy, autocracy).
SS.7.C.3.1:	**Clarifications:** This benchmark is annually evaluated on the Civics End-of-Course Assessment. For more information on how this benchmark is evaluated view the Civics End-of-Course Assessment Test Item Specifications page 50. Additional resources may be found on the FLDOE End-of-Course (EOC) Assessments webpage and the FLDOE Social Studies webpage.
	Compare parliamentary, federal, confederal, and unitary systems of government.

SS.7.C.3.2:	**Clarifications:** This benchmark is annually evaluated on the Civics End-of-Course Assessment. For more information on how this benchmark is evaluated view the Civics End-of-Course Assessment Test Item Specifications pages 51-52. Additional resources may be found on the FLDOE End-of-Course (EOC) Assessments webpage and the FLDOE Social Studies webpage.
SS.7.C.3.3:	Illustrate the structure and function (three branches of government established in Articles I, II, and III with corresponding powers) of government in the United States as established in the Constitution. **Clarifications:** This benchmark is annually evaluated on the Civics End-of-Course Assessment. For more information on how this benchmark is evaluated view the Civics End-of-Course Assessment Test Item Specifications pages 53-54. Additional resources may be found on the FLDOE End-of-Course (EOC) Assessments webpage and the FLDOE Social Studies webpage.
SS.7.C.3.4:	Identify the relationship and division of powers between the federal government and state governments. **Clarifications:** This benchmark is annually evaluated on the Civics End-of-Course Assessment. For more information on how this benchmark is evaluated view the Civics End-of-Course Assessment Test Item Specifications page 55. Additional resources may be found on the FLDOE End-of-Course (EOC) Assessments webpage and the FLDOE Social Studies webpage.
SS.7.C.3.5:	Explain the Constitutional amendment process. **Clarifications:** This benchmark is annually evaluated on the Civics End-of-Course Assessment. For more information on how this benchmark is evaluated view the Civics End-of-Course Assessment Test Item Specifications page 56. Additional resources may be found on the FLDOE End-of-Course (EOC) Assessments webpage and the FLDOE Social Studies webpage.
SS.7.C.3.6:	Evaluate Constitutional rights and their impact on individuals and society. **Clarifications:** This benchmark is annually evaluated on the Civics End-of-Course Assessment. For more information on how this benchmark is evaluated view the Civics End-of-Course Assessment Test Item Specifications page 57. Additional resources may be found on the FLDOE End-of-Course (EOC) Assessments webpage and the FLDOE Social Studies webpage.
SS.7.C.3.7:	Analyze the impact of the 13th, 14th, 15th, 19th, 24th, and 26th amendments on participation of minority groups in the American political process. **Clarifications:** This benchmark is annually evaluated on the Civics End-of-Course Assessment. For more information on how this benchmark is evaluated view the Civics End-of-Course Assessment Test Item Specifications pages 58-59. Additional resources may be found on the FLDOE End-of-Course (EOC) Assessments webpage and the FLDOE Social Studies webpage.
SS.7.C.3.8:	Analyze the structure, functions, and processes of the legislative, executive, and judicial branches. **Clarifications:** This benchmark is annually evaluated on the Civics End-of-Course Assessment. For more information on how this benchmark is evaluated view the Civics End-of-Course Assessment Test Item Specifications pages 60-61. Additional resources may be found on the FLDOE End-of-Course (EOC) Assessments webpage and the FLDOE Social Studies webpage.
SS.7.C.3.9:	Illustrate the law making process at the local, state, and federal levels. **Clarifications:** This benchmark is annually evaluated on the Civics End-of-Course Assessment. For more information on how this benchmark is evaluated view the Civics End-of-Course Assessment Test Item Specifications pages 60-61. Additional resources may be found on the FLDOE End-of-Course (EOC) Assessments webpage and the FLDOE Social Studies webpage.
SS.7.C.3.10:	Identify sources and types (civil, criminal, constitutional, military) of law. **Clarifications:** This benchmark is annually evaluated on the Civics End-of-Course Assessment. For more information on how this benchmark is evaluated view the Civics End-of-Course Assessment Test Item Specifications page 62. Additional resources may be found on the FLDOE End-of-Course (EOC) Assessments webpage and the FLDOE Social Studies webpage.
SS.7.C.3.11:	Diagram the levels, functions, and powers of courts at the state and federal levels. **Clarifications:** This benchmark is annually evaluated on the Civics End-of-Course Assessment. For more information on how this benchmark is evaluated view the Civics End-of-Course Assessment Test Item Specifications pages 63-64. Additional resources may be found on the FLDOE End-of-Course (EOC) Assessments webpage and the FLDOE Social Studies webpage.
SS.7.C.3.12:	Analyze the significance and outcomes of landmark Supreme Court cases including, but not limited to, Marbury v. Madison, Plessy v. Ferguson, Brown v. Board of Education, Gideon v. Wainwright, Miranda v. Arizona, in re Gault, Tinker v. Des Moines, Hazelwood v. Kuhlmeier, United States v. Nixon, and Bush v. Gore. **Clarifications:** This benchmark is annually evaluated on the Civics End-of-Course Assessment. For more information on how this benchmark is evaluated view the Civics End-of-Course Assessment Test Item Specifications page 65. Additional resources may be found on the FLDOE End-of-Course (EOC) Assessments webpage and the FLDOE Social Studies webpage.
SS.7.C.3.13:	Compare the constitutions of the United States and Florida. **Clarifications:** This benchmark is annually evaluated on the Civics End-of-Course Assessment. For more information on how this benchmark is evaluated view the Civics End-of-Course Assessment Test Item Specifications pages 66-67. Additional resources may be found on the FLDOE End-of-Course (EOC) Assessments webpage and the FLDOE Social Studies webpage.

SS.7.C.3.14:	Differentiate between local, state, and federal governments' obligations and services. **Clarifications:** This benchmark is annually evaluated on the Civics End-of-Course Assessment. For more information on how this benchmark is evaluated view the Civics End-of-Course Assessment Test Item Specifications pages 68-69. Additional resources may be found on the FLDOE End-of-Course (EOC) Assessments webpage and the FLDOE Social Studies webpage.
SS.7.C.4.1:	Differentiate concepts related to United States domestic and foreign policy. **Clarifications:** This benchmark is annually evaluated on the Civics End-of-Course Assessment. For more information on how this benchmark is evaluated view the Civics End-of-Course Assessment Test Item Specifications pages 70-71. Additional resources may be found on the FLDOE End-of-Course (EOC) Assessments webpage and the FLDOE Social Studies webpage.
SS.7.C.4.2:	Recognize government and citizen participation in international organizations. **Clarifications:** Examples are United Nations, NATO, Peace Corps, World Health Organization, World Trade Organization, International Court of Justice. This benchmark is annually evaluated on the Civics End-of-Course Assessment. For more information on how this benchmark is evaluated view the Civics End-of-Course Assessment Test Item Specifications pages 72-73. Additional resources may be found on the FLDOE End-of-Course (EOC) Assessments webpage and the FLDOE Social Studies webpage.
SS.7.C.4.3:	Describe examples of how the United States has dealt with international conflicts. **Clarifications:** This benchmark is annually evaluated on the Civics End-of-Course Assessment. For more information on how this benchmark is evaluated view the Civics End-of-Course Assessment Test Item Specifications pages 74-75. Additional resources may be found on the FLDOE End-of-Course (EOC) Assessments webpage and the FLDOE Social Studies webpage.
SS.8.A.1.1:	Provide supporting details for an answer from text, interview for oral history, check validity of information from research/text, and identify strong vs. weak arguments. **Clarifications:** Students should be encouraged to utilize FINDS (Focus, Investigage, Note, Develop, Score), Florida's research process model accessible at: fldoe.org/bii/Library_Media/pdf/12TotalFINDS.pdf.
SS.8.A.1.2:	Analyze charts, graphs, maps, photographs and timelines; analyze political cartoons; determine cause and effect.
SS.8.A.1.3:	Analyze current events relevant to American History topics through a variety of electronic and print media resources. **Clarifications:** Examples may include, but are not limited to, articles, editorials, journals, periodicals, reports, websites, videos, and podcasts.
SS.8.A.1.4:	Differentiate fact from opinion, utilize appropriate historical research and fiction/nonfiction support materials.
SS.8.A.1.5:	Identify, within both primary and secondary sources, the author, audience, format, and purpose of significant historical documents. **Clarifications:** Examples of primary and secondary sources may be found on various websites such as the site for The Kinsey Collection.
SS.8.A.1.6:	Compare interpretations of key events and issues throughout American History. **Clarifications:** Examples may include, but are not limited to, historiography.
SS.8.A.1.7:	View historic events through the eyes of those who were there as shown in their art, writings, music, and artifacts.
SS.8.A.2.1:	Compare the relationships among the British, French, Spanish, and Dutch in their struggle for colonization of North America. **Clarifications:** This benchmark implies a study of the ways that economic, political, cultural, and religious competition between these Atlantic powers shaped early colonial America.
SS.8.A.2.2:	Compare the characteristics of the New England, Middle, and Southern colonies. **Clarifications:** Examples may include, but are not limited to, colonial governments, geographic influences, occupations, religion, education, settlement patterns, and social patterns.
SS.8.A.2.3:	Differentiate economic systems of New England, Middle and Southern colonies including indentured servants and slaves as labor sources. **Clarifications:** Examples may include, but are not limited to, subsistence farming, cash crop farming, and maritime industries.
SS.8.A.2.4:	Identify the impact of key colonial figures on the economic, political, and social development of the colonies. **Clarifications:** Examples may include, but are not limited to, John Smith, William Penn, Roger Williams, Anne Hutchinson, John Winthrop, Jonathan Edwards, William Bradford, Nathaniel Bacon, John Peter Zenger, and Lord Calvert.
SS.8.A.2.5:	Discuss the impact of colonial settlement on Native American populations. **Clarifications:** Examples may include, but are not limited to, war, disease, loss of land, westward displacement of tribes causing increased conflict between tribes, and dependence on trade for Western goods, including guns.
SS.8.A.2.6:	Examine the causes, course, and consequences of the French and Indian War. **Clarifications:** Examples may include, but are not limited to, ongoing conflict between France and England, territorial disputes, trade competition, Ft. Duquesne, Ft. Quebec, Treaty of Paris, heavy British debt.
SS.8.A.2.7:	Describe the contributions of key groups (Africans, Native Americans, women, and children) to the society and culture of colonial America.
	Explain the consequences of the French and Indian War in British policies for the American colonies from 1763 - 1774.

SS.8.A.3.1:	**Clarifications:** Examples may include, but are not limited to, Proclamation of 1763, Sugar Act, Quartering Act, Stamp Act, Declaratory Act, Townshend Acts, Tea Act, Quebec Act, and Coercive Acts.
SS.8.A.3.2:	Explain American colonial reaction to British policy from 1763 - 1774. **Clarifications:** Examples may include, but are not limited to, written protests, boycotts, unrest leading to the Boston Massacre, Boston Tea Party, First Continental Congress, Stamp Act Congress, Committees of Correspondence.
SS.8.A.3.3:	Recognize the contributions of the Founding Fathers (John Adams, Sam Adams, Benjamin Franklin, John Hancock, Alexander Hamilton, Thomas Jefferson, James Madison, George Mason, George Washington) during American Revolutionary efforts. **Clarifications:** Examples may also include, but are not limited to, Thomas Paine, John Jay, Peter Salem.
SS.8.A.3.4:	Examine the contributions of influential groups to both the American and British war efforts during the American Revolutionary War and their effects on the outcome of the war. **Clarifications:** Examples may include, but are not limited to, foreign alliances, freedmen, Native Americans, slaves, women, soldiers, Hessians.
SS.8.A.3.5:	Describe the influence of individuals on social and political developments during the Revolutionary era. **Clarifications:** Examples may include, but are not limited to, James Otis, Mercy Otis Warren, Abigail Adams, Benjamin Banneker, Lemuel Haynes, Phyllis Wheatley.
SS.8.A.3.6:	Examine the causes, course, and consequences of the American Revolution. **Clarifications:** Examples may include, but are not limited to, Battles of Lexington and Concord, Common Sense, Second Continental Congress, Battle of Bunker Hill, Battle of Cowpens, Battle of Trenton, Olive Branch Petition, Declaration of Independence, winter at Valley Forge, Battles of Saratoga and Yorktown, Treaty of Paris.
SS.8.A.3.7:	Examine the structure, content, and consequences of the Declaration of Independence.
SS.8.A.3.8:	Examine individuals and groups that affected political and social motivations during the American Revolution. **Clarifications:** Examples may include, but are not limited to, Ethan Allen and the Green Mountain Boys, the Committees of Correspondence, Sons of Liberty, Daughters of Liberty, the Black Regiment (in churches), Patrick Henry, Patriots, Loyalists, individual colonial militias, and undecideds.
SS.8.A.3.9:	Evaluate the structure, strengths, and weaknesses of the Articles of Confederation and its aspects that led to the Constitutional Convention.
SS.8.A.3.10:	Examine the course and consequences of the Constitutional Convention (New Jersey Plan, Virginia Plan, Great Compromise, Three-Fifths Compromise, compromises regarding taxation and slave trade, Electoral College, state vs. federal power, empowering a president).
SS.8.A.3.11:	Analyze support and opposition (Federalists, Federalist Papers, AntiFederalists, Bill of Rights) to ratification of the U.S. Constitution.
SS.8.A.3.12:	Examine the influences of George Washington's presidency in the formation of the new nation. **Clarifications:** Examples may include, but are not limited to, personal motivations, military experience, political influence, establishing Washington, D.C. as the nation's capital, rise of the party system, setting of precedents (e.g., the Cabinet), Farewell Address.
SS.8.A.3.13:	Explain major domestic and international economic, military, political, and socio-cultural events of John Adams's presidency. **Clarifications:** Examples may include, but aren ot limited to, XYZ Affairs, Alien and Sedition Acts, Land Act of 1800, the quasi-war, the Midnight Judges.
SS.8.A.3.14:	Explain major domestic and international economic, military, political, and socio-cultural events of Thomas Jefferson's presidency. **Clarifications:** Examples may include, but are not limited to, Election of 1800, birth of political parties, Marbury v. Madison, judicial review, Jefferson's First Inaugural Address, Judiciary Act of 1801, Louisiana Purchase, Barbary War, Lewis and Clark Expedition, Hamilton and Burr conflict/duel, Embargo of 1807.
SS.8.A.3.15:	Examine this time period (1763-1815) from the perspective of historically under-represented groups (children, indentured servants, Native Americans, slaves, women, working class).
SS.8.A.3.16:	Examine key events in Florida history as each impacts this era of American history. **Clarifications:** Examples may include, but are not limited to, Treaty of Paris, British rule, Second Spanish Period.
SS.8.A.4.1:	Examine the causes, course, and consequences of United States westward expansion and its growing diplomatic assertiveness (War of 1812, Convention of 1818, Adams-Onis Treaty, Missouri Compromise, Monroe Doctrine, Trail of Tears, Texas annexation, Manifest Destiny, Oregon Territory, Mexican American War/Mexican Cession, California Gold Rush, Compromise of 1850, Kansas Nebraska Act, Gadsden Purchase).
SS.8.A.4.2:	Describe the debate surrounding the spread of slavery into western territories and Florida. **Clarifications:** Examples may include, but are not limited to, abolitionist movement, Ft. Mose, Missouri Compromise, Bleeding Kansas, Kansas-Nebraska Act, Compromise of 1850.
SS.8.A.4.3:	Examine the experiences and perspectives of significant individuals and groups during this era of American History. **Clarifications:** Examples may include, but are not limited to, Lewis and Clark, Sacajawea, York, Pike, Native Americans, Buffalo Soldiers, Mexicanos, Chinese immigrants, Irish immigrants, children, slaves, women, Alexis de Tocqueville, political parties.
SS.8.A.4.4:	Discuss the impact of westward expansion on cultural practices and migration patterns of Native American and African slave populations.
SS.8.A.4.5:	Explain the causes, course, and consequences of the 19th century transportation revolution on the growth of the nation's economy. **Clarifications:** Examples may include, but are not limited to, roads, canals, bridges, steamboats, railroads.
	Identify technological improvements (inventions/inventors) that contributed to industrial growth.

SS.8.A.4.6:	**Clarifications:** Examples may include, but are not limited to, Fitch/steamboat, Slater/textile mill machinery, Whitney/cotton gin, interchangeable parts, McCoy/industrial lubrication, Fulton/commercial steamboat, Lowell/ mechanized cotton mill, Isaac Singer/sewing machine.
SS.8.A.4.7:	Explain the causes, course, and consequences (industrial growth, subsequent effect on children and women) of New England's textile industry.
SS.8.A.4.8:	Describe the influence of individuals on social and political developments of this era in American History. **Clarifications:** Examples may include, but are not limited to, Daniel Boone, Tecumseh, Black Hawk, John Marshall, James Madison, Dolly Madison, Andrew Jackson, John C. Calhoun, Henry Clay, Daniel Webster, James Polk, Susan B. Anthony, Elizabeth Cady Stanton, William Lloyd Garrison, Frederick Douglass, Horace Mann, Dorothea Dix, Lucretia Mott, Sojourner Truth, Harriet Tubman.
SS.8.A.4.9:	Analyze the causes, course and consequences of the Second Great Awakening on social reform movements. **Clarifications:** Examples may include, but are not limited to, abolition, women's rights, temperance, education, prison and mental health reform, Charles Grandison Finney, the Beecher family.
SS.8.A.4.10:	Analyze the impact of technological advancements on the agricultural economy and slave labor. **Clarifications:** Examples may include, but are not limited to, cotton gin, steel plow, rapid growth of slave trade.
SS.8.A.4.11:	Examine the aspects of slave culture including plantation life, resistance efforts, and the role of the slaves' spiritual system.
SS.8.A.4.12:	Examine the effects of the 1804 Haitian Revolution on the United States acquisition of the Louisiana Territory.
SS.8.A.4.13:	Explain the consequences of landmark Supreme Court decisions (McCulloch v. Maryland [1819], Gibbons v. Odgen [1824], Cherokee Nation v. Georgia [1831], and Worcester v. Georgia [1832]) significant to this era of American history.
SS.8.A.4.14:	Examine the causes, course, and consequences of the women's suffrage movement (1848 Seneca Falls Convention, Declaration of Sentiments).
SS.8.A.4.15:	Examine the causes, course, and consequences of literature movements (Transcendentalism) significant to this era of American history.
SS.8.A.4.16:	Identify key ideas and influences of Jacksonian democracy. **Clarifications:** Examples may include, but are not limited to, political participation, political parties, constitutional government, spoils system, National Bank veto, Maysville Road veto, tariff battles, Indian Removal Act, nullification crisis.
SS.8.A.4.17:	Examine key events and peoples in Florida history as each impacts this era of American history. **Clarifications:** Examples may include, but are not limited to, Andrew Jackson's military expeditions to end Indian uprisings, developing relationships between the Seminole and runaway slaves, Adams-Onis Treaty, Florida becoming a United States territory, combining former East and West Floridas, establishing first state capital, Florida's constitution, Florida's admittance to the Union as 27th state.
SS.8.A.4.18:	Examine the experiences and perspectives of different ethnic, national, and religious groups in Florida, explaining their contributions to Florida's and America's society and culture during the Territorial Period. **Clarifications:** Examples may include, but are not limited to, Osceola, white settlers, U.S. troops, Black Seminoles, southern plantation and slave owners, Seminole Wars, Treaty of Moultrie Creek, Seminole relocation, Chief Billy Bowlegs, Florida Crackers.
SS.8.A.5.1:	Explain the causes, course, and consequence of the Civil War (sectionalism, slavery, states' rights, balance of power in the Senate).
SS.8.A.5.2:	Analyze the role of slavery in the development of sectional conflict. **Clarifications:** Examples may include, but are not limited to, Abolition Movement, Nat Turner's Rebellion, Black Codes, Missouri Compromise, Compromise of 1850, Uncle Tom's Cabin, Kansas-Nebraska Act, Dred Scott v. Sandford, Lincoln-Douglas Debates, raid on Harper's Ferry, Underground Railroad, Presidential Election of 1860, Southern secession.
SS.8.A.5.3:	Explain major domestic and international economic, military, political, and socio-cultural events of Abraham Lincoln's presidency. **Clarifications:** Examples may include, but aren ot limited to, sectionalism, states' rights, slavery, Civil War, attempts at foreign alliances, Emancipation Proclamation, Gettysburg Address, suspension of habeas corpus, First and Second Inaugural Addresses.
SS.8.A.5.4:	Identify the division (Confederate and Union States, Border states, western territories) of the United States at the outbreak of the Civil War.
SS.8.A.5.5:	Compare Union and Confederate strengths and weaknesses. **Clarifications:** Examples may include, but aren ot limited to, technology, resources, alliances, geography, military leaders-Lincoln, Davis, Grant, Lee, Jackson, Sherman.
SS.8.A.5.6:	Compare significant Civil War battles and events and their effects on civilian populations. **Clarifications:** Examples may include, but are not limited to, Fort Sumter, Bull Run, Monitor v. Merrimack, Antietam, Vicksburg, Gettysburg, Emancipation Proclamation, Sherman's March, Lee's surrender at Appomattox.
SS.8.A.5.7:	Examine key events and peoples in Florida history as each impacts this era of American history. **Clarifications:** Examples may include, but are not limited to, slavery, influential planters, Florida's secession and Confederate membership, women, children, pioneer environment, Union occupation, Battle of Olustee and role of 54th Massachusetts regiment, Battle at Natural Bridge.
SS.8.A.5.8:	Explain and evaluate the policies, practices, and consequences of Reconstruction (presidential and congressional reconstruction, Johnson's impeachment, Civil Rights Act of 1866, the 13th, 14th, and 15th Amendments, opposition of Southern whites to Reconstruction, accomplishments and failures of Radical Reconstruction, presidential election of 1876, end of Reconstruction, rise of Jim Crow laws, rise of Ku Klux Klan).
SS.8.C.1.1:	Identify the constitutional provisions for establishing citizenship.
SS.8.C.1.2:	Compare views of self-government and the rights and responsibilities of citizens held by Patriots, Loyalists, and other colonists.
SS.8.C.1.3:	Recognize the role of civic virtue in the lives of citizens and leaders from the colonial period through Reconstruction.
SS.8.C.1.4:	Identify the evolving forms of civic and political participation from the colonial period through Reconstruction.
SS.8.C.1.5:	Apply the rights and principles contained in the Constitution and Bill of Rights to the lives of citizens today.

SS.8.C.1.6:	Evaluate how amendments to the Constitution have expanded voting rights from our nation's early history to present day.
SS.8.C.2.1:	Evaluate and compare the essential ideals and principles of American constitutional government expressed in primary sources from the colonial period to Reconstruction.
SS.8.E.1.1:	Examine motivating economic factors that influenced the development of the United States economy over time including scarcity, supply and demand, opportunity costs, incentives, profits, and entrepreneurial aspects. **Clarifications:** Examples areTriangular Trade, colonial development - New England, Middle, and Southern colonies - Revolutionary War, Manifest Destiny, compromises over slavery issues, the Civil War, Reconstruction.
SS.8.E.2.1:	Analyze contributions of entrepreneurs, inventors, and other key individuals from various gender, social, and ethnic backgrounds in the development of the United States economy.
SS.8.E.2.2:	Explain the economic impact of government policies. **Clarifications:** Examples are mercantilism, colonial establishment, Articles of Confederation, Constitution, compromises over slavery.
SS.8.E.2.3:	Assess the role of Africans and other minority groups in the economic development of the United States.
SS.8.E.3.1:	Evaluate domestic and international interdependence. **Clarifications:** Examples are triangular trade routes and regional exchange of resources.
SS.8.G.1.1:	Use maps to explain physical and cultural attributes of major regions throughout American history.
SS.8.G.1.2:	Use appropriate geographic tools and terms to identify and describe significant places and regions in American history.
SS.8.G.2.1:	Identify the physical elements and the human elements that define and differentiate regions as relevant to American history. **Clarifications:** Examples of physical elements are climate, terrain, resources. Examples of human elements are religion, government, economy, language, demography.
SS.8.G.2.2:	Use geographic terms and tools to analyze case studies of regional issues in different parts of the United States that have had critical economic, physical, or political ramifications. **Clarifications:** Examples are cataclysmic natural disasters, shipwrecks.
SS.8.G.2.3:	Use geographic terms and tools to analyze case studies of how selected regions of the United States have changed over time.
SS.8.G.3.1:	Locate and describe in geographic terms the major ecosystems of the United States.
SS.8.G.3.2:	Use geographic terms and tools to explain differing perspectives on the use of renewable and non-renewable resources in the United States and Florida over time.
SS.8.G.4.1:	Interpret population growth and other demographic data for any given place in the United States throughout its history.
SS.8.G.4.2:	Use geographic terms and tools to analyze the effects throughout American history of migration to and within the United States, both on the place of origin and destination.
SS.8.G.4.3:	Use geographic terms and tools to explain cultural diffusion throughout the United States as it expanded its territory.
SS.8.G.4.4:	Interpret databases, case studies, and maps to describe the role that regions play in influencing trade, migration patterns, and cultural/political interaction in the United States throughout time.
SS.8.G.4.5:	Use geographic terms and tools to analyze case studies of the development, growth, and changing nature of cities and urban centers in the United States over time.
SS.8.G.4.6:	Use political maps to describe changes in boundaries and governance throughout American history.
SS.8.G.5.1:	Describe human dependence on the physical environment and natural resources to satisfy basic needs in local environments in the United States.
SS.8.G.5.2:	Describe the impact of human modifications on the physical environment and ecosystems of the United States throughout history. **Clarifications:** Examples are deforestation, urbanization, agriculture.
SS.8.G.6.1:	Use appropriate maps and other graphic representations to analyze geographic problems and changes over time throughout American history.
SS.8.G.6.2:	Illustrate places and events in U.S. history through the use of narratives and graphic representations. **Clarifications:** Examples are maps, graphs, tables.
MA.K12.MTR.1.1:	Mathematicians who participate in effortful learning both individually and with others: • Analyze the problem in a way that makes sense given the task. • Ask questions that will help with solving the task. • Build perseverance by modifying methods as needed while solving a challenging task. • Stay engaged and maintain a positive mindset when working to solve tasks. • Help and support each other when attempting a new method or approach. **Clarifications:** Teachers who encourage students to participate actively in effortful learning both individually and with others: • Cultivate a community of growth mindset learners. • Foster perseverance in students by choosing tasks that are challenging. • Develop students' ability to analyze and problem solve. • Recognize students' effort when solving challenging problems.
MA.K12.MTR.2.1:	Demonstrate understanding by representing problems in multiple ways. Mathematicians who demonstrate understanding by representing problems in multiple ways: • Build understanding through modeling and using manipulatives. • Represent solutions to problems in multiple ways using objects, drawings, tables, graphs and equations. • Progress from modeling problems with objects and drawings to using algorithms and equations. • Express connections between concepts and representations. • Choose a representation based on the given context or purpose.

Clarifications:
Teachers who encourage students to demonstrate understanding by representing problems in multiple ways:

- Help students make connections between concepts and representations.
- Provide opportunities for students to use manipulatives when investigating concepts.
- Guide students from concrete to pictorial to abstract representations as understanding progresses.
- Show students that various representations can have different purposes and can be useful in different situations.

MA.K12.MTR.3.1:

Complete tasks with mathematical fluency.
Mathematicians who complete tasks with mathematical fluency:

- Select efficient and appropriate methods for solving problems within the given context.
- Maintain flexibility and accuracy while performing procedures and mental calculations.
- Complete tasks accurately and with confidence.
- Adapt procedures to apply them to a new context.
- Use feedback to improve efficiency when performing calculations.

Clarifications:
Teachers who encourage students to complete tasks with mathematical fluency:

- Provide students with the flexibility to solve problems by selecting a procedure that allows them to solve efficiently and accurately.
- Offer multiple opportunities for students to practice efficient and generalizable methods.
- Provide opportunities for students to reflect on the method they used and determine if a more efficient method could have been used.

MA.K12.MTR.4.1:

Engage in discussions that reflect on the mathematical thinking of self and others.
Mathematicians who engage in discussions that reflect on the mathematical thinking of self and others:

- Communicate mathematical ideas, vocabulary and methods effectively.
- Analyze the mathematical thinking of others.
- Compare the efficiency of a method to those expressed by others.
- Recognize errors and suggest how to correctly solve the task.
- Justify results by explaining methods and processes.
- Construct possible arguments based on evidence.

Clarifications:
Teachers who encourage students to engage in discussions that reflect on the mathematical thinking of self and others:

- Establish a culture in which students ask questions of the teacher and their peers, and error is an opportunity for learning.
- Create opportunities for students to discuss their thinking with peers.
- Select, sequence and present student work to advance and deepen understanding of correct and increasingly efficient methods.
- Develop students' ability to justify methods and compare their responses to the responses of their peers.

MA.K12.MTR.5.1:

Use patterns and structure to help understand and connect mathematical concepts.
Mathematicians who use patterns and structure to help understand and connect mathematical concepts:

- Focus on relevant details within a problem.
- Create plans and procedures to logically order events, steps or ideas to solve problems.
- Decompose a complex problem into manageable parts.
- Relate previously learned concepts to new concepts.
- Look for similarities among problems.
- Connect solutions of problems to more complicated large-scale situations.

Clarifications:
Teachers who encourage students to use patterns and structure to help understand and connect mathematical concepts:

- Help students recognize the patterns in the world around them and connect these patterns to mathematical concepts.
- Support students to develop generalizations based on the similarities found among problems.
- Provide opportunities for students to create plans and procedures to solve problems.
- Develop students' ability to construct relationships between their current understanding and more sophisticated ways of thinking.

MA.K12.MTR.6.1:

Assess the reasonableness of solutions.
Mathematicians who assess the reasonableness of solutions:

- Estimate to discover possible solutions.
- Use benchmark quantities to determine if a solution makes sense.
- Check calculations when solving problems.
- Verify possible solutions by explaining the methods used.
- Evaluate results based on the given context.

Clarifications:
Teachers who encourage students to assess the reasonableness of solutions:

- Have students estimate or predict solutions prior to solving.
- Prompt students to continually ask, "Does this solution make sense? How do you know?"
- Reinforce that students check their work as they progress within and after a task.
- Strengthen students' ability to verify solutions through justifications.

MA.K12.MTR.7.1:

Apply mathematics to real-world contexts.
Mathematicians who apply mathematics to real-world contexts:

- Connect mathematical concepts to everyday experiences.
- Use models and methods to understand, represent and solve problems.
- Perform investigations to gather data or determine if a method is appropriate. • Redesign models and methods to improve accuracy or efficiency.

Clarifications:

	Teachers who encourage students to apply mathematics to real-world contexts: • Provide opportunities for students to create models, both concrete and abstract, and perform investigations. • Challenge students to question the accuracy of their models and methods. • Support students as they validate conclusions by comparing them to the given situation. • Indicate how various concepts can be applied to other disciplines.
ELA.K12.EE.1.1:	Cite evidence to explain and justify reasoning. **Clarifications:** K-1 Students include textual evidence in their oral communication with guidance and support from adults. The evidence can consist of details from the text without naming the text. During 1st grade, students learn how to incorporate the evidence in their writing. 2-3 Students include relevant textual evidence in their written and oral communication. Students should name the text when they refer to it. In 3rd grade, students should use a combination of direct and indirect citations. 4-5 Students continue with previous skills and reference comments made by speakers and peers. Students cite texts that they've directly quoted, paraphrased, or used for information. When writing, students will use the form of citation dictated by the instructor or the style guide referenced by the instructor. 6-8 Students continue with previous skills and use a style guide to create a proper citation. 9-12 Students continue with previous skills and should be aware of existing style guides and the ways in which they differ.
ELA.K12.EE.2.1:	Read and comprehend grade-level complex texts proficiently. **Clarifications:** See Text Complexity for grade-level complexity bands and a text complexity rubric.
ELA.K12.EE.3.1:	Make inferences to support comprehension. **Clarifications:** Students will make inferences before the words infer or inference are introduced. Kindergarten students will answer questions like "Why is the girl smiling?" or make predictions about what will happen based on the title page. Students will use the terms and apply them in 2nd grade and beyond.
ELA.K12.EE.4.1:	Use appropriate collaborative techniques and active listening skills when engaging in discussions in a variety of situations. **Clarifications:** In kindergarten, students learn to listen to one another respectfully. In grades 1-2, students build upon these skills by justifying what they are thinking. For example: "I think _____ because _____." The collaborative conversations are becoming academic conversations. In grades 3-12, students engage in academic conversations discussing claims and justifying their reasoning, refining and applying skills. Students build on ideas, propel the conversation, and support claims and counterclaims with evidence.
ELA.K12.EE.5.1:	Use the accepted rules governing a specific format to create quality work. **Clarifications:** Students will incorporate skills learned into work products to produce quality work. For students to incorporate these skills appropriately, they must receive instruction. A 3rd grade student creating a poster board display must have instruction in how to effectively present information to do quality work.
ELA.K12.EE.6.1:	Use appropriate voice and tone when speaking or writing. **Clarifications:** In kindergarten and 1st grade, students learn the difference between formal and informal language. For example, the way we talk to our friends differs from the way we speak to adults. In 2nd grade and beyond, students practice appropriate social and academic language to discuss texts.
ELD.K12.ELL.SI.1:	English language learners communicate for social and instructional purposes within the school setting.
ELD.K12.ELL.SS.1:	English language learners communicate information, ideas and concepts necessary for academic success in the content area of Social Studies.
HE.8.C.2.4:	Critique school and public health policies that influence health promotion and disease prevention. **Clarifications:** Speed-limit laws, immunization requirements, universal precautions, zero tolerance, report bullying, and cell phone/texting laws.

General Course Information and Notes

GENERAL NOTES

M/J U.S. History - The eighth grade social studies curriculum consists of the following content area strands: American History, Geography, Economics and Civics. Primary content emphasis for this course pertains to the study of American history from the Exploration and Colonization period to the Reconstruction Period following the Civil War. Students will be exposed to the historical, geographic, political, economic, and sociological events which influenced the development of the United States and the resulting impact on world history. So that students can clearly see the relationship between cause and effect in historical events, students should have the opportunity to explore those fundamental ideas and events which occurred after Reconstruction.

M/J Civics - The primary content for this portion of the course pertains to the principles, functions, and organization of government; the origins of the American political system; the roles, rights, responsibilities of United States citizens; and methods of active participation in our political system.

Special Notes: This course is meant as a means of combining the required M/J United States History content with remediation of the required M/J Civics content.

Additional content that may be contained in the NAEP Grade 8 United States History assessment includes material from all time periods on the following topics:

- Change and Continuity in American Democracy: Ideas, Institutions, Events, Key Figures, and Controversies

- The Gathering and Interactions of Peoples, Cultures, and Ideas
- Economic and Technological Changes and Their Relationship to Society, Ideas, and the Environment
- The Changing Role of America in the World

The NAEP frameworks for United States History may be accessed at nagb.org/content/nagb/assets/documents/publications/frameworks/historyframework.pdf

Additional content that may be included in the Grade 8 NAEP Civics assessment includes:

- Distinctive characteristics of American society
- Unity/diversity in American society
- Civil society: nongovernmental associations, groups
- Nation-states
- Interaction among nation-states
- Major governmental, nongovernmental international organizations

The NAEP frameworks for Civics may be accessed at nagb.org/publications/frameworks/civicsframework.pdf

Instructional Practices
Teaching from well-written, grade-level instructional materials enhances students' content area knowledge and also strengthens their ability to comprehend longer, complex reading passages on any topic for any reason. Using the following instructional practices also helps student learning:

1. Reading assignments from longer text passages as well as shorter ones when text is extremely complex.
2. Making close reading and rereading of texts central to lessons.
3. Asking high-level, text-specific questions and requiring high-level, complex tasks and assignments.
4. Requiring students to support answers with evidence from the text.
5. Providing extensive text-based research and writing opportunities (claims and evidence).

Florida's Benchmarks for Excellent Student Thinking (B.E.S.T.) Standards
This course includes Florida's B.E.S.T. ELA Expectations (EE) and Mathematical Thinking and Reasoning Standards (MTRs) for students. Florida educators should intentionally embed these standards within the content and their instruction as applicable. For guidance on the implementation of the EEs and MTRs, please visit cpalms.org/Standards/BEST_Standards.aspx and select the appropriate B.E.S.T. Standards package.

English Language Development ELD Standards Special Notes Section:
Teachers are required to provide listening, speaking, reading and writing instruction that allows English language learners (ELL) to communicate information, ideas and concepts for academic success in the content area of Social Studies. For the given level of English language proficiency and with visual, graphic, or interactive support, students will interact with grade level words, expressions, sentences and discourse to process or produce language necessary for academic success. The ELD standard should specify a relevant content area concept or topic of study chosen by curriculum developers and teachers which maximizes an ELL's need for communication and social skills. To access an ELL supporting document which delineates performance definitions and descriptors, please click on the following link: cpalms.org/uploads/docs/standards/eld/SS.pdf

GENERAL INFORMATION

Course Number: 2100045

Course Path: Section: Grades PreK to 12 Education Courses > **Grade Group:** Grades 6 to 8 Education Courses > **Subject:** Social Studies > **SubSubject:** American and Western Hemispheric Histories >
Abbreviated Title: M/J US HIST & CIVICS
Course Length: Year (Y)
Course Attributes:
- Class Size Core Required

Course Level: 2

Course Status: Draft - Course Pending Approval

Grade Level(s): 6,7,8

Educator Certifications

History (Grades 6-12)
Social Science (Grades 5-9)
Social Science (Grades 6-12)

M/J Social Studies Transfer (#2100220) 2022 - And Beyond

Course Standards

Name	Description
MA.K12.MTR.1.1:	Mathematicians who participate in effortful learning both individually and with others: • Analyze the problem in a way that makes sense given the task. • Ask questions that will help with solving the task. • Build perseverance by modifying methods as needed while solving a challenging task. • Stay engaged and maintain a positive mindset when working to solve tasks. • Help and support each other when attempting a new method or approach. **Clarifications:** Teachers who encourage students to participate actively in effortful learning both individually and with others: • Cultivate a community of growth mindset learners. • Foster perseverance in students by choosing tasks that are challenging. • Develop students' ability to analyze and problem solve. • Recognize students' effort when solving challenging problems.
MA.K12.MTR.2.1:	Demonstrate understanding by representing problems in multiple ways. Mathematicians who demonstrate understanding by representing problems in multiple ways: • Build understanding through modeling and using manipulatives. • Represent solutions to problems in multiple ways using objects, drawings, tables, graphs and equations. • Progress from modeling problems with objects and drawings to using algorithms and equations. • Express connections between concepts and representations. • Choose a representation based on the given context or purpose. **Clarifications:** Teachers who encourage students to demonstrate understanding by representing problems in multiple ways: • Help students make connections between concepts and representations. • Provide opportunities for students to use manipulatives when investigating concepts. • Guide students from concrete to pictorial to abstract representations as understanding progresses. • Show students that various representations can have different purposes and can be useful in different situations.
MA.K12.MTR.3.1:	Complete tasks with mathematical fluency. Mathematicians who complete tasks with mathematical fluency: • Select efficient and appropriate methods for solving problems within the given context. • Maintain flexibility and accuracy while performing procedures and mental calculations. • Complete tasks accurately and with confidence. • Adapt procedures to apply them to a new context. • Use feedback to improve efficiency when performing calculations. **Clarifications:** Teachers who encourage students to complete tasks with mathematical fluency: • Provide students with the flexibility to solve problems by selecting a procedure that allows them to solve efficiently and accurately. • Offer multiple opportunities for students to practice efficient and generalizable methods. • Provide opportunities for students to reflect on the method they used and determine if a more efficient method could have been used.
MA.K12.MTR.4.1:	Engage in discussions that reflect on the mathematical thinking of self and others. Mathematicians who engage in discussions that reflect on the mathematical thinking of self and others: • Communicate mathematical ideas, vocabulary and methods effectively. • Analyze the mathematical thinking of others. • Compare the efficiency of a method to those expressed by others. • Recognize errors and suggest how to correctly solve the task. • Justify results by explaining methods and processes. • Construct possible arguments based on evidence. **Clarifications:** Teachers who encourage students to engage in discussions that reflect on the mathematical thinking of self and others: • Establish a culture in which students ask questions of the teacher and their peers, and error is an opportunity for learning. • Create opportunities for students to discuss their thinking with peers. • Select, sequence and present student work to advance and deepen understanding of correct and increasingly efficient methods. • Develop students' ability to justify methods and compare their responses to the responses of their peers.
	Use patterns and structure to help understand and connect mathematical concepts. Mathematicians who use patterns and structure to help understand and connect mathematical concepts: • Focus on relevant details within a problem. • Create plans and procedures to logically order events, steps or ideas to solve problems. • Decompose a complex problem into manageable parts. • Relate previously learned concepts to new concepts.

MA.K12.MTR.5.1:	• Look for similarities among problems. • Connect solutions of problems to more complicated large-scale situations. **Clarifications:** Teachers who encourage students to use patterns and structure to help understand and connect mathematical concepts: • Help students recognize the patterns in the world around them and connect these patterns to mathematical concepts. • Support students to develop generalizations based on the similarities found among problems. • Provide opportunities for students to create plans and procedures to solve problems. • Develop students' ability to construct relationships between their current understanding and more sophisticated ways of thinking.
MA.K12.MTR.6.1:	Assess the reasonableness of solutions. Mathematicians who assess the reasonableness of solutions: • Estimate to discover possible solutions. • Use benchmark quantities to determine if a solution makes sense. • Check calculations when solving problems. • Verify possible solutions by explaining the methods used. • Evaluate results based on the given context. **Clarifications:** Teachers who encourage students to assess the reasonableness of solutions: • Have students estimate or predict solutions prior to solving. • Prompt students to continually ask, "Does this solution make sense? How do you know?" • Reinforce that students check their work as they progress within and after a task. • Strengthen students' ability to verify solutions through justifications.
MA.K12.MTR.7.1:	Apply mathematics to real-world contexts. Mathematicians who apply mathematics to real-world contexts: • Connect mathematical concepts to everyday experiences. • Use models and methods to understand, represent and solve problems. • Perform investigations to gather data or determine if a method is appropriate. • Redesign models and methods to improve accuracy or efficiency. **Clarifications:** Teachers who encourage students to apply mathematics to real-world contexts: • Provide opportunities for students to create models, both concrete and abstract, and perform investigations. • Challenge students to question the accuracy of their models and methods. • Support students as they validate conclusions by comparing them to the given situation. • Indicate how various concepts can be applied to other disciplines.
ELA.K12.EE.1.1:	Cite evidence to explain and justify reasoning. **Clarifications:** K-1 Students include textual evidence in their oral communication with guidance and support from adults. The evidence can consist of details from the text without naming the text. During 1st grade, students learn how to incorporate the evidence in their writing. 2-3 Students include relevant textual evidence in their written and oral communication. Students should name the text when they refer to it. In 3rd grade, students should use a combination of direct and indirect citations. 4-5 Students continue with previous skills and reference comments made by speakers and peers. Students cite texts that they've directly quoted, paraphrased, or used for information. When writing, students will use the form of citation dictated by the instructor or the style guide referenced by the instructor. 6-8 Students continue with previous skills and use a style guide to create a proper citation. 9-12 Students continue with previous skills and should be aware of existing style guides and the ways in which they differ.
ELA.K12.EE.2.1:	Read and comprehend grade-level complex texts proficiently. **Clarifications:** See Text Complexity for grade-level complexity bands and a text complexity rubric.
ELA.K12.EE.3.1:	Make inferences to support comprehension. **Clarifications:** Students will make inferences before the words infer or inference are introduced. Kindergarten students will answer questions like "Why is the girl smiling?" or make predictions about what will happen based on the title page. Students will use the terms and apply them in 2nd grade and beyond.
ELA.K12.EE.4.1:	Use appropriate collaborative techniques and active listening skills when engaging in discussions in a variety of situations. **Clarifications:** In kindergarten, students learn to listen to one another respectfully. In grades 1-2, students build upon these skills by justifying what they are thinking. For example: "I think _____ because _____." The collaborative conversations are becoming academic conversations. In grades 3-12, students engage in academic conversations discussing claims and justifying their reasoning, refining and applying skills. Students build on ideas, propel the conversation, and support claims and counterclaims with evidence.
ELA.K12.EE.5.1:	Use the accepted rules governing a specific format to create quality work. **Clarifications:** Students will incorporate skills learned into work products to produce quality work. For students to incorporate these skills appropriately, they must receive instruction. A 3rd grade student creating a poster board display must have instruction in how to effectively present information to do quality work.
	Use appropriate voice and tone when speaking or writing.

ELA.K12.EE.6.1:	**Clarifications:** In kindergarten and 1st grade, students learn the difference between formal and informal language. For example, the way we talk to our friends differs from the way we speak to adults. In 2nd grade and beyond, students practice appropriate social and academic language to discuss texts.

General Course Information and Notes

GENERAL NOTES

SUBJECT AREA TRANSFER NUMBERS

Each course transferred into a Florida public school by an out-of-state or non-public school student should be matched with a course title and number when such course provides substantially the same content. However, a few transfer courses may not be close enough in content to be matched. For those courses a subject area transfer number is provided.

Florida's Benchmarks for Excellent Student Thinking (B.E.S.T.) Standards
This course includes Florida's B.E.S.T. ELA Expectations (EE) and Mathematical Thinking and Reasoning Standards (MTRs) for students. Florida educators should intentionally embed these standards within the content and their instruction as applicable. For guidance on the implementation of the EEs and MTRs, please visit cpalms.org/Standards/BEST_Standards.aspx and select the appropriate B.E.S.T. Standards package.

GENERAL INFORMATION

Course Number: 2100220

Course Path: Section: Grades PreK to 12 Education Courses > **Grade Group:** Grades 6 to 8 Education Courses > **Subject:** Social Studies > **SubSubject:** World and Eastern Hemispheric Histories >
Abbreviated Title: M/J SS TRAN
Course Length: Not Applicable

Course Type: Transfer Course
Course Status: Draft - Course Pending Approval
Grade Level(s): 6,7,8

United States History (#2100310) 2022 - And Beyond

Course Standards

Name	Description
SS.912.A.1.1:	Describe the importance of historiography, which includes how historical knowledge is obtained and transmitted, when interpreting events in history.
SS.912.A.1.2:	Utilize a variety of primary and secondary sources to identify author, historical significance, audience, and authenticity to understand a historical period. **Clarifications:** Examples of primary and secondary sources may be found on various websites such as the site for The Kinsey Collection.
SS.912.A.1.3:	Utilize timelines to identify the time sequence of historical data.
SS.912.A.1.4:	Analyze how images, symbols, objects, cartoons, graphs, charts, maps, and artwork may be used to interpret the significance of time periods and events from the past.
SS.912.A.1.5:	Evaluate the validity, reliability, bias, and authenticity of current events and Internet resources. **Clarifications:** Students should be encouraged to utilize FINDS (Focus, Investigate, Note, Develop, Score), Florida's research process model accessible at: fldoe.org/bii/Library_Media/pdf/12TotalFINDS.pdf
SS.912.A.1.6:	Use case studies to explore social, political, legal, and economic relationships in history.
SS.912.A.1.7:	Describe various socio-cultural aspects of American life including arts, artifacts, literature, education, and publications.
SS.912.A.2.1:	Review causes and consequences of the Civil War. **Clarifications:** Examples may include, but are not limited to, slavery, states' rights, territorial claims, abolitionist movement, regional differences, Reconstruction, 13th, 14th, and 15th amendments. This benchmark is annually evaluated on the United States History End-of-Course Assessment. For more information on how this benchmark is assessed view the United States History End-of-Course Assessment Test Item Specifications pages 19-21. Additional resources may be found on the FLDOE End-of-Course (EOC) Assessments webpage and the FLDOE Social Studies webpage.
SS.912.A.2.2:	Assess the influence of significant people or groups on Reconstruction. **Clarifications:** Examples may include, but are not limited to, Alexander H. Stephens, Andrew Johnson, carpetbaggers, Charles Sumner, Elizabeth Cady Stanton, Frederick Douglass, Hiram Revels, Hiram Rhodes Revels, Jefferson Davis, Ku Klux Klan, Oliver O. Howard, Radical Republicans, Rutherford B. Hayes, scalawags, Thaddeus Stevens, Ulysses S. Grant, and William T. Sherman. This benchmark is annually evaluated on the United States History End-of-Course Assessment. For more information on how this benchmark is evaluated view the United States History End-of-Course Assessment Test Item Specifications pages 19-21. Additional resources may be found on the FLDOE End-of-Course (EOC) Assessments webpage and the FLDOE Social Studies webpage.
SS.912.A.2.3:	Describe the issues that divided Republicans during the early Reconstruction era. **Clarifications:** Examples may include, but are not limited to, the impeachment of Andrew Johnson, southern whites, blacks, black legislators and white extremist organizations such as the KKK, Knights of the White Camellia, The White League, Red Shirts, and Pale Faces. This benchmark is annually evaluated on the United States History End-of-Course Assessment. For more information on how this benchmark is evaluated view the United States History End-of-Course Assessment Test Item Specifications pages 19-21. Additional resources may be found on the FLDOE End-of-Course (EOC) Assessments webpage and the FLDOE Social Studies webpage.
SS.912.A.2.4:	Distinguish the freedoms guaranteed to African Americans and other groups with the 13th, 14th, and 15th Amendments to the Constitution. **Clarifications:** Examples may include, but are not limited to, abolition of slavery, citizenship, suffrage, equal protection. This benchmark is annually evaluated on the United States History End-of-Course Assessment. For more information on how this benchmark is evaluated view the United States History End-of-Course Assessment Test Item Specifications pages 19-21. Additional resources may be found on the FLDOE End-of-Course (EOC) Assessments webpage and the FLDOE Social Studies webpage.
SS.912.A.2.5:	Assess how Jim Crow Laws influenced life for African Americans and other racial/ethnic minority groups. **Clarifications:** This benchmark is annually evaluated on the United States History End-of-Course Assessment. For more information on how this benchmark is evaluated view the United States History End-of-Course Assessment Test Item Specifications pages 19-21. Additional resources may be found on the FLDOE End-of-Course (EOC) Assessments webpage and the FLDOE Social Studies webpage.
SS.912.A.2.6:	Compare the effects of the Black Codes and the Nadir on freed people, and analyze the sharecropping system and debt peonage as practiced in the United States. **Clarifications:** This benchmark is annually evaluated on the United States History End-of-Course Assessment. For more information on how this benchmark is evaluated view the United States History End-of-Course Assessment Test Item Specifications pages 19-21. Additional resources may be found on the FLDOE End-of-Course (EOC) Assessments webpage and the FLDOE Social Studies webpage.

SS.912.A.2.7:	Review the Native American experience. **Clarifications:** Examples may include, but are not limited to, westward expansion, reservation system, the Dawes Act, Wounded Knee Massacre, Sand Creek Massacre, Battle of Little Big Horn, Indian Schools, government involvement in the killing of the buffalo. This benchmark is annually evaluated on the United States History End-of-Course Assessment. For more information on how this benchmark is evaluated view the United States History End-of-Course Assessment Test Item Specifications pages 19-21. Additional resources may be found on the FLDOE End-of-Course (EOC) Assessments webpage and the FLDOE Social Studies webpage.
SS.912.A.3.1:	Analyze the economic challenges to American farmers and farmers' responses to these challenges in the mid to late 1800s. **Clarifications:** This benchmark is annually evaluated on the United States History End-of-Course Assessment. For more information on how this benchmark is evaluated view the United States History End-of-Course Assessment Test Item Specifications page 22. Additional resources may be found on the FLDOE End-of-Course (EOC) Assessments webpage and the FLDOE Social Studies webpage. Examples may include, but are not limited to, creation of agricultural colleges, Morrill Land Grant Act, gold standard and Bimetallism, the creation of the Populist Party.
SS.912.A.3.2:	Examine the social, political, and economic causes, course, and consequences of the second Industrial Revolution that began in the late 19th century. **Clarifications:** This benchmark is annually evaluated on the United States History End-of-Course Assessment. For more information on how this benchmark is evaluated view the United States History End-of-Course Assessment Test Item Specifications pages 23-26. Additional resources may be found on the FLDOE End-of-Course (EOC) Assessments webpage and the FLDOE Social Studies webpage.
SS.912.A.3.3:	Compare the first and second Industrial Revolutions in the United States. **Clarifications:** This benchmark is annually evaluated on the United States History End-of-Course Assessment. For more information on how this benchmark is evaluated view the United States History End-of-Course Assessment Test Item Specifications pages 23-26. Additional resources may be found on the FLDOE End-of-Course (EOC) Assessments webpage and the FLDOE Social Studies webpage. Examples may include, but are not limited to, trade, development of new industries.
SS.912.A.3.4:	Determine how the development of steel, oil, transportation, communication, and business practices affected the United States economy. **Clarifications:** Examples may include, but are not limited to, railroads, the telegraph, pools, holding companies, trusts, corporations, contributed to westward expansion, expansion of trade and development of new industries, vertical and horizontal integration. This benchmark is annually evaluated on the United States History End-of-Course Assessment. For more information on how this benchmark is evaluated view the United States History End-of-Course Assessment Test Item Specifications pages 23-26. Additional resources may be found on the FLDOE End-of-Course (EOC) Assessments webpage and the FLDOE Social Studies webpage.
SS.912.A.3.5:	Identify significant inventors of the Industrial Revolution including African Americans and women. **Clarifications:** Examples may include, but are not limited to, Lewis Howard Latimer, Jan E. Matzeliger, Sarah E. Goode, Granville T. Woods, Alexander Graham Bell, Thomas Edison, George Pullman, Henry Ford, Orville and Wilbur Wright, Elijah McCoy, Garrett Morgan, Madame C.J. Walker, George Westinghouse. This benchmark is annually evaluated on the United States History End-of-Course Assessment. For more information on how this benchmark is evaluated view the United States History End-of-Course Assessment Test Item Specifications pages 23-26. Additional resources may be found on the FLDOE End-of-Course (EOC) Assessments webpage and the FLDOE Social Studies webpage.
SS.912.A.3.6:	Analyze changes that occurred as the United States shifted from agrarian to an industrial society. **Clarifications:** Examples may include, but are not limited to, Social Darwinism, laissez-faire, government regulations of food and drugs, migration to cities, urbanization, changes to the family structure, Ellis Island, angel Island, push-pull factors. This benchmark is annually evaluated on the United States History End-of-Course Assessment. For more information on how this benchmark is evaluated view the United States History End-of-Course Assessment Test Item Specifications page 22. Additional resources may be found on the FLDOE End-of-Course (EOC) Assessments webpage and the FLDOE Social Studies webpage.
SS.912.A.3.7:	Compare the experience of European immigrants in the east to that of Asian immigrants in the west (the Chinese Exclusion Act, Gentlemen's Agreement with Japan). **Clarifications:** Examples may include, but are not limited to nativism, integration of immigrants into society when comparing "Old" [before 1890] and "New" immigrants [after 1890], Immigration Act of 1924. This benchmark is annually evaluated on the United States History End-of-Course Assessment. For more information on how this benchmark is evaluated view the United States History End-of-Course Assessment Test Item Specifications pages 23-26. Additional resources may be found on the FLDOE End-of-Course (EOC) Assessments webpage and the FLDOE Social Studies webpage.
SS.912.A.3.8:	Examine the importance of social change and reform in the late 19th and early 20th centuries (class system, migration from farms to cities, Social Gospel movement, role of settlement houses and churches in providing services to the poor). **Clarifications:** This benchmark is annually evaluated on the United States History End-of-Course Assessment. For more information on how this benchmark is evaluated view the United States History End-of-Course Assessment Test Item Specifications page 22. Additional resources may be found on the FLDOE End-of-Course (EOC) Assessments webpage and the FLDOE Social Studies webpage.

SS.912.A.3.9:	Examine causes, course, and consequences of the labor movement in the late 19th and early 20th centuries. **Clarifications:** Examples may include, but are not limited to, unions, Knights of Labor, american Federation of Labor, socialist Party, labor laws. This benchmark is annually evaluated on the United States History End-of-Course Assessment. For more information on how this benchmark is evaluated view the United States History End-of-Course Assessment Test Item Specifications page 22. Additional resources may be found on the FLDOE End-of-Course (EOC) Assessments webpage and the FLDOE Social Studies webpage.
SS.912.A.3.10:	Review different economic and philosophic ideologies. **Clarifications:** Economic examples may include, but are not limited to, market economy, mixed economy, planned economy and philosophic examples are capitalism, socialism, communism, anarchy. This benchmark is annually evaluated on the United States History End-of-Course Assessment. For more information on how this benchmark is evaluated view the United States History End-of-Course Assessment Test Item Specifications page 22. Additional resources may be found on the FLDOE End-of-Course (EOC) Assessments webpage and the FLDOE Social Studies webpage.
SS.912.A.3.11:	Analyze the impact of political machines in United States cities in the late 19th and early 20th centuries. **Clarifications:** Examples may include, but aren ot limited to, Boss Tweed, Tammany Hall, George Washington Plunkitt, Washington Gladden, Thomas Nast. This benchmark is annually evaluated on the United States History End-of-Course Assessment. For more information on how this benchmark is evaluated view the United States History End-of-Course Assessment Test Item Specifications page 22. Additional resources may be found on the FLDOE End-of-Course (EOC) Assessments webpage and the FLDOE Social Studies webpage.
SS.912.A.3.12:	Compare how different nongovernmental organizations and progressives worked to shape public policy, restore economic opportunities, and correct injustices in American life. **Clarifications:** Examples may include, but are not limited to, NAACP, YMCA, Women's Christian Temperance Union, National Women's Suffrage Association, National Women's Party, Robert LaFollette, Florence Kelley, Ida M. Tarbell, Eugene Debs, Carrie Chapman Catt, Alice Paul, Theodore Roosevelt, William Taft, Woodrow Wilson, Upton Sinclair, Booker T. Washington, W.E.B. DuBois, Gifford Pinchot, William Jennings Bryan. This benchmark is annually evaluated on the United States History End-of-Course Assessment. For more information on how this benchmark is evaluated view the United States History End-of-Course Assessment Test Item Specifications page 22. Additional resources may be found on the FLDOE End-of-Course (EOC) Assessments webpage and the FLDOE Social Studies webpage.
SS.912.A.3.13:	Examine key events and peoples in Florida history as they relate to United States history. **Clarifications:** Examples may include, but are not limited to, the railroad industry, bridge construction in the Florida Keys, the cattle industry, the cigar industry, the influence of Cuban, Greek and Italian immigrants, Henry B. Plant, William Chipley, Henry Flagler, George Proctor, Thomas DeSaille Tucker, Hamilton Disston. This benchmark is annually evaluated on the United States History End-of-Course Assessment. For more information on how this benchmark is evaluated view the United States History End-of-Course Assessment Test Item Specifications page 22. Additional resources may be found on the FLDOE End-of-Course (EOC) Assessments webpage and the FLDOE Social Studies webpage.
SS.912.A.4.1:	Analyze the major factors that drove United States imperialism. **Clarifications:** Examples may include, but are not limited to, the Monroe Doctrine, Manifest Destiny, *The Influence of Sea Power Upon History, Turner's thesis,the Roosevelt Corollary, natural resources, markets for resources, elimination of spheres of influence in China.* This benchmark is annually evaluated on the United States History End-of-Course Assessment. For more information on how this benchmark is evaluated view the United States History End-of-Course Assessment Test Item Specifications pages 27-28. Additional resources may be found on the FLDOE End-of-Course (EOC) Assessments webpage and the FLDOE Social Studies webpage.
SS.912.A.4.2:	Explain the motives of the United States acquisition of the territories. **Clarifications:** Examples may include, but are not limited to, Alaska, Hawaii, Puerto Rico, Philippines, Guam, Samoa, Marshall Islands, Midway Island, Virgin Islands. This benchmark is annually evaluated on the United States History End-of-Course Assessment. For more information on how this benchmark is evaluated view the United States History End-of-Course Assessment Test Item Specifications pages 27-28. Additional resources may be found on the FLDOE End-of-Course (EOC) Assessments webpage and the FLDOE Social Studies webpage.
SS.912.A.4.3:	Examine causes, course, and consequences of the Spanish American War. **Clarifications:** Examples may include, but are not limited to, Cuba as a protectorate, Yellow Journalism, sinking of the *Maine, the Philippines, Commodore Dewey, the Rough Riders, acqusition of territories, the Treaty of Paris.* This benchmark is annually evaluated on the United States History End-of-Course Assessment. For more information on how this benchmark is evaluated view the United States History End-of-Course Assessment Test Item Specifications pages 27-28. Additional resources may be found on the FLDOE End-of-Course (EOC) Assessments webpage and the FLDOE Social Studies webpage.
SS.912.A.4.4:	Analyze the economic, military, and security motivations of the United States to complete the Panama Canal as well as major obstacles involved in its construction. **Clarifications:** Examples may include, but are not limited to, disease, environmental impact, challenges faced by various ethnic groups such as Africans and indigenous populations, shipping routes, increased trade, defense and independence for Panama.

	This benchmark is annually evaluated on the United States History End-of-Course Assessment. For more information on how this benchmark is evaluated view the United States History End-of-Course Assessment Test Item Specifications pages 27-28. Additional resources may be found on the FLDOE End-of-Course (EOC) Assessments webpage and the FLDOE Social Studies webpage.
SS.912.A.4.5:	Examine causes, course, and consequences of United States involvement in World War I. **Clarifications:** Examples may include, but are not limited to, nationalism, imperialism, militarism, entangling alliances vs. neutrality, Zimmerman Note, the *Lusitania,* the Selective Service Act, the homefront, the American Expeditionary Force, Wilson's Fourteen Points, the Treaty of Versailles (and opposition to it), isolationism. This benchmark is annually evaluated on the United States History End-of-Course Assessment. For more information on how this benchmark is evaluated view the United States History End-of-Course Assessment Test Item Specifications pages 29-31. Additional resources may be found on the FLDOE End-of-Course (EOC) Assessments webpage and the FLDOE Social Studies webpage.
SS.912.A.4.6:	Examine how the United States government prepared the nation for war with war measures (Selective Service Act, War Industries Board, war bonds, Espionage Act, Sedition Act, Committee of Public Information). **Clarifications:** This benchmark is annually evaluated on the United States History End-of-Course Assessment. For more information on how this benchmark is evaluated view the United States History End-of-Course Assessment Test Item Specifications pages 29-31. Additional resources may be found on the FLDOE End-of-Course (EOC) Assessments webpage and the FLDOE Social Studies webpage.
SS.912.A.4.7:	Examine the impact of airplanes, battleships, new weaponry and chemical warfare in creating new war strategies (trench warfare, convoys). **Clarifications:** This benchmark is annually evaluated on the United States History End-of-Course Assessment. For more information on how this benchmark is evaluated view the United States History End-of-Course Assessment Test Item Specifications pages 29-31. Additional resources may be found on the FLDOE End-of-Course (EOC) Assessments webpage and the FLDOE Social Studies webpage.
SS.912.A.4.8:	Compare the experiences Americans (African Americans, Hispanics, Asians, women, conscientious objectors) had while serving in Europe. **Clarifications:** This benchmark is annually evaluated on the United States History End-of-Course Assessment. For more information on how this benchmark is evaluated view the United States History End-of-Course Assessment Test Item Specifications pages 29-31. Additional resources may be found on the FLDOE End-of-Course (EOC) Assessments webpage and the FLDOE Social Studies webpage.
SS.912.A.4.9:	Compare how the war impacted German Americans, Asian Americans, African Americans, Hispanic Americans, Jewish Americans, Native Americans, women and dissenters in the United States. **Clarifications:** This benchmark is annually evaluated on the United States History End-of-Course Assessment. For more information on how this benchmark is evaluated view the United States History End-of-Course Assessment Test Item Specifications pages 29-31. Additional resources may be found on the FLDOE End-of-Course (EOC) Assessments webpage and the FLDOE Social Studies webpage.
SS.912.A.4.10:	Examine the provisions of the Treaty of Versailles and the failure of the United States to support the League of Nations. **Clarifications:** Examples may include, but are not limited to, self-determination, boundaries, demilitarized zone, sanctions reparations, and the League of Nations (including Article X of the Covenant). This benchmark is annually evaluated on the United States History End-of-Course Assessment. For more information on how this benchmark is evaluated view the United States History End-of-Course Assessment Test Item Specifications pages 29-31. Additional resources may be found on the FLDOE End-of-Course (EOC) Assessments webpage and the FLDOE Social Studies webpage.
SS.912.A.4.11:	Examine key events and peoples in Florida history as they relate to United States history. **Clarifications:** Examples may include, but are not limited to, the Spanish-American War, Ybor City, Jose Marti. This benchmark is annually evaluated on the United States History End-of-Course Assessment. For more information on how this benchmark is evaluated view the United States History End-of-Course Assessment Test Item Specifications pages 29-31. Additional resources may be found on the FLDOE End-of-Course (EOC) Assessments webpage and the FLDOE Social Studies webpage.
SS.912.A.5.1:	Discuss the economic outcomes of demobilization. **Clarifications:** This benchmark is annually evaluated on the United States History End-of-Course Assessment. For more information on how this benchmark is evaluated view the United States History End-of-Course Assessment Test Item Specifications pages 32-33. Additional resources may be found on the FLDOE End-of-Course (EOC) Assessments webpage and the FLDOE Social Studies webpage.
SS.912.A.5.2:	Explain the causes of the public reaction (Sacco and Vanzetti, labor, racial unrest) associated with the Red Scare. **Clarifications:** Examples may also include, but are not limited to, Palmer Raids, FBI, J. Edgar Hoover. This benchmark is annually evaluated on the United States History End-of-Course Assessment. For more information on how this benchmark is evaluated view the United States History End-of-Course Assessment Test Item Specifications pages 35-36. Additional resources may be found on the FLDOE End-of-Course (EOC) Assessments webpage and the FLDOE Social Studies webpage.
SS.912.A.5.3:	Examine the impact of United States foreign economic policy during the 1920s. **Clarifications:** Examples may include, but are not limited to, the Depression of 1920-21, "The Business of America is Business," assembly line, installment buying, consumerism. This benchmark is annually evaluated on the United States History End-of-Course Assessment. For more information on how this benchmark is evaluated view the United States History End-of-Course Assessment Test Item Specifications pages 32-33. Additional resources may be found on

	the FLDOE End-of-Course (EOC) Assessments webpage and the FLDOE Social Studies webpage.
SS.912.A.5.4:	Evaluate how the economic boom during the Roaring Twenties changed consumers, businesses, manufacturing, and marketing practices. **Clarifications:** This benchmark is annually evaluated on the United States History End-of-Course Assessment. For more information on how this benchmark is evaluated view the United States History End-of-Course Assessment Test Item Specifications pages 37-39. Additional resources may be found on the FLDOE End-of-Course (EOC) Assessments webpage and the FLDOE Social Studies webpage.
SS.912.A.5.5:	Describe efforts by the United States and other world powers to avoid future wars. **Clarifications:** Examples may include, but are not limited to, League of Nations, Washington Naval Conference, London Conference, Kellogg-Briand Pact, the Nobel Prize. This benchmark is annually evaluated on the United States History End-of-Course Assessment. For more information on how this benchmark is evaluated view the United States History End-of-Course Assessment Test Item Specifications page 34. Additional resources may be found on the FLDOE End-of-Course (EOC) Assessments webpage and the FLDOE Social Studies webpage.
SS.912.A.5.6:	Analyze the influence that Hollywood, the Harlem Renaissance, the Fundamentalist movement, and prohibition had in changing American society in the 1920s. **Clarifications:** This benchmark is annually evaluated on the United States History End-of-Course Assessment. For more information on how this benchmark is evaluated view the United States History End-of-Course Assessment Test Item Specifications pages 35-36. Additional resources may be found on the FLDOE End-of-Course (EOC) Assessments webpage and the FLDOE Social Studies webpage.
SS.912.A.5.7:	Examine the freedom movements that advocated civil rights for African Americans, Latinos, Asians, and women. **Clarifications:** This benchmark is annually evaluated on the United States History End-of-Course Assessment. For more information on how this benchmark is evaluated view the United States History End-of-Course Assessment Test Item Specifications pages 35-36. Additional resources may be found on the FLDOE End-of-Course (EOC) Assessments webpage and the FLDOE Social Studies webpage.
SS.912.A.5.8:	Compare the views of Booker T. Washington, W.E.B. DuBois, and Marcus Garvey relating to the African American experience. **Clarifications:** This benchmark is annually evaluated on the United States History End-of-Course Assessment. For more information on how this benchmark is evaluated view the United States History End-of-Course Assessment Test Item Specifications pages 35-36. Additional resources may be found on the FLDOE End-of-Course (EOC) Assessments webpage and the FLDOE Social Studies webpage.
SS.912.A.5.9:	Explain why support for the Ku Klux Klan varied in the 1920s with respect to issues such as anti-immigration, anti-African American, anti-Catholic, anti-Jewish, anti-women, and anti-union ideas. **Clarifications:** Examples may include, but are not limited to, 100 Percent Americanism. This benchmark is annually evaluated on the United States History End-of-Course Assessment. For more information on how this benchmark is evaluated view the United States History End-of-Course Assessment Test Item Specifications pages 35-36. Additional resources may be found on the FLDOE End-of-Course (EOC) Assessments webpage and the FLDOE Social Studies webpage.
SS.912.A.5.10:	Analyze support for and resistance to civil rights for women, African Americans, Native Americans, and other minorities. **Clarifications:** This benchmark is annually evaluated on the United States History End-of-Course Assessment. For more information on how this benchmark is evaluated view the United States History End-of-Course Assessment Test Item Specifications pages 35-36. Additional resources may be found on the FLDOE End-of-Course (EOC) Assessments webpage and the FLDOE Social Studies webpage.
SS.912.A.5.11:	Examine causes, course, and consequences of the Great Depression and the New Deal. **Clarifications:** This benchmark is annually evaluated on the United States History End-of-Course Assessment. For more information on how this benchmark is evaluated view the United States History End-of-Course Assessment Test Item Specifications pages 37-39. Additional resources may be found on the FLDOE End-of-Course (EOC) Assessments webpage and the FLDOE Social Studies webpage.
SS.912.A.5.12:	Examine key events and people in Florida history as they relate to United States history. **Clarifications:** Examples may include, but are not limited to, Rosewood, land boom, speculation, impact of climate and natural disasters on the end of the land boom, invention of modern air conditioning in 1929, Alfred DuPont, Majorie Kinnan Rawlings, Zora Neale Hurston, James Weldon Johnson. This benchmark is annually evaluated on the United States History End-of-Course Assessment. For more information on how this benchmark is evaluated view the United States History End-of-Course Assessment Test Item Specifications pages 35-36. Additional resources may be found on the FLDOE End-of-Course (EOC) Assessments webpage and the FLDOE Social Studies webpage.
SS.912.A.6.1:	Examine causes, course, and consequences of World War II on the United States and the world. **Clarifications:** Examples may include, but are not limited to, rise of dictators, attack on Pearl Harbor, Nazi party, American neutrality, D-Day, Battle of the Bulge, War in the Pacific, internment camps, Holocaust, Yalta. This benchmark is annually evaluated on the United States History End-of-Course Assessment. For more information on how this benchmark is evaluated view the United States History End-of-Course Assessment Test Item Specifications pages 40-42. Additional resources may be found on the FLDOE End-of-Course (EOC) Assessments webpage and the FLDOE Social Studies webpage.
	Describe the United States response in the early years of World War II (Neutrality Acts, Cash and Carry, Lend Lease Act). **Clarifications:**

SS.912.A.6.2:	This benchmark is annually evaluated on the United States History End-of-Course Assessment. For more information on how this benchmark is evaluated view the United States History End-of-Course Assessment Test Item Specifications pages 40-42. Additional resources may be found on the FLDOE End-of-Course (EOC) Assessments webpage and the FLDOE Social Studies webpage.
SS.912.A.6.3:	Analyze the impact of the Holocaust during World War II on Jews as well as other groups. **Clarifications:** This benchmark is annually evaluated on the United States History End-of-Course Assessment. For more information on how this benchmark is evaluated view the United States History End-of-Course Assessment Test Item Specifications pages 40-42. Additional resources may be found on the FLDOE End-of-Course (EOC) Assessments webpage and the FLDOE Social Studies webpage.
SS.912.A.6.4:	Examine efforts to expand or contract rights for various populations during World War II. **Clarifications:** Examples may include, but are not limited to, women, African Americans, German Americans, Japanese Americans and their internment, Native Americans, Hispanic Americans, Italian Americans. This benchmark is annually evaluated on the United States History End-of-Course Assessment. For more information on how this benchmark is evaluated view the United States History End-of-Course Assessment Test Item Specifications pages 40-42. Additional resources may be found on the FLDOE End-of-Course (EOC) Assessments webpage and the FLDOE Social Studies webpage.
SS.912.A.6.5:	Explain the impact of World War II on domestic government policy. **Clarifications:** Examples may include, but are not limited to, rationing, national security, civil rights, increased job opportunities for African Americans, women, Jews, and other refugees. This benchmark is annually evaluated on the United States History End-of-Course Assessment. For more information on how this benchmark is evaluated view the United States History End-of-Course Assessment Test Item Specifications pages 40-42. Additional resources may be found on the FLDOE End-of-Course (EOC) Assessments webpage and the FLDOE Social Studies webpage.
SS.912.A.6.6:	Analyze the use of atomic weapons during World War II and the aftermath of the bombings. **Clarifications:** This benchmark is annually evaluated on the United States History End-of-Course Assessment. For more information on how this benchmark is evaluated view the United States History End-of-Course Assessment Test Item Specifications pages 40-42. Additional resources may be found on the FLDOE End-of-Course (EOC) Assessments webpage and the FLDOE Social Studies webpage.
SS.912.A.6.7:	Describe the attempts to promote international justice through the Nuremberg Trials. **Clarifications:** This benchmark is annually evaluated on the United States History End-of-Course Assessment. For more information on how this benchmark is evaluated view the United States History End-of-Course Assessment Test Item Specifications pages 40-42. Additional resources may be found on the FLDOE End-of-Course (EOC) Assessments webpage and the FLDOE Social Studies webpage.
SS.912.A.6.8:	Analyze the effects of the Red Scare on domestic United States policy. **Clarifications:** Examples may include, but are not limited to, loyalty review program, House Un-American Activities Committee, McCarthyism (Sen. Joe McCarthy), McCarran Act. This benchmark is annually evaluated on the United States History End-of-Course Assessment. For more information on how this benchmark is evaluated view the United States History End-of-Course Assessment Test Item Specifications pages 40-42. Additional resources may be found on the FLDOE End-of-Course (EOC) Assessments webpage and the FLDOE Social Studies webpage.
SS.912.A.6.9:	Describe the rationale for the formation of the United Nations, including the contribution of Mary McLeod Bethune. **Clarifications:** Examples may include, but are not limited to, the Declaration of Human Rights. This benchmark is annually evaluated on the United States History End-of-Course Assessment. For more information on how this benchmark is evaluated view the United States History End-of-Course Assessment Test Item Specifications pages 40-42. Additional resources may be found on the FLDOE End-of-Course (EOC) Assessments webpage and the FLDOE Social Studies webpage.
SS.912.A.6.10:	Examine causes, course, and consequences of the early years of the Cold War (Truman Doctrine, Marshall Plan, NATO, Warsaw Pact). **Clarifications:** This benchmark is annually evaluated on the United States History End-of-Course Assessment. For more information on how this benchmark is evaluated view the United States History End-of-Course Assessment Test Item Specifications pages 43-44. Additional resources may be found on the FLDOE End-of-Course (EOC) Assessments webpage and the FLDOE Social Studies webpage.
SS.912.A.6.11:	Examine the controversy surrounding the proliferation of nuclear technology in the United States and the world. **Clarifications:** This benchmark is annually evaluated on the United States History End-of-Course Assessment. For more information on how this benchmark is evaluated view the United States History End-of-Course Assessment Test Item Specifications pages 45-46. Additional resources may be found on the FLDOE End-of-Course (EOC) Assessments webpage and the FLDOE Social Studies webpage.
SS.912.A.6.12:	Examine causes, course, and consequences of the Korean War. **Clarifications:** Examples may include, but aren ot limited to, Communist China, 38th parallel, cease fire, firing of Gen. Douglas McArthur. This benchmark is annually evaluated on the United States History End-of-Course Assessment. For more information on how this benchmark is evaluated view the United States History End-of-Course Assessment Test Item Specifications pages 45-46. Additional resources may be found on the FLDOE End-of-Course (EOC) Assessments webpage and the FLDOE Social Studies webpage.
	Analyze significant foreign policy events during the Truman, Eisenhower, Kennedy, Johnson, and Nixon administrations.

SS.912.A.6.13:	**Clarifications:** Examples may include, but are not limited to, the Domino Theory, Sputnik, space race, Korean Conflict, Vietnam Conflict, U-2 and Gary Powers, Bay of Pigs invasion, Cuban Missile Crisis, Berlin Wall, Ping Pong Diplomacy, opening of China. This benchmark is annually evaluated on the United States History End-of-Course Assessment. For more information on how this benchmark is evaluated view the United States History End-of-Course Assessment Test Item Specifications pages 45-46. Additional resources may be found on the FLDOE End-of-Course (EOC) Assessments webpage and the FLDOE Social Studies webpage.
SS.912.A.6.14:	Analyze causes, course, and consequences of the Vietnam War. **Clarifications:** Examples may include, but are not lmited to, Geneva Accords, Gulf of Tonkin Resolution, the draft, escalating protest at home, Vietnamization, the War Powers Act. This benchmark is annually evaluated on the United States History End-of-Course Assessment. For more information on how this benchmark is evaluated view the United States History End-of-Course Assessment Test Item Specifications pages 45-46. Additional resources may be found on the FLDOE End-of-Course (EOC) Assessments webpage and the FLDOE Social Studies webpage.
SS.912.A.6.15:	Examine key events and peoples in Florida history as they relate to United States history. **Clarifications:** Examples may include, but are not limited to, Mosquito Fleet, "Double V Campaign", construction of military bases and WWII training centers, 1959 Cuban coup and its impact on Florida, development of the space program and NASA. This benchmark is annually evaluated on the United States History End-of-Course Assessment. For more information on how this benchmark is evaluated view the United States History End-of-Course Assessment Test Item Specifications pages 40-42. Additional resources may be found on the FLDOE End-of-Course (EOC) Assessments webpage and the FLDOE Social Studies webpage.
SS.912.A.7.1:	Identify causes for Post-World War II prosperity and its effects on American society. **Clarifications:** Examples may include, but are not limited to, G.I. Bill, Baby Boom, growth of suburbs, Beatnik movement, youth culture, religious revivalism (e.g., Billy Graham and Bishop Fulton J. Sheen), conformity of the 1950s and the protest in the 1960s. This benchmark is annually evaluated on the United States History End-of-Course Assessment. For more information on how this benchmark is evaluated view the United States History End-of-Course Assessment Test Item Specifications pages 47-48. Additional resources may be found on the FLDOE End-of-Course (EOC) Assessments webpage and the FLDOE Social Studies webpage.
SS.912.A.7.2:	Compare the relative prosperity between different ethnic groups and social classes in the post-World War II period. **Clarifications:** This benchmark is annually evaluated on the United States History End-of-Course Assessment. For more information on how this benchmark is evaluated view the United States History End-of-Course Assessment Test Item Specifications pages 47-48. Additional resources may be found on the FLDOE End-of-Course (EOC) Assessments webpage and the FLDOE Social Studies webpage.
SS.912.A.7.3:	Examine the changing status of women in the United States from post-World War II to present. **Clarifications:** Examples may include, but are not limited to, increased numbers of women in the workforce, Civil Rights Act of 1964, *The Feminine Mystique*, National Organization for Women, *Roe v. Wade,* Equal Rights Amendment, Title IX, Betty Freidan, Gloria Steinem, Phyllis Schlafly, Billie Jean King, feminism. This benchmark is annually evaluated on the United States History End-of-Course Assessment. For more information on how this benchmark is evaluated view the United States History End-of-Course Assessment Test Item Specifications pages 47-48. Additional resources may be found on the FLDOE End-of-Course (EOC) Assessments webpage and the FLDOE Social Studies webpage.
SS.912.A.7.4:	Evaluate the success of 1960s era presidents' foreign and domestic policies. **Clarifications:** Examples may include, but are not limited to, civil rights legislation, Space Race, Great Society, War on Poverty. This benchmark is annually evaluated on the United States History End-of-Course Assessment. For more information on how this benchmark is evaluated view the United States History End-of-Course Assessment Test Item Specifications pages 49-50. Additional resources may be found on the FLDOE End-of-Course (EOC) Assessments webpage and the FLDOE Social Studies webpage.
SS.912.A.7.5:	Compare nonviolent and violent approaches utilized by groups (African Americans, women, Native Americans, Hispanics) to achieve civil rights. **Clarifications:** Examples may include, but are not limited to, sit-ins, Freedom Rides, boycotts, riots, protest marches. This benchmark is annually evaluated on the United States History End-of-Course Assessment. For more information on how this benchmark is evaluated view the United States History End-of-Course Assessment Test Item Specifications pages 51-52. Additional resources may be found on the FLDOE End-of-Course (EOC) Assessments webpage and the FLDOE Social Studies webpage.
SS.912.A.7.6:	Assess key figures and organizations in shaping the Civil Rights Movement and Black Power Movement. **Clarifications:** Examples may include, but are not limited to, the NAACP, National Urban League, SNCC, CORE, James Farmer, Charles Houston, Thurgood Marshall, Rosa Parks, Constance Baker Motley, the Little Rock Nine, Roy Wilkins, Whitney M. Young, A. Philip Randolph, Dr. Martin Luther King, Jr., Robert F. Williams, Fannie Lou Hamer, Malcolm X [El-Hajj Malik El-Shabazz], Stokely Carmichael [Kwame Ture], H. Rap Brown [Jamil Abdullah Al-Amin], the Black Panther Party [e.g., Huey P. Newton, Bobby Seale]. This benchmark is annually evaluated on the United States History End-of-Course Assessment. For more information on how this benchmark is evaluated view the United States History End-of-Course Assessment Test Item Specifications pages 51-52. Additional resources may be found on the FLDOE End-of-Course (EOC) Assessments webpage and the FLDOE Social Studies webpage.

SS.912.A.7.7:	Assess the building of coalitions between African Americans, whites, and other groups in achieving integration and equal rights. **Clarifications:** Examples may include, but are not limited to, Freedom Summer, Freedom Rides, Montgomery Bus Boycott, Tallahassee Bus Boycott of 1956, March on Washington. This benchmark is annually evaluated on the United States History End-of-Course Assessment. For more information on how this benchmark is evaluated view the United States History End-of-Course Assessment Test Item Specifications pages 51-52. Additional resources may be found on the FLDOE End-of-Course (EOC) Assessments webpage and the FLDOE Social Studies webpage.
SS.912.A.7.8:	Analyze significant Supreme Court decisions relating to integration, busing, affirmative action, the rights of the accused, and reproductive rights. **Clarifications:** Examples may include, but are not limited to, Plessy v. Ferguson [1896], Brown v. Board of Education [1954], Swann v. Charlotte-Mecklenburg Board of Education [1971], Regents of the University of California v. Bakke [1978], Miranda v. Arizona [1966], Gideon v. Wainwright [1963], Mapp v. Ohio [1961], and Roe v. Wade [1973]. This benchmark is annually evaluated on the United States History End-of-Course Assessment. For more information on how this benchmark is evaluated view the United States History End-of-Course Assessment Test Item Specifications pages 53-54. Additional resources may be found on the FLDOE End-of-Course (EOC) Assessments webpage and the FLDOE Social Studies webpage.
SS.912.A.7.9:	Examine the similarities of social movements (Native Americans, Hispanics, women, anti-war protesters) of the 1960s and 1970s.
SS.912.A.7.10:	Analyze the significance of Vietnam and Watergate on the government and people of the United States. **Clarifications:** Examples may include, but are not limited to, mistrust of government, reinforcement of freedom of the press, as well as checks and balances. Examples may include, but are not limited to, mistrust of government and reinforcement of freedom of the press. This benchmark is annually evaluated on the United States History End-of-Course Assessment. For more information on how this benchmark is evaluated view the United States History End-of-Course Assessment Test Item Specifications pages 49-50. Additional resources may be found on the FLDOE End-of-Course (EOC) Assessments webpage and the FLDOE Social Studies webpage.
SS.912.A.7.11:	Analyze the foreign policy of the United States as it relates to Africa, Asia, the Caribbean, Latin America, and the Middle East. **Clarifications:** Examples may include, but aren ot limited to, Haiti, Bosnia-Kosovo, Rwanda, Grenada, Camp David Accords, Iran Hostage Crisis, Lebanon, Iran-Iraq War, Reagan Doctrine, Iran-Contra Affair, Persian Gulf War. This benchmark is annually evaluated on the United States History End-of-Course Assessment. For more information on how this benchmark is evaluated view the United States History End-of-Course Assessment Test Item Specifications pages 55-56. Additional resources may be found on the FLDOE End-of-Course (EOC) Assessments webpage and the FLDOE Social Studies webpage.
SS.912.A.7.12:	Analyze political, economic, and social concerns that emerged at the end of the 20th century and into the 21st century. **Clarifications:** Examples may include, but are not limited to, AIDS, Green Revolution, outsourcing of jobs, global warming, human rights violations. This benchmark is annually evaluated on the United States History End-of-Course Assessment. For more information on how this benchmark is evaluated view the United States History End-of-Course Assessment Test Item Specifications pages 57-59. Additional resources may be found on the FLDOE End-of-Course (EOC) Assessments webpage and the FLDOE Social Studies webpage.
SS.912.A.7.13:	Analyze the attempts to extend New Deal legislation through the Great Society and the successes and failures of these programs to promote social and economic stability. **Clarifications:** Examples may include, but are not limited to, Civil Rights Act of 1964, Voting Rights Act of 1965, War on Poverty, Medicare, Medicaid, Headstart. This benchmark is annually evaluated on the United States History End-of-Course Assessment. For more information on how this benchmark is evaluated view the United States History End-of-Course Assessment Test Item Specifications pages 49-50 and pages 57-59. Additional resources may be found on the FLDOE End-of-Course (EOC) Assessments webpage and the FLDOE Social Studies webpage.
SS.912.A.7.14:	Review the role of the United States as a participant in the global economy (trade agreements, international competition, impact on American labor, environmental concerns). **Clarifications:** Examples may include, but are not limited to, NAFTA, World Trade Organization. This benchmark is annually evaluated on the United States History End-of-Course Assessment. For more information on how this benchmark is evaluated view the United States History End-of-Course Assessment Test Item Specifications pages 57-59. Additional resources may be found on the FLDOE End-of-Course (EOC) Assessments webpage and the FLDOE Social Studies webpage.
SS.912.A.7.15:	Analyze the effects of foreign and domestic terrorism on the American people. **Clarifications:** Examples may include, but are not limited to, Oklahoma City bombing, attack of September 11, 2001, Patriot Act, wars in Afghanistan and Iraq. This benchmark is annually evaluated on the United States History End-of-Course Assessment. For more information on how this benchmark is evaluated view the United States History End-of-Course Assessment Test Item Specifications pages 57-59. Additional resources may be found on the FLDOE End-of-Course (EOC) Assessments webpage and the FLDOE Social Studies webpage.
SS.912.A.7.16:	Examine changes in immigration policy and attitudes toward immigration since 1950. **Clarifications:** This benchmark is annually evaluated on the United States History End-of-Course Assessment. For more information on how this benchmark is evaluated view the United States History End-of-Course Assessment Test Item Specifications pages 57-59. Additional resources may be found on

	the FLDOE End-of-Course (EOC) Assessments webpage and the FLDOE Social Studies webpage.
SS.912.A.7.17:	Examine key events and key people in Florida history as they relate to United States history. **Clarifications:** Examples may include, but are not limited to, selection of Central Florida as a location for Disney, growth of the citrus and cigar industries, construction of Interstates, Harry T. Moore, Pork Chop Gang, Claude Pepper, changes in the space program, use of DEET, Hurricane Andrew, the Election of 2000, migration and immigration, Sunbelt state. This benchmark is annually evaluated on the United States History End-of-Course Assessment. For more information on how this benchmark is evaluated view the United States History End-of-Course Assessment Test Item Specifications pages 47-52 and pages 57-59. Additional resources may be found on the FLDOE End-of-Course (EOC) Assessments webpage and the FLDOE Social Studies webpage.
SS.912.G.1.2:	Use spatial perspective and appropriate geographic terms and tools, including the Six Essential Elements, as organizational schema to describe any given place.
SS.912.G.1.3:	Employ applicable units of measurement and scale to solve simple locational problems using maps and globes.
SS.912.G.2.1:	Identify the physical characteristics and the human characteristics that define and differentiate regions. **Clarifications:** Examples of physical characteristics are climate, terrain, resources. Examples of human characteristics are religion, government, economy, demography.
SS.912.G.4.2:	Use geographic terms and tools to analyze the push/pull factors contributing to human migration within and among places.
SS.912.G.4.3:	Use geographic terms and tools to analyze the effects of migration both on the place of origin and destination, including border areas.
SS.912.H.1.1:	Relate works in the arts (architecture, dance, music, theatre, and visual arts) of varying styles and genre according to the periods in which they were created. **Clarifications:** Examples are Bronze Age, Ming Dynasty, Classical, Renaissance, Modern, and Contemporary.
SS.912.H.1.3:	Relate works in the arts to various cultures. **Clarifications:** Examples are African, Asian, Oceanic, European, the Americas, Middle Eastern, Egyptian, Greek, Roman.
SS.912.H.1.5:	Examine artistic response to social issues and new ideas in various cultures. **Clarifications:** Examples are Victor Hugo's Les Miserables, Langston Hughes' poetry, Pete Seeger's Bring 'Em Home.
SS.912.H.3.1:	Analyze the effects of transportation, trade, communication, science, and technology on the preservation and diffusion of culture.
MA.K12.MTR.1.1:	Mathematicians who participate in effortful learning both individually and with others: • Analyze the problem in a way that makes sense given the task. • Ask questions that will help with solving the task. • Build perseverance by modifying methods as needed while solving a challenging task. • Stay engaged and maintain a positive mindset when working to solve tasks. • Help and support each other when attempting a new method or approach. **Clarifications:** Teachers who encourage students to participate actively in effortful learning both individually and with others: • Cultivate a community of growth mindset learners. • Foster perseverance in students by choosing tasks that are challenging. • Develop students' ability to analyze and problem solve. • Recognize students' effort when solving challenging problems.
MA.K12.MTR.2.1:	Demonstrate understanding by representing problems in multiple ways. Mathematicians who demonstrate understanding by representing problems in multiple ways: • Build understanding through modeling and using manipulatives. • Represent solutions to problems in multiple ways using objects, drawings, tables, graphs and equations. • Progress from modeling problems with objects and drawings to using algorithms and equations. • Express connections between concepts and representations. • Choose a representation based on the given context or purpose. **Clarifications:** Teachers who encourage students to demonstrate understanding by representing problems in multiple ways: • Help students make connections between concepts and representations. • Provide opportunities for students to use manipulatives when investigating concepts. • Guide students from concrete to pictorial to abstract representations as understanding progresses. • Show students that various representations can have different purposes and can be useful in different situations.
MA.K12.MTR.3.1:	Complete tasks with mathematical fluency. Mathematicians who complete tasks with mathematical fluency: • Select efficient and appropriate methods for solving problems within the given context. • Maintain flexibility and accuracy while performing procedures and mental calculations. • Complete tasks accurately and with confidence. • Adapt procedures to apply them to a new context. • Use feedback to improve efficiency when performing calculations. **Clarifications:** Teachers who encourage students to complete tasks with mathematical fluency: • Provide students with the flexibility to solve problems by selecting a procedure that allows them to solve efficiently and accurately.

	• Offer multiple opportunities for students to practice efficient and generalizable methods. • Provide opportunities for students to reflect on the method they used and determine if a more efficient method could have been used.
MA.K12.MTR.4.1:	Engage in discussions that reflect on the mathematical thinking of self and others. Mathematicians who engage in discussions that reflect on the mathematical thinking of self and others: • Communicate mathematical ideas, vocabulary and methods effectively. • Analyze the mathematical thinking of others. • Compare the efficiency of a method to those expressed by others. • Recognize errors and suggest how to correctly solve the task. • Justify results by explaining methods and processes. • Construct possible arguments based on evidence. **Clarifications:** Teachers who encourage students to engage in discussions that reflect on the mathematical thinking of self and others: • Establish a culture in which students ask questions of the teacher and their peers, and error is an opportunity for learning. • Create opportunities for students to discuss their thinking with peers. • Select, sequence and present student work to advance and deepen understanding of correct and increasingly efficient methods. • Develop students' ability to justify methods and compare their responses to the responses of their peers.
MA.K12.MTR.5.1:	Use patterns and structure to help understand and connect mathematical concepts. Mathematicians who use patterns and structure to help understand and connect mathematical concepts: • Focus on relevant details within a problem. • Create plans and procedures to logically order events, steps or ideas to solve problems. • Decompose a complex problem into manageable parts. • Relate previously learned concepts to new concepts. • Look for similarities among problems. • Connect solutions of problems to more complicated large-scale situations. **Clarifications:** Teachers who encourage students to use patterns and structure to help understand and connect mathematical concepts: • Help students recognize the patterns in the world around them and connect these patterns to mathematical concepts. • Support students to develop generalizations based on the similarities found among problems. • Provide opportunities for students to create plans and procedures to solve problems. • Develop students' ability to construct relationships between their current understanding and more sophisticated ways of thinking.
MA.K12.MTR.6.1:	Assess the reasonableness of solutions. Mathematicians who assess the reasonableness of solutions: • Estimate to discover possible solutions. • Use benchmark quantities to determine if a solution makes sense. • Check calculations when solving problems. • Verify possible solutions by explaining the methods used. • Evaluate results based on the given context. **Clarifications:** Teachers who encourage students to assess the reasonableness of solutions: • Have students estimate or predict solutions prior to solving. • Prompt students to continually ask, "Does this solution make sense? How do you know?" • Reinforce that students check their work as they progress within and after a task. • Strengthen students' ability to verify solutions through justifications.
MA.K12.MTR.7.1:	Apply mathematics to real-world contexts. Mathematicians who apply mathematics to real-world contexts: • Connect mathematical concepts to everyday experiences. • Use models and methods to understand, represent and solve problems. • Perform investigations to gather data or determine if a method is appropriate. • Redesign models and methods to improve accuracy or efficiency. **Clarifications:** Teachers who encourage students to apply mathematics to real-world contexts: • Provide opportunities for students to create models, both concrete and abstract, and perform investigations. • Challenge students to question the accuracy of their models and methods. • Support students as they validate conclusions by comparing them to the given situation. • Indicate how various concepts can be applied to other disciplines.
ELA.K12.EE.1.1:	Cite evidence to explain and justify reasoning. **Clarifications:** K-1 Students include textual evidence in their oral communication with guidance and support from adults. The evidence can consist of details from the text without naming the text. During 1st grade, students learn how to incorporate the evidence in their writing. 2-3 Students include relevant textual evidence in their written and oral communication. Students should name the text when they refer to it. In 3rd grade, students should use a combination of direct and indirect citations. 4-5 Students continue with previous skills and reference comments made by speakers and peers. Students cite texts that they've directly quoted, paraphrased, or used for information. When writing, students will use the form of citation dictated by the instructor or the style guide referenced by the instructor. 6-8 Students continue with previous skills and use a style guide to create a proper citation. 9-12 Students continue with previous skills and should be aware of existing style guides and the ways in which they differ.

ELA.K12.EE.2.1:	Read and comprehend grade-level complex texts proficiently. **Clarifications:** See Text Complexity for grade-level complexity bands and a text complexity rubric.
ELA.K12.EE.3.1:	Make inferences to support comprehension. **Clarifications:** Students will make inferences before the words infer or inference are introduced. Kindergarten students will answer questions like "Why is the girl smiling?" or make predictions about what will happen based on the title page. Students will use the terms and apply them in 2nd grade and beyond.
ELA.K12.EE.4.1:	Use appropriate collaborative techniques and active listening skills when engaging in discussions in a variety of situations. **Clarifications:** In kindergarten, students learn to listen to one another respectfully. In grades 1-2, students build upon these skills by justifying what they are thinking. For example: "I think _____ because _____." The collaborative conversations are becoming academic conversations. In grades 3-12, students engage in academic conversations discussing claims and justifying their reasoning, refining and applying skills. Students build on ideas, propel the conversation, and support claims and counterclaims with evidence.
ELA.K12.EE.5.1:	Use the accepted rules governing a specific format to create quality work. **Clarifications:** Students will incorporate skills learned into work products to produce quality work. For students to incorporate these skills appropriately, they must receive instruction. A 3rd grade student creating a poster board display must have instruction in how to effectively present information to do quality work.
ELA.K12.EE.6.1:	Use appropriate voice and tone when speaking or writing. **Clarifications:** In kindergarten and 1st grade, students learn the difference between formal and informal language. For example, the way we talk to our friends differs from the way we speak to adults. In 2nd grade and beyond, students practice appropriate social and academic language to discuss texts.
ELD.K12.ELL.SI.1:	English language learners communicate for social and instructional purposes within the school setting.
ELD.K12.ELL.SS.1:	English language learners communicate information, ideas and concepts necessary for academic success in the content area of Social Studies.
HE.912.C.2.4:	Evaluate how public health policies and government regulations can influence health promotion and disease prevention. **Clarifications:** Seat-belt enforcement, underage alcohol sales, reporting communicable diseases, child care, and AED availability.

General Course Information and Notes

VERSION DESCRIPTION

United States History (U.S. History) 9-12 Course - The grade 9-12 United States History course consists of the following content area strands: United States History, Geography, and Humanities. The primary content emphasis for this course pertains to the study of United States history from Reconstruction to the present day. Students will be exposed to the historical, geographic, political, economic and sociological events which influenced the development of the United States and the resulting impact on world history. So that students can clearly see the relationship between cause and effect in historical events, students should have the opportunity to review those fundamental ideas and events which occurred before the end of Reconstruction.

Special Notes: Additional content that may be contained in the NAEP Grade 12 United States History assessment includes material from all time periods on the following topics:

- Change and Continuity in American Democracy: Ideas, Institutions, Events, Key Figures, and Controversies
- The Gathering and Interactions of Peoples, Cultures, and Ideas
- Economic and Technological Changes and Their Relationship to Society, Ideas, and the Environment
- The Changing Role of America in the World

The NAEP frameworks for United States History may be accessed at nagb.org/content/nagb/assests/documents/publications/frameworks/hsitoryframework.pdf.

Instructional Practices: Teaching from well-written, grade-level instructional materials enhances students' content area knowledge and also strengthens their ability to comprehend longer, complex reading passages on any topic for any reason. Using the following instructional practices also helps student learning:

1. Reading assignments from longer text passages as well as shorter ones when text is extremely complex.
2. Making close reading and rereading of texts central to lessons.
3. Asking high-level, text-specific questions and requiring high-level, complex tasks and assignments.
4. Requiring students to support answers with evidence from the text.
5. Providing extensive text-based research and writing opportunities (claims and evidence).

English Language Development ELD Standards Special Notes Section:

Teachers are required to provide listening, speaking, reading and writing instruction that allows English language learners (ELL) to communicate information, ideas and concepts for academic success in the content area of Social Studies. For the given level of English language proficiency and with visual, graphic, or interactive support, students will interact with grade level words, expressions, sentences and discourse to process or produce language necessary for academic success. The ELD standard should specify a relevant content area concept or topic of study chosen by curriculum developers and teachers which maximizes an ELL's need for communication and social skills. To access an ELL supporting document which delineates performance definitions and descriptors, please click on the following link: cpalms.org/uploads/docs/standards/eld/SS.pdf.

Additional Instructional Resources:

Kinsey Collection: thekinseycollection.com/the-kinsey-collection-on-itunes-u/

A.V.E. for Success Collection: fasa.net/4DCGI/cms/review.html?Action=CMS_Document&DocID=139

GENERAL INFORMATION

Course Number: 2100310

Course Path: Section: Grades PreK to 12 Education Courses > **Grade Group:** Grades 9 to 12 and Adult Education Courses > **Subject:** Social Studies > **SubSubject:** American and Western Hemispheric Histories >

Abbreviated Title: US HIST

Number of Credits: One (1) credit

Course Length: Year (Y)

Course Attributes:

- Class Size Core Required

Course Type: Core Academic Course

Course Level: 2

Course Status: Draft - Course Pending Approval

Grade Level(s): 9,10,11,12,30,31

Graduation Requirement: United States History

Educator Certifications

History (Grades 6-12)
Social Science (Grades 5-9)

United States History for Credit Recovery (#2100315) 2022 - And Beyond

Course Standards

Name	Description
SS.912.A.1.1:	Describe the importance of historiography, which includes how historical knowledge is obtained and transmitted, when interpreting events in history.
SS.912.A.1.2:	Utilize a variety of primary and secondary sources to identify author, historical significance, audience, and authenticity to understand a historical period. **Clarifications:** Examples of primary and secondary sources may be found on various websites such as the site for The Kinsey Collection.
SS.912.A.1.3:	Utilize timelines to identify the time sequence of historical data.
SS.912.A.1.4:	Analyze how images, symbols, objects, cartoons, graphs, charts, maps, and artwork may be used to interpret the significance of time periods and events from the past.
SS.912.A.1.5:	Evaluate the validity, reliability, bias, and authenticity of current events and Internet resources. **Clarifications:** Students should be encouraged to utilize FINDS (Focus, Investigate, Note, Develop, Score), Florida's research process model accessible at: fldoe.org/bii/Library_Media/pdf/12TotalFINDS.pdf
SS.912.A.1.6:	Use case studies to explore social, political, legal, and economic relationships in history.
SS.912.A.1.7:	Describe various socio-cultural aspects of American life including arts, artifacts, literature, education, and publications.
SS.912.A.2.1:	Review causes and consequences of the Civil War. **Clarifications:** Examples may include, but are not limited to, slavery, states' rights, territorial claims, abolitionist movement, regional differences, Reconstruction, 13th, 14th, and 15th amendments. This benchmark is annually evaluated on the United States History End-of-Course Assessment. For more information on how this benchmark is assessed view the United States History End-of-Course Assessment Test Item Specifications pages 19-21. Additional resources may be found on the FLDOE End-of-Course (EOC) Assessments webpage and the FLDOE Social Studies webpage.
SS.912.A.2.2:	Assess the influence of significant people or groups on Reconstruction. **Clarifications:** Examples may include, but are not limited to, Alexander H. Stephens, Andrew Johnson, carpetbaggers, Charles Sumner, Elizabeth Cady Stanton, Frederick Douglass, Hiram Revels, Hiram Rhodes Revels, Jefferson Davis, Ku Klux Klan, Oliver O. Howard, Radical Republicans, Rutherford B. Hayes, scalawags, Thaddeus Stevens, Ulysses S. Grant, and William T. Sherman. This benchmark is annually evaluated on the United States History End-of-Course Assessment. For more information on how this benchmark is evaluated view the United States History End-of-Course Assessment Test Item Specifications pages 19-21. Additional resources may be found on the FLDOE End-of-Course (EOC) Assessments webpage and the FLDOE Social Studies webpage.
SS.912.A.2.3:	Describe the issues that divided Republicans during the early Reconstruction era. **Clarifications:** Examples may include, but are not limited to, the impeachment of Andrew Johnson, southern whites, blacks, black legislators and white extremist organizations such as the KKK, Knights of the White Camellia, The White League, Red Shirts, and Pale Faces. This benchmark is annually evaluated on the United States History End-of-Course Assessment. For more information on how this benchmark is evaluated view the United States History End-of-Course Assessment Test Item Specifications pages 19-21. Additional resources may be found on the FLDOE End-of-Course (EOC) Assessments webpage and the FLDOE Social Studies webpage.
SS.912.A.2.4:	Distinguish the freedoms guaranteed to African Americans and other groups with the 13th, 14th, and 15th Amendments to the Constitution. **Clarifications:** Examples may include, but are not limited to, abolition of slavery, citizenship, suffrage, equal protection. This benchmark is annually evaluated on the United States History End-of-Course Assessment. For more information on how this benchmark is evaluated view the United States History End-of-Course Assessment Test Item Specifications pages 19-21. Additional resources may be found on the FLDOE End-of-Course (EOC) Assessments webpage and the FLDOE Social Studies webpage.
SS.912.A.2.5:	Assess how Jim Crow Laws influenced life for African Americans and other racial/ethnic minority groups. **Clarifications:** This benchmark is annually evaluated on the United States History End-of-Course Assessment. For more information on how this benchmark is evaluated view the United States History End-of-Course Assessment Test Item Specifications pages 19-21. Additional resources may be found on the FLDOE End-of-Course (EOC) Assessments webpage and the FLDOE Social Studies webpage.
	Compare the effects of the Black Codes and the Nadir on freed people, and analyze the sharecropping system and debt peonage as practiced in the United States. **Clarifications:**

SS.912.A.2.6:	This benchmark is annually evaluated on the United States History End-of-Course Assessment. For more information on how this benchmark is evaluated view the United States History End-of-Course Assessment Test Item Specifications pages 19-21. Additional resources may be found on the FLDOE End-of-Course (EOC) Assessments webpage and the FLDOE Social Studies webpage.
SS.912.A.2.7:	Review the Native American experience. **Clarifications:** Examples may include, but are not limited to, westward expansion, reservation system, the Dawes Act, Wounded Knee Massacre, Sand Creek Massacre, Battle of Little Big Horn, Indian Schools, government involvement in the killing of the buffalo. This benchmark is annually evaluated on the United States History End-of-Course Assessment. For more information on how this benchmark is evaluated view the United States History End-of-Course Assessment Test Item Specifications pages 19-21. Additional resources may be found on the FLDOE End-of-Course (EOC) Assessments webpage and the FLDOE Social Studies webpage.
SS.912.A.3.1:	Analyze the economic challenges to American farmers and farmers' responses to these challenges in the mid to late 1800s. **Clarifications:** This benchmark is annually evaluated on the United States History End-of-Course Assessment. For more information on how this benchmark is evaluated view the United States History End-of-Course Assessment Test Item Specifications page 22. Additional resources may be found on the FLDOE End-of-Course (EOC) Assessments webpage and the FLDOE Social Studies webpage. Examples may include, but are not limited to, creation of agricultural colleges, Morrill Land Grant Act, gold standard and Bimetallism, the creation of the Populist Party.
SS.912.A.3.2:	Examine the social, political, and economic causes, course, and consequences of the second Industrial Revolution that began in the late 19th century. **Clarifications:** This benchmark is annually evaluated on the United States History End-of-Course Assessment. For more information on how this benchmark is evaluated view the United States History End-of-Course Assessment Test Item Specifications pages 23-26. Additional resources may be found on the FLDOE End-of-Course (EOC) Assessments webpage and the FLDOE Social Studies webpage.
SS.912.A.3.3:	Compare the first and second Industrial Revolutions in the United States. **Clarifications:** This benchmark is annually evaluated on the United States History End-of-Course Assessment. For more information on how this benchmark is evaluated view the United States History End-of-Course Assessment Test Item Specifications pages 23-26. Additional resources may be found on the FLDOE End-of-Course (EOC) Assessments webpage and the FLDOE Social Studies webpage. Examples may include, but are not limited to, trade, development of new industries.
SS.912.A.3.4:	Determine how the development of steel, oil, transportation, communication, and business practices affected the United States economy. **Clarifications:** Examples may include, but are not limited to, railroads, the telegraph, pools, holding companies, trusts, corporations, contributed to westward expansion, expansion of trade and development of new industries, vertical and horizontal integration. This benchmark is annually evaluated on the United States History End-of-Course Assessment. For more information on how this benchmark is evaluated view the United States History End-of-Course Assessment Test Item Specifications pages 23-26. Additional resources may be found on the FLDOE End-of-Course (EOC) Assessments webpage and the FLDOE Social Studies webpage.
SS.912.A.3.5:	Identify significant inventors of the Industrial Revolution including African Americans and women. **Clarifications:** Examples may include, but are not limited to, Lewis Howard Latimer, Jan E. Matzeliger, Sarah E. Goode, Granville T. Woods, Alexander Graham Bell, Thomas Edison, George Pullman, Henry Ford, Orville and Wilbur Wright, Elijah McCoy, Garrett Morgan, Madame C.J. Walker, George Westinghouse. This benchmark is annually evaluated on the United States History End-of-Course Assessment. For more information on how this benchmark is evaluated view the United States History End-of-Course Assessment Test Item Specifications pages 23-26. Additional resources may be found on the FLDOE End-of-Course (EOC) Assessments webpage and the FLDOE Social Studies webpage.
SS.912.A.3.6:	Analyze changes that occurred as the United States shifted from agrarian to an industrial society. **Clarifications:** Examples may include, but are not limited to, Social Darwinism, laissez-faire, government regulations of food and drugs, migration to cities, urbanization, changes to the family structure, Ellis Island, angel Island, push-pull factors. This benchmark is annually evaluated on the United States History End-of-Course Assessment. For more information on how this benchmark is evaluated view the United States History End-of-Course Assessment Test Item Specifications page 22. Additional resources may be found on the FLDOE End-of-Course (EOC) Assessments webpage and the FLDOE Social Studies webpage.
SS.912.A.3.7:	Compare the experience of European immigrants in the east to that of Asian immigrants in the west (the Chinese Exclusion Act, Gentlemen's Agreement with Japan). **Clarifications:** Examples may include, but are not limited to nativism, integration of immigrants into society when comparing "Old" [before 1890] and "New" immigrants [after 1890], Immigration Act of 1924. This benchmark is annually evaluated on the United States History End-of-Course Assessment. For more information on how this benchmark is evaluated view the United States History End-of-Course Assessment Test Item Specifications pages 23-26. Additional resources may be found on the FLDOE End-of-Course (EOC) Assessments webpage and the FLDOE Social Studies webpage.
	Examine the importance of social change and reform in the late 19th and early 20th centuries (class system, migration from farms to cities, Social Gospel movement, role of settlement houses and churches in providing services to the poor).

SS.912.A.3.8:	**Clarifications:** This benchmark is annually evaluated on the United States History End-of-Course Assessment. For more information on how this benchmark is evaluated view the United States History End-of-Course Assessment Test Item Specifications page 22. Additional resources may be found on the FLDOE End-of-Course (EOC) Assessments webpage and the FLDOE Social Studies webpage.
SS.912.A.3.9:	Examine causes, course, and consequences of the labor movement in the late 19th and early 20th centuries. **Clarifications:** Examples may include, but are not limited to, unions, Knights of Labor, american Federation of Labor, socialist Party, labor laws. This benchmark is annually evaluated on the United States History End-of-Course Assessment. For more information on how this benchmark is evaluated view the United States History End-of-Course Assessment Test Item Specifications page 22. Additional resources may be found on the FLDOE End-of-Course (EOC) Assessments webpage and the FLDOE Social Studies webpage.
SS.912.A.3.10:	Review different economic and philosophic ideologies. **Clarifications:** Economic examples may include, but are not limited to, market economy, mixed economy, planned economy and philosophic examples are capitalism, socialism, communism, anarchy. This benchmark is annually evaluated on the United States History End-of-Course Assessment. For more information on how this benchmark is evaluated view the United States History End-of-Course Assessment Test Item Specifications page 22. Additional resources may be found on the FLDOE End-of-Course (EOC) Assessments webpage and the FLDOE Social Studies webpage.
SS.912.A.3.11:	Analyze the impact of political machines in United States cities in the late 19th and early 20th centuries. **Clarifications:** Examples may include, but aren ot limited to, Boss Tweed, Tammany Hall, George Washington Plunkitt, Washington Gladden, Thomas Nast. This benchmark is annually evaluated on the United States History End-of-Course Assessment. For more information on how this benchmark is evaluated view the United States History End-of-Course Assessment Test Item Specifications page 22. Additional resources may be found on the FLDOE End-of-Course (EOC) Assessments webpage and the FLDOE Social Studies webpage.
SS.912.A.3.12:	Compare how different nongovernmental organizations and progressives worked to shape public policy, restore economic opportunities, and correct injustices in American life. **Clarifications:** Examples may include, but are not limited to, NAACP, YMCA, Women's Christian Temperance Union, National Women's Suffrage Association, National Women's Party, Robert LaFollette, Florence Kelley, Ida M. Tarbell, Eugene Debs, Carrie Chapman Catt, Alice Paul, Theodore Roosevelt, William Taft, Woodrow Wilson, Upton Sinclair, Booker T. Washington, W.E.B. DuBois, Gifford Pinchot, William Jennings Bryan. This benchmark is annually evaluated on the United States History End-of-Course Assessment. For more information on how this benchmark is evaluated view the United States History End-of-Course Assessment Test Item Specifications page 22. Additional resources may be found on the FLDOE End-of-Course (EOC) Assessments webpage and the FLDOE Social Studies webpage.
SS.912.A.3.13:	Examine key events and peoples in Florida history as they relate to United States history. **Clarifications:** Examples may include, but are not limited to, the railroad industry, bridge construction in the Florida Keys, the cattle industry, the cigar industry, the influence of Cuban, Greek and Italian immigrants, Henry B. Plant, William Chipley, Henry Flagler, George Proctor, Thomas DeSaille Tucker, Hamilton Disston. This benchmark is annually evaluated on the United States History End-of-Course Assessment. For more information on how this benchmark is evaluated view the United States History End-of-Course Assessment Test Item Specifications page 22. Additional resources may be found on the FLDOE End-of-Course (EOC) Assessments webpage and the FLDOE Social Studies webpage.
SS.912.A.4.1:	Analyze the major factors that drove United States imperialism. **Clarifications:** Examples may include, but are not limited to, the Monroe Doctrine, Manifest Destiny, *The Influence of Sea Power Upon History, Turner's thesis,the Roosevelt Corollary, natural resources, markets for resources, elimination of spheres of influence in China.* This benchmark is annually evaluated on the United States History End-of-Course Assessment. For more information on how this benchmark is evaluated view the United States History End-of-Course Assessment Test Item Specifications pages 27-28. Additional resources may be found on the FLDOE End-of-Course (EOC) Assessments webpage and the FLDOE Social Studies webpage.
SS.912.A.4.2:	Explain the motives of the United States acquisition of the territories. **Clarifications:** Examples may include, but are not limited to, Alaska, Hawaii, Puerto Rico, Philippines, Guam, Samoa, Marshall Islands, Midway Island, Virgin Islands. This benchmark is annually evaluated on the United States History End-of-Course Assessment. For more information on how this benchmark is evaluated view the United States History End-of-Course Assessment Test Item Specifications pages 27-28. Additional resources may be found on the FLDOE End-of-Course (EOC) Assessments webpage and the FLDOE Social Studies webpage.
SS.912.A.4.3:	Examine causes, course, and consequences of the Spanish American War. **Clarifications:** Examples may include, but are not limited to, Cuba as a protectorate, Yellow Journalism, sinking of the *Maine, the Philippines, Commodore Dewey, the Rough Riders, acqusition of territories, the Treaty of Paris.* This benchmark is annually evaluated on the United States History End-of-Course Assessment. For more information on how this benchmark is evaluated view the United States History End-of-Course Assessment Test Item Specifications pages 27-28. Additional resources may be found on the FLDOE End-of-Course (EOC) Assessments webpage and the FLDOE Social Studies webpage.
	Analyze the economic, military, and security motivations of the United States to complete the Panama Canal as well as major obstacles involved in its construction.

SS.912.A.4.4:	**Clarifications:** Examples may include, but are not limited to, disease, environmental impact, challenges faced by various ethnic groups such as Africans and indigenous populations, shipping routes, increased trade, defense and independence for Panama. This benchmark is annually evaluated on the United States History End-of-Course Assessment. For more information on how this benchmark is evaluated view the United States History End-of-Course Assessment Test Item Specifications pages 27-28. Additional resources may be found on the FLDOE End-of-Course (EOC) Assessments webpage and the FLDOE Social Studies webpage.
SS.912.A.4.5:	Examine causes, course, and consequences of United States involvement in World War I. **Clarifications:** Examples may include, but are not limited to, nationalism, imperialism, militarism, entangling alliances vs. neutrality, Zimmerman Note, the *Lusitania,* the Selective Service Act, the homefront, the American Expeditionary Force, Wilson's Fourteen Points, the Treaty of Versailles (and opposition to it), isolationism. This benchmark is annually evaluated on the United States History End-of-Course Assessment. For more information on how this benchmark is evaluated view the United States History End-of-Course Assessment Test Item Specifications pages 29-31. Additional resources may be found on the FLDOE End-of-Course (EOC) Assessments webpage and the FLDOE Social Studies webpage.
SS.912.A.4.6:	Examine how the United States government prepared the nation for war with war measures (Selective Service Act, War Industries Board, war bonds, Espionage Act, Sedition Act, Committee of Public Information). **Clarifications:** This benchmark is annually evaluated on the United States History End-of-Course Assessment. For more information on how this benchmark is evaluated view the United States History End-of-Course Assessment Test Item Specifications pages 29-31. Additional resources may be found on the FLDOE End-of-Course (EOC) Assessments webpage and the FLDOE Social Studies webpage.
SS.912.A.4.7:	Examine the impact of airplanes, battleships, new weaponry and chemical warfare in creating new war strategies (trench warfare, convoys). **Clarifications:** This benchmark is annually evaluated on the United States History End-of-Course Assessment. For more information on how this benchmark is evaluated view the United States History End-of-Course Assessment Test Item Specifications pages 29-31. Additional resources may be found on the FLDOE End-of-Course (EOC) Assessments webpage and the FLDOE Social Studies webpage.
SS.912.A.4.8:	Compare the experiences Americans (African Americans, Hispanics, Asians, women, conscientious objectors) had while serving in Europe. **Clarifications:** This benchmark is annually evaluated on the United States History End-of-Course Assessment. For more information on how this benchmark is evaluated view the United States History End-of-Course Assessment Test Item Specifications pages 29-31. Additional resources may be found on the FLDOE End-of-Course (EOC) Assessments webpage and the FLDOE Social Studies webpage.
SS.912.A.4.9:	Compare how the war impacted German Americans, Asian Americans, African Americans, Hispanic Americans, Jewish Americans, Native Americans, women and dissenters in the United States. **Clarifications:** This benchmark is annually evaluated on the United States History End-of-Course Assessment. For more information on how this benchmark is evaluated view the United States History End-of-Course Assessment Test Item Specifications pages 29-31. Additional resources may be found on the FLDOE End-of-Course (EOC) Assessments webpage and the FLDOE Social Studies webpage.
SS.912.A.4.10:	Examine the provisions of the Treaty of Versailles and the failure of the United States to support the League of Nations. **Clarifications:** Examples may include, but are not limited to, self-determination, boundaries, demilitarized zone, sanctions reparations, and the League of Nations (including Article X of the Covenant). This benchmark is annually evaluated on the United States History End-of-Course Assessment. For more information on how this benchmark is evaluated view the United States History End-of-Course Assessment Test Item Specifications pages 29-31. Additional resources may be found on the FLDOE End-of-Course (EOC) Assessments webpage and the FLDOE Social Studies webpage.
SS.912.A.4.11:	Examine key events and peoples in Florida history as they relate to United States history. **Clarifications:** Examples may include, but are not limited to, the Spanish-American War, Ybor City, Jose Marti. This benchmark is annually evaluated on the United States History End-of-Course Assessment. For more information on how this benchmark is evaluated view the United States History End-of-Course Assessment Test Item Specifications pages 29-31. Additional resources may be found on the FLDOE End-of-Course (EOC) Assessments webpage and the FLDOE Social Studies webpage.
SS.912.A.5.1:	Discuss the economic outcomes of demobilization. **Clarifications:** This benchmark is annually evaluated on the United States History End-of-Course Assessment. For more information on how this benchmark is evaluated view the United States History End-of-Course Assessment Test Item Specifications pages 32-33. Additional resources may be found on the FLDOE End-of-Course (EOC) Assessments webpage and the FLDOE Social Studies webpage.
SS.912.A.5.2:	Explain the causes of the public reaction (Sacco and Vanzetti, labor, racial unrest) associated with the Red Scare. **Clarifications:** Examples may also include, but are not limited to, Palmer Raids, FBI, J. Edgar Hoover. This benchmark is annually evaluated on the United States History End-of-Course Assessment. For more information on how this benchmark is evaluated view the United States History End-of-Course Assessment Test Item Specifications pages 35-36. Additional resources may be found on the FLDOE End-of-Course (EOC) Assessments webpage and the FLDOE Social Studies webpage.
	Examine the impact of United States foreign economic policy during the 1920s. **Clarifications:** Examples may include, but are not limited to, the Depression of 1920-21, "The Business of America is Business," assembly line, installment buying,

SS.912.A.5.3:	consumerism. This benchmark is annually evaluated on the United States History End-of-Course Assessment. For more information on how this benchmark is evaluated view the United States History End-of-Course Assessment Test Item Specifications pages 32-33. Additional resources may be found on the FLDOE End-of-Course (EOC) Assessments webpage and the FLDOE Social Studies webpage.
SS.912.A.5.4:	Evaluate how the economic boom during the Roaring Twenties changed consumers, businesses, manufacturing, and marketing practices. **Clarifications:** This benchmark is annually evaluated on the United States History End-of-Course Assessment. For more information on how this benchmark is evaluated view the United States History End-of-Course Assessment Test Item Specifications pages 37-39. Additional resources may be found on the FLDOE End-of-Course (EOC) Assessments webpage and the FLDOE Social Studies webpage.
SS.912.A.5.5:	Describe efforts by the United States and other world powers to avoid future wars. **Clarifications:** Examples may include, but are not limited to, League of Nations, Washington Naval Conference, London Conference, Kellogg-Briand Pact, the Nobel Prize. This benchmark is annually evaluated on the United States History End-of-Course Assessment. For more information on how this benchmark is evaluated view the United States History End-of-Course Assessment Test Item Specifications page 34. Additional resources may be found on the FLDOE End-of-Course (EOC) Assessments webpage and the FLDOE Social Studies webpage.
SS.912.A.5.6:	Analyze the influence that Hollywood, the Harlem Renaissance, the Fundamentalist movement, and prohibition had in changing American society in the 1920s. **Clarifications:** This benchmark is annually evaluated on the United States History End-of-Course Assessment. For more information on how this benchmark is evaluated view the United States History End-of-Course Assessment Test Item Specifications pages 35-36. Additional resources may be found on the FLDOE End-of-Course (EOC) Assessments webpage and the FLDOE Social Studies webpage.
SS.912.A.5.7:	Examine the freedom movements that advocated civil rights for African Americans, Latinos, Asians, and women. **Clarifications:** This benchmark is annually evaluated on the United States History End-of-Course Assessment. For more information on how this benchmark is evaluated view the United States History End-of-Course Assessment Test Item Specifications pages 35-36. Additional resources may be found on the FLDOE End-of-Course (EOC) Assessments webpage and the FLDOE Social Studies webpage.
SS.912.A.5.8:	Compare the views of Booker T. Washington, W.E.B. DuBois, and Marcus Garvey relating to the African American experience. **Clarifications:** This benchmark is annually evaluated on the United States History End-of-Course Assessment. For more information on how this benchmark is evaluated view the United States History End-of-Course Assessment Test Item Specifications pages 35-36. Additional resources may be found on the FLDOE End-of-Course (EOC) Assessments webpage and the FLDOE Social Studies webpage.
SS.912.A.5.9:	Explain why support for the Ku Klux Klan varied in the 1920s with respect to issues such as anti-immigration, anti-African American, anti-Catholic, anti-Jewish, anti-women, and anti-union ideas. **Clarifications:** Examples may include, but are not limited to, 100 Percent Americanism. This benchmark is annually evaluated on the United States History End-of-Course Assessment. For more information on how this benchmark is evaluated view the United States History End-of-Course Assessment Test Item Specifications pages 35-36. Additional resources may be found on the FLDOE End-of-Course (EOC) Assessments webpage and the FLDOE Social Studies webpage.
SS.912.A.5.10:	Analyze support for and resistance to civil rights for women, African Americans, Native Americans, and other minorities. **Clarifications:** This benchmark is annually evaluated on the United States History End-of-Course Assessment. For more information on how this benchmark is evaluated view the United States History End-of-Course Assessment Test Item Specifications pages 35-36. Additional resources may be found on the FLDOE End-of-Course (EOC) Assessments webpage and the FLDOE Social Studies webpage.
SS.912.A.5.11:	Examine causes, course, and consequences of the Great Depression and the New Deal. **Clarifications:** This benchmark is annually evaluated on the United States History End-of-Course Assessment. For more information on how this benchmark is evaluated view the United States History End-of-Course Assessment Test Item Specifications pages 37-39. Additional resources may be found on the FLDOE End-of-Course (EOC) Assessments webpage and the FLDOE Social Studies webpage.
SS.912.A.5.12:	Examine key events and people in Florida history as they relate to United States history. **Clarifications:** Examples may include, but are not limited to, Rosewood, land boom, speculation, impact of climate and natural disasters on the end of the land boom, invention of modern air conditioning in 1929, Alfred DuPont, Majorie Kinnan Rawlings, Zora Neale Hurston, James Weldon Johnson. This benchmark is annually evaluated on the United States History End-of-Course Assessment. For more information on how this benchmark is evaluated view the United States History End-of-Course Assessment Test Item Specifications pages 35-36. Additional resources may be found on the FLDOE End-of-Course (EOC) Assessments webpage and the FLDOE Social Studies webpage.
SS.912.A.6.1:	Examine causes, course, and consequences of World War II on the United States and the world. **Clarifications:** Examples may include, but are not limited to, rise of dictators, attack on Pearl Harbor, Nazi party, American neutrality, D-Day, Battle of the Bulge, War in the Pacific, internment camps, Holocaust, Yalta. This benchmark is annually evaluated on the United States History End-of-Course Assessment. For more information on how this benchmark is evaluated view the United States History End-of-Course Assessment Test Item Specifications pages 40-42. Additional resources may be found

	on the FLDOE End-of-Course (EOC) Assessments webpage and the FLDOE Social Studies webpage.
SS.912.A.6.2:	Describe the United States response in the early years of World War II (Neutrality Acts, Cash and Carry, Lend Lease Act). **Clarifications:** This benchmark is annually evaluated on the United States History End-of-Course Assessment. For more information on how this benchmark is evaluated view the United States History End-of-Course Assessment Test Item Specifications pages 40-42. Additional resources may be found on the FLDOE End-of-Course (EOC) Assessments webpage and the FLDOE Social Studies webpage.
SS.912.A.6.3:	Analyze the impact of the Holocaust during World War II on Jews as well as other groups. **Clarifications:** This benchmark is annually evaluated on the United States History End-of-Course Assessment. For more information on how this benchmark is evaluated view the United States History End-of-Course Assessment Test Item Specifications pages 40-42. Additional resources may be found on the FLDOE End-of-Course (EOC) Assessments webpage and the FLDOE Social Studies webpage.
SS.912.A.6.4:	Examine efforts to expand or contract rights for various populations during World War II. **Clarifications:** Examples may include, but are not limited to, women, African Americans, German Americans, Japanese Americans and their internment, Native Americans, Hispanic Americans, Italian Americans. This benchmark is annually evaluated on the United States History End-of-Course Assessment. For more information on how this benchmark is evaluated view the United States History End-of-Course Assessment Test Item Specifications pages 40-42. Additional resources may be found on the FLDOE End-of-Course (EOC) Assessments webpage and the FLDOE Social Studies webpage.
SS.912.A.6.5:	Explain the impact of World War II on domestic government policy. **Clarifications:** Examples may include, but are not limited to, rationing, national security, civil rights, increased job opportunities for African Americans, women, Jews, and other refugees. This benchmark is annually evaluated on the United States History End-of-Course Assessment. For more information on how this benchmark is evaluated view the United States History End-of-Course Assessment Test Item Specifications pages 40-42. Additional resources may be found on the FLDOE End-of-Course (EOC) Assessments webpage and the FLDOE Social Studies webpage.
SS.912.A.6.6:	Analyze the use of atomic weapons during World War II and the aftermath of the bombings. **Clarifications:** This benchmark is annually evaluated on the United States History End-of-Course Assessment. For more information on how this benchmark is evaluated view the United States History End-of-Course Assessment Test Item Specifications pages 40-42. Additional resources may be found on the FLDOE End-of-Course (EOC) Assessments webpage and the FLDOE Social Studies webpage.
SS.912.A.6.7:	Describe the attempts to promote international justice through the Nuremberg Trials. **Clarifications:** This benchmark is annually evaluated on the United States History End-of-Course Assessment. For more information on how this benchmark is evaluated view the United States History End-of-Course Assessment Test Item Specifications pages 40-42. Additional resources may be found on the FLDOE End-of-Course (EOC) Assessments webpage and the FLDOE Social Studies webpage.
SS.912.A.6.8:	Analyze the effects of the Red Scare on domestic United States policy. **Clarifications:** Examples may include, but are not limited to, loyalty review program, House Un-American Activities Committee, McCarthyism (Sen. Joe McCarthy), McCarran Act. This benchmark is annually evaluated on the United States History End-of-Course Assessment. For more information on how this benchmark is evaluated view the United States History End-of-Course Assessment Test Item Specifications pages 40-42. Additional resources may be found on the FLDOE End-of-Course (EOC) Assessments webpage and the FLDOE Social Studies webpage.
SS.912.A.6.9:	Describe the rationale for the formation of the United Nations, including the contribution of Mary McLeod Bethune. **Clarifications:** Examples may include, but are not limited to, the Declaration of Human Rights. This benchmark is annually evaluated on the United States History End-of-Course Assessment. For more information on how this benchmark is evaluated view the United States History End-of-Course Assessment Test Item Specifications pages 40-42. Additional resources may be found on the FLDOE End-of-Course (EOC) Assessments webpage and the FLDOE Social Studies webpage.
SS.912.A.6.10:	Examine causes, course, and consequences of the early years of the Cold War (Truman Doctrine, Marshall Plan, NATO, Warsaw Pact). **Clarifications:** This benchmark is annually evaluated on the United States History End-of-Course Assessment. For more information on how this benchmark is evaluated view the United States History End-of-Course Assessment Test Item Specifications pages 43-44. Additional resources may be found on the FLDOE End-of-Course (EOC) Assessments webpage and the FLDOE Social Studies webpage.
SS.912.A.6.11:	Examine the controversy surrounding the proliferation of nuclear technology in the United States and the world. **Clarifications:** This benchmark is annually evaluated on the United States History End-of-Course Assessment. For more information on how this benchmark is evaluated view the United States History End-of-Course Assessment Test Item Specifications pages 45-46. Additional resources may be found on the FLDOE End-of-Course (EOC) Assessments webpage and the FLDOE Social Studies webpage.
SS.912.A.6.12:	Examine causes, course, and consequences of the Korean War. **Clarifications:** Examples may include, but aren ot limited to, Communist China, 38th parallel, cease fire, firing of Gen. Douglas McArthur. This benchmark is annually evaluated on the United States History End-of-Course Assessment. For more information on how this benchmark is

	evaluated view the United States History End-of-Course Assessment Test Item Specifications pages 45-46. Additional resources may be found on the FLDOE End-of-Course (EOC) Assessments webpage and the FLDOE Social Studies webpage.
SS.912.A.6.13:	Analyze significant foreign policy events during the Truman, Eisenhower, Kennedy, Johnson, and Nixon administrations. **Clarifications:** Examples may include, but are not limited to, the Domino Theory, Sputnik, space race, Korean Conflict, Vietnam Conflict, U-2 and Gary Powers, Bay of Pigs invasion, Cuban Missile Crisis, Berlin Wall, Ping Pong Diplomacy, opening of China. This benchmark is annually evaluated on the United States History End-of-Course Assessment. For more information on how this benchmark is evaluated view the United States History End-of-Course Assessment Test Item Specifications pages 45-46. Additional resources may be found on the FLDOE End-of-Course (EOC) Assessments webpage and the FLDOE Social Studies webpage.
SS.912.A.6.14:	Analyze causes, course, and consequences of the Vietnam War. **Clarifications:** Examples may include, but are not lmited to, Geneva Accords, Gulf of Tonkin Resolution, the draft, escalating protest at home, Vietnamization, the War Powers Act. This benchmark is annually evaluated on the United States History End-of-Course Assessment. For more information on how this benchmark is evaluated view the United States History End-of-Course Assessment Test Item Specifications pages 45-46. Additional resources may be found on the FLDOE End-of-Course (EOC) Assessments webpage and the FLDOE Social Studies webpage.
SS.912.A.6.15:	Examine key events and peoples in Florida history as they relate to United States history. **Clarifications:** Examples may include, but are not limited to, Mosquito Fleet, "Double V Campaign", construction of military bases and WWII training centers, 1959 Cuban coup and its impact on Florida, development of the space program and NASA. This benchmark is annually evaluated on the United States History End-of-Course Assessment. For more information on how this benchmark is evaluated view the United States History End-of-Course Assessment Test Item Specifications pages 40-42. Additional resources may be found on the FLDOE End-of-Course (EOC) Assessments webpage and the FLDOE Social Studies webpage.
SS.912.A.7.1:	Identify causes for Post-World War II prosperity and its effects on American society. **Clarifications:** Examples may include, but are not limited to, G.I. Bill, Baby Boom, growth of suburbs, Beatnik movement, youth culture, religious revivalism (e.g., Billy Graham and Bishop Fulton J. Sheen), conformity of the 1950s and the protest in the 1960s. This benchmark is annually evaluated on the United States History End-of-Course Assessment. For more information on how this benchmark is evaluated view the United States History End-of-Course Assessment Test Item Specifications pages 47-48. Additional resources may be found on the FLDOE End-of-Course (EOC) Assessments webpage and the FLDOE Social Studies webpage.
SS.912.A.7.2:	Compare the relative prosperity between different ethnic groups and social classes in the post-World War II period. **Clarifications:** This benchmark is annually evaluated on the United States History End-of-Course Assessment. For more information on how this benchmark is evaluated view the United States History End-of-Course Assessment Test Item Specifications pages 47-48. Additional resources may be found on the FLDOE End-of-Course (EOC) Assessments webpage and the FLDOE Social Studies webpage.
SS.912.A.7.3:	Examine the changing status of women in the United States from post-World War II to present. **Clarifications:** Examples may include, but are not limited to, increased numbers of women in the workforce, Civil Rights Act of 1964, *The Feminine Mystique*, National Organization for Women, *Roe v. Wade,* Equal Rights Amendment, Title IX, Betty Freidan, Gloria Steinem, Phyllis Schlafly, Billie Jean King, feminism. This benchmark is annually evaluated on the United States History End-of-Course Assessment. For more information on how this benchmark is evaluated view the United States History End-of-Course Assessment Test Item Specifications pages 47-48. Additional resources may be found on the FLDOE End-of-Course (EOC) Assessments webpage and the FLDOE Social Studies webpage.
SS.912.A.7.4:	Evaluate the success of 1960s era presidents' foreign and domestic policies. **Clarifications:** Examples may include, but are not limited to, civil rights legislation, Space Race, Great Society, War on Poverty. This benchmark is annually evaluated on the United States History End-of-Course Assessment. For more information on how this benchmark is evaluated view the United States History End-of-Course Assessment Test Item Specifications pages 49-50. Additional resources may be found on the FLDOE End-of-Course (EOC) Assessments webpage and the FLDOE Social Studies webpage.
SS.912.A.7.5:	Compare nonviolent and violent approaches utilized by groups (African Americans, women, Native Americans, Hispanics) to achieve civil rights. **Clarifications:** Examples may include, but are not limited to, sit-ins, Freedom Rides, boycotts, riots, protest marches. This benchmark is annually evaluated on the United States History End-of-Course Assessment. For more information on how this benchmark is evaluated view the United States History End-of-Course Assessment Test Item Specifications pages 51-52. Additional resources may be found on the FLDOE End-of-Course (EOC) Assessments webpage and the FLDOE Social Studies webpage.
SS.912.A.7.6:	Assess key figures and organizations in shaping the Civil Rights Movement and Black Power Movement. **Clarifications:** Examples may include, but are not limited to, the NAACP, National Urban League, SNCC, CORE, James Farmer, Charles Houston, Thurgood Marshall, Rosa Parks, Constance Baker Motley, the Little Rock Nine, Roy Wilkins, Whitney M. Young, A. Philip Randolph, Dr. Martin Luther King, Jr., Robert F. Williams, Fannie Lou Hamer, Malcolm X [El-Hajj Malik El-Shabazz], Stokely Carmichael [Kwame Ture], H. Rap Brown [Jamil Abdullah Al-Amin], the Black Panther Party [e.g., Huey P. Newton, Bobby Seale].

	This benchmark is annually evaluated on the United States History End-of-Course Assessment. For more information on how this benchmark is evaluated view the United States History End-of-Course Assessment Test Item Specifications pages 51-52. Additional resources may be found on the FLDOE End-of-Course (EOC) Assessments webpage and the FLDOE Social Studies webpage.
SS.912.A.7.7:	Assess the building of coalitions between African Americans, whites, and other groups in achieving integration and equal rights. **Clarifications:** Examples may include, but are not limited to, Freedom Summer, Freedom Rides, Montgomery Bus Boycott, Tallahassee Bus Boycott of 1956, March on Washington. This benchmark is annually evaluated on the United States History End-of-Course Assessment. For more information on how this benchmark is evaluated view the United States History End-of-Course Assessment Test Item Specifications pages 51-52. Additional resources may be found on the FLDOE End-of-Course (EOC) Assessments webpage and the FLDOE Social Studies webpage.
SS.912.A.7.8:	Analyze significant Supreme Court decisions relating to integration, busing, affirmative action, the rights of the accused, and reproductive rights. **Clarifications:** Examples may include, but are not limited to, Plessy v. Ferguson [1896], Brown v. Board of Education [1954], Swann v. Charlotte-Mecklenburg Board of Education [1971], Regents of the University of California v. Bakke [1978], Miranda v. Arizona [1966], Gideon v. Wainwright [1963], Mapp v. Ohio [1961], and Roe v. Wade [1973]. This benchmark is annually evaluated on the United States History End-of-Course Assessment. For more information on how this benchmark is evaluated view the United States History End-of-Course Assessment Test Item Specifications pages 53-54. Additional resources may be found on the FLDOE End-of-Course (EOC) Assessments webpage and the FLDOE Social Studies webpage.
SS.912.A.7.9:	Examine the similarities of social movements (Native Americans, Hispanics, women, anti-war protesters) of the 1960s and 1970s.
SS.912.A.7.10:	Analyze the significance of Vietnam and Watergate on the government and people of the United States. **Clarifications:** Examples may include, but are not limited to, mistrust of government, reinforcement of freedom of the press, as well as checks and balances. Examples may include, but are not limited to, mistrust of government and reinforcement of freedom of the press. This benchmark is annually evaluated on the United States History End-of-Course Assessment. For more information on how this benchmark is evaluated view the United States History End-of-Course Assessment Test Item Specifications pages 49-50. Additional resources may be found on the FLDOE End-of-Course (EOC) Assessments webpage and the FLDOE Social Studies webpage.
SS.912.A.7.11:	Analyze the foreign policy of the United States as it relates to Africa, Asia, the Caribbean, Latin America, and the Middle East. **Clarifications:** Examples may include, but aren ot limited to, Haiti, Bosnia-Kosovo, Rwanda, Grenada, Camp David Accords, Iran Hostage Crisis, Lebanon, Iran-Iraq War, Reagan Doctrine, Iran-Contra Affair, Persian Gulf War. This benchmark is annually evaluated on the United States History End-of-Course Assessment. For more information on how this benchmark is evaluated view the United States History End-of-Course Assessment Test Item Specifications pages 55-56. Additional resources may be found on the FLDOE End-of-Course (EOC) Assessments webpage and the FLDOE Social Studies webpage.
SS.912.A.7.12:	Analyze political, economic, and social concerns that emerged at the end of the 20th century and into the 21st century. **Clarifications:** Examples may include, but are not limited to, AIDS, Green Revolution, outsourcing of jobs, global warming, human rights violations. This benchmark is annually evaluated on the United States History End-of-Course Assessment. For more information on how this benchmark is evaluated view the United States History End-of-Course Assessment Test Item Specifications pages 57-59. Additional resources may be found on the FLDOE End-of-Course (EOC) Assessments webpage and the FLDOE Social Studies webpage.
SS.912.A.7.13:	Analyze the attempts to extend New Deal legislation through the Great Society and the successes and failures of these programs to promote social and economic stability. **Clarifications:** Examples may include, but are not limited to, Civil Rights Act of 1964, Voting Rights Act of 1965, War on Poverty, Medicare, Medicaid, Headstart. This benchmark is annually evaluated on the United States History End-of-Course Assessment. For more information on how this benchmark is evaluated view the United States History End-of-Course Assessment Test Item Specifications pages 49-50 and pages 57-59. Additional resources may be found on the FLDOE End-of-Course (EOC) Assessments webpage and the FLDOE Social Studies webpage.
SS.912.A.7.14:	Review the role of the United States as a participant in the global economy (trade agreements, international competition, impact on American labor, environmental concerns). **Clarifications:** Examples may include, but are not limited to, NAFTA, World Trade Organization. This benchmark is annually evaluated on the United States History End-of-Course Assessment. For more information on how this benchmark is evaluated view the United States History End-of-Course Assessment Test Item Specifications pages 57-59. Additional resources may be found on the FLDOE End-of-Course (EOC) Assessments webpage and the FLDOE Social Studies webpage.
SS.912.A.7.15:	Analyze the effects of foreign and domestic terrorism on the American people. **Clarifications:** Examples may include, but are not limited to, Oklahoma City bombing, attack of September 11, 2001, Patriot Act, wars in Afghanistan and Iraq. This benchmark is annually evaluated on the United States History End-of-Course Assessment. For more information on how this benchmark is evaluated view the United States History End-of-Course Assessment Test Item Specifications pages 57-59. Additional resources may be found on the FLDOE End-of-Course (EOC) Assessments webpage and the FLDOE Social Studies webpage.

	Examine changes in immigration policy and attitudes toward immigration since 1950.
SS.912.A.7.16:	**Clarifications:** This benchmark is annually evaluated on the United States History End-of-Course Assessment. For more information on how this benchmark is evaluated view the United States History End-of-Course Assessment Test Item Specifications pages 57-59. Additional resources may be found on the FLDOE End-of-Course (EOC) Assessments webpage and the FLDOE Social Studies webpage.
	Examine key events and key people in Florida history as they relate to United States history.
SS.912.A.7.17:	**Clarifications:** Examples may include, but are not limited to, selection of Central Florida as a location for Disney, growth of the citrus and cigar industries, construction of Interstates, Harry T. Moore, Pork Chop Gang, Claude Pepper, changes in the space program, use of DEET, Hurricane Andrew, the Election of 2000, migration and immigration, Sunbelt state. This benchmark is annually evaluated on the United States History End-of-Course Assessment. For more information on how this benchmark is evaluated view the United States History End-of-Course Assessment Test Item Specifications pages 47-52 and pages 57-59. Additional resources may be found on the FLDOE End-of-Course (EOC) Assessments webpage and the FLDOE Social Studies webpage.
SS.912.G.1.2:	Use spatial perspective and appropriate geographic terms and tools, including the Six Essential Elements, as organizational schema to describe any given place.
SS.912.G.1.3:	Employ applicable units of measurement and scale to solve simple locational problems using maps and globes.
SS.912.G.2.1:	Identify the physical characteristics and the human characteristics that define and differentiate regions. **Clarifications:** Examples of physical characteristics are climate, terrain, resources. Examples of human characteristics are religion, government, economy, demography.
SS.912.G.4.2:	Use geographic terms and tools to analyze the push/pull factors contributing to human migration within and among places.
SS.912.G.4.3:	Use geographic terms and tools to analyze the effects of migration both on the place of origin and destination, including border areas.
SS.912.H.1.1:	Relate works in the arts (architecture, dance, music, theatre, and visual arts) of varying styles and genre according to the periods in which they were created. **Clarifications:** Examples are Bronze Age, Ming Dynasty, Classical, Renaissance, Modern, and Contemporary.
SS.912.H.1.3:	Relate works in the arts to various cultures. **Clarifications:** Examples are African, Asian, Oceanic, European, the Americas, Middle Eastern, Egyptian, Greek, Roman.
SS.912.H.1.5:	Examine artistic response to social issues and new ideas in various cultures. **Clarifications:** Examples are Victor Hugo's Les Miserables, Langston Hughes' poetry, Pete Seeger's Bring 'Em Home.
SS.912.H.3.1:	Analyze the effects of transportation, trade, communication, science, and technology on the preservation and diffusion of culture.
MA.K12.MTR.1.1:	Mathematicians who participate in effortful learning both individually and with others: • Analyze the problem in a way that makes sense given the task. • Ask questions that will help with solving the task. • Build perseverance by modifying methods as needed while solving a challenging task. • Stay engaged and maintain a positive mindset when working to solve tasks. • Help and support each other when attempting a new method or approach. **Clarifications:** Teachers who encourage students to participate actively in effortful learning both individually and with others: • Cultivate a community of growth mindset learners. • Foster perseverance in students by choosing tasks that are challenging. • Develop students' ability to analyze and problem solve. • Recognize students' effort when solving challenging problems.
MA.K12.MTR.2.1:	Demonstrate understanding by representing problems in multiple ways. Mathematicians who demonstrate understanding by representing problems in multiple ways: • Build understanding through modeling and using manipulatives. • Represent solutions to problems in multiple ways using objects, drawings, tables, graphs and equations. • Progress from modeling problems with objects and drawings to using algorithms and equations. • Express connections between concepts and representations. • Choose a representation based on the given context or purpose. **Clarifications:** Teachers who encourage students to demonstrate understanding by representing problems in multiple ways: • Help students make connections between concepts and representations. • Provide opportunities for students to use manipulatives when investigating concepts. • Guide students from concrete to pictorial to abstract representations as understanding progresses. • Show students that various representations can have different purposes and can be useful in different situations.
	Complete tasks with mathematical fluency. Mathematicians who complete tasks with mathematical fluency: • Select efficient and appropriate methods for solving problems within the given context. • Maintain flexibility and accuracy while performing procedures and mental calculations. • Complete tasks accurately and with confidence.

MA.K12.MTR.3.1:	• Adapt procedures to apply them to a new context. • Use feedback to improve efficiency when performing calculations. **Clarifications:** Teachers who encourage students to complete tasks with mathematical fluency: • Provide students with the flexibility to solve problems by selecting a procedure that allows them to solve efficiently and accurately. • Offer multiple opportunities for students to practice efficient and generalizable methods. • Provide opportunities for students to reflect on the method they used and determine if a more efficient method could have been used.
MA.K12.MTR.4.1:	Engage in discussions that reflect on the mathematical thinking of self and others. Mathematicians who engage in discussions that reflect on the mathematical thinking of self and others: • Communicate mathematical ideas, vocabulary and methods effectively. • Analyze the mathematical thinking of others. • Compare the efficiency of a method to those expressed by others. • Recognize errors and suggest how to correctly solve the task. • Justify results by explaining methods and processes. • Construct possible arguments based on evidence. **Clarifications:** Teachers who encourage students to engage in discussions that reflect on the mathematical thinking of self and others: • Establish a culture in which students ask questions of the teacher and their peers, and error is an opportunity for learning. • Create opportunities for students to discuss their thinking with peers. • Select, sequence and present student work to advance and deepen understanding of correct and increasingly efficient methods. • Develop students' ability to justify methods and compare their responses to the responses of their peers.
MA.K12.MTR.5.1:	Use patterns and structure to help understand and connect mathematical concepts. Mathematicians who use patterns and structure to help understand and connect mathematical concepts: • Focus on relevant details within a problem. • Create plans and procedures to logically order events, steps or ideas to solve problems. • Decompose a complex problem into manageable parts. • Relate previously learned concepts to new concepts. • Look for similarities among problems. • Connect solutions of problems to more complicated large-scale situations. **Clarifications:** Teachers who encourage students to use patterns and structure to help understand and connect mathematical concepts: • Help students recognize the patterns in the world around them and connect these patterns to mathematical concepts. • Support students to develop generalizations based on the similarities found among problems. • Provide opportunities for students to create plans and procedures to solve problems. • Develop students' ability to construct relationships between their current understanding and more sophisticated ways of thinking.
MA.K12.MTR.6.1:	Assess the reasonableness of solutions. Mathematicians who assess the reasonableness of solutions: • Estimate to discover possible solutions. • Use benchmark quantities to determine if a solution makes sense. • Check calculations when solving problems. • Verify possible solutions by explaining the methods used. • Evaluate results based on the given context. **Clarifications:** Teachers who encourage students to assess the reasonableness of solutions: • Have students estimate or predict solutions prior to solving. • Prompt students to continually ask, "Does this solution make sense? How do you know?" • Reinforce that students check their work as they progress within and after a task. • Strengthen students' ability to verify solutions through justifications.
MA.K12.MTR.7.1:	Apply mathematics to real-world contexts. Mathematicians who apply mathematics to real-world contexts: • Connect mathematical concepts to everyday experiences. • Use models and methods to understand, represent and solve problems. • Perform investigations to gather data or determine if a method is appropriate. • Redesign models and methods to improve accuracy or efficiency. **Clarifications:** Teachers who encourage students to apply mathematics to real-world contexts: • Provide opportunities for students to create models, both concrete and abstract, and perform investigations. • Challenge students to question the accuracy of their models and methods. • Support students as they validate conclusions by comparing them to the given situation. • Indicate how various concepts can be applied to other disciplines.
ELA.K12.EE.1.1:	Cite evidence to explain and justify reasoning. **Clarifications:** K-1 Students include textual evidence in their oral communication with guidance and support from adults. The evidence can consist of details from the text without naming the text. During 1st grade, students learn how to incorporate the evidence in their writing. 2-3 Students include relevant textual evidence in their written and oral communication. Students should name the text when they refer to it. In 3rd grade, students should use a combination of direct and indirect citations. 4-5 Students continue with previous skills and reference comments made by speakers and peers. Students cite texts that they've directly

	quoted, paraphrased, or used for information. When writing, students will use the form of citation dictated by the instructor or the style guide referenced by the instructor. 6-8 Students continue with previous skills and use a style guide to create a proper citation. 9-12 Students continue with previous skills and should be aware of existing style guides and the ways in which they differ.
ELA.K12.EE.2.1:	Read and comprehend grade-level complex texts proficiently. **Clarifications:** See Text Complexity for grade-level complexity bands and a text complexity rubric.
ELA.K12.EE.3.1:	Make inferences to support comprehension. **Clarifications:** Students will make inferences before the words infer or inference are introduced. Kindergarten students will answer questions like "Why is the girl smiling?" or make predictions about what will happen based on the title page. Students will use the terms and apply them in 2nd grade and beyond.
ELA.K12.EE.4.1:	Use appropriate collaborative techniques and active listening skills when engaging in discussions in a variety of situations. **Clarifications:** In kindergarten, students learn to listen to one another respectfully. In grades 1-2, students build upon these skills by justifying what they are thinking. For example: "I think _____ because _____." The collaborative conversations are becoming academic conversations. In grades 3-12, students engage in academic conversations discussing claims and justifying their reasoning, refining and applying skills. Students build on ideas, propel the conversation, and support claims and counterclaims with evidence.
ELA.K12.EE.5.1:	Use the accepted rules governing a specific format to create quality work. **Clarifications:** Students will incorporate skills learned into work products to produce quality work. For students to incorporate these skills appropriately, they must receive instruction. A 3rd grade student creating a poster board display must have instruction in how to effectively present information to do quality work.
ELA.K12.EE.6.1:	Use appropriate voice and tone when speaking or writing. **Clarifications:** In kindergarten and 1st grade, students learn the difference between formal and informal language. For example, the way we talk to our friends differs from the way we speak to adults. In 2nd grade and beyond, students practice appropriate social and academic language to discuss texts.
ELD.K12.ELL.SI.1:	English language learners communicate for social and instructional purposes within the school setting.
ELD.K12.ELL.SS.1:	English language learners communicate information, ideas and concepts necessary for academic success in the content area of Social Studies.
HE.912.C.2.4:	Evaluate how public health policies and government regulations can influence health promotion and disease prevention. **Clarifications:** Seat-belt enforcement, underage alcohol sales, reporting communicable diseases, child care, and AED availability.

General Course Information and Notes

GENERAL NOTES

United States History (U.S. History) 9-12 Course - The grade 9-12 United States History course consists of the following content area strands: United States History, Geography, and Humanities. The primary content emphasis for this course pertains to the study of United States history from Reconstruction to the present day. Students will be exposed to the historical, geographic, political, economic, and sociological events which influenced the development of the United States and the resulting impact on world history. So that students can clearly see the relationship between cause and effect in historical events, students should have the opportunity to review those fundamental ideas and events which occurred before the end of Reconstruction.

Special Notes:
Credit Recovery courses are credit bearing courses with specific content requirements defined by Next Generation Sunshine State Standards and/or Florida Standards. Students enrolled in a Credit Recovery course must have previously attempted the corresponding course (and/or End-of-Course assessment) since the course requirements for the Credit Recovery course are exactly the same as the previously attempted corresponding course. For example, Geometry (1206310) and Geometry for Credit Recovery (1206315) have identical content requirements. It is important to note that Credit Recovery courses are not bound by Section 1003.436(1)(a), Florida Statutes, requiring a minimum of 135 hours of bona fide instruction (120 hours in a school/district implementing block scheduling) in a designed course of study that contains student performance standards, since the students have previously attempted successful completion of the corresponding course. Additionally, Credit Recovery courses should ONLY be used for credit recovery, grade forgiveness, or remediation for students needing to prepare for an End-of-Course assessment retake.

Additional content that may be contained in the NAEP Grade 12 United States History assessment includes material from all time periods on the following topics:

- Change and Continuity in American Democracy: Ideas, Institutions, Events, Key Figures, and Controversies
- The Gathering and Interactions of Peoples, Cultures, and Ideas
- Economic and Technological Changes and Their Relationship to Society, Ideas, and the Environment
- The Changing Role of America in the World

The NAEP frameworks for United States History may be accessed at nagb.org/content/nagb/assets/documents/publications/frameworks/historyframework.pdf

Instructional Practices:
Teaching from well-written, grade-level instructional materials enhances students' content area knowledge and also strengthens their ability to comprehend longer, complex reading passages on any topic for any reason. Using the following instructional practices also helps student learning:

1. Reading assignments from longer text passages as well as shorter ones when text is extremely complex.

2. Making close reading and rereading of texts central to lessons.
3. Asking high-level, text-specific questions and requiring high-level, complex tasks and assignments.
4. Requiring students to support answers with evidence from the text.
5. Providing extensive text-based research and writing opportunities (claims and evidence).

Florida's Benchmarks for Excellent Student Thinking (B.E.S.T.) Standards
This course includes Florida's B.E.S.T. ELA Expectations (EE) and Mathematical Thinking and Reasoning Standards (MTRs) for students. Florida educators should intentionally embed these standards within the content and their instruction as applicable. For guidance on the implementation of the EEs and MTRs, please visit cpalms.org/Standards/BEST_Standards.aspx and select the appropriate B.E.S.T. Standards package.

English Language Development ELD Standards Special Notes Section:
Teachers are required to provide listening, speaking, reading and writing instruction that allows English language learners (ELL) to communicate information, ideas and concepts for academic success in the content area of Social Studies. For the given level of English language proficiency and with visual, graphic, or interactive support, students will interact with grade level words, expressions, sentences and discourse to process or produce language necessary for academic success. The ELD standard should specify a relevant content area concept or topic of study chosen by curriculum developers and teachers which maximizes an ELL's need for communication and social skills. To access an ELL supporting document which delineates performance definitions and descriptors, please click on the following link: cpalms.org/uploads/docs/standards/eld/SS.pdf

Additional Instructional Resources:
Kinsey Collection: thekinseycollection.com/the-kinsey-collection-on-itunes-u/

GENERAL INFORMATION

Course Number: 2100315

Course Path: Section: Grades PreK to 12 Education Courses > **Grade Group:** Grades 9 to 12 and Adult Education Courses > **Subject:** Social Studies > **SubSubject:** American and Western Hemispheric Histories >
Abbreviated Title: US HIST CR

Number of Credits: One (1) credit

Course Length: Credit Recovery (R)

Course Type: Credit Recovery

Course Level: 2

Course Status: Draft - Course Pending Approval

Grade Level(s): 9,10,11,12

Educator Certifications

History (Grades 6-12)
Social Science (Grades 5-9)
Social Science (Grades 6-12)

United States History Honors (#2100320) 2022 - And Beyond

Course Standards

Name	Description
SS.912.A.1.1:	Describe the importance of historiography, which includes how historical knowledge is obtained and transmitted, when interpreting events in history.
SS.912.A.1.2:	Utilize a variety of primary and secondary sources to identify author, historical significance, audience, and authenticity to understand a historical period. **Clarifications:** Examples of primary and secondary sources may be found on various websites such as the site for The Kinsey Collection.
SS.912.A.1.3:	Utilize timelines to identify the time sequence of historical data.
SS.912.A.1.4:	Analyze how images, symbols, objects, cartoons, graphs, charts, maps, and artwork may be used to interpret the significance of time periods and events from the past.
SS.912.A.1.5:	Evaluate the validity, reliability, bias, and authenticity of current events and Internet resources. **Clarifications:** Students should be encouraged to utilize FINDS (Focus, Investigate, Note, Develop, Score), Florida's research process model accessible at: fldoe.org/bii/Library_Media/pdf/12TotalFINDS.pdf
SS.912.A.1.6:	Use case studies to explore social, political, legal, and economic relationships in history.
SS.912.A.1.7:	Describe various socio-cultural aspects of American life including arts, artifacts, literature, education, and publications.
SS.912.A.2.1:	Review causes and consequences of the Civil War. **Clarifications:** Examples may include, but are not limited to, slavery, states' rights, territorial claims, abolitionist movement, regional differences, Reconstruction, 13th, 14th, and 15th amendments. This benchmark is annually evaluated on the United States History End-of-Course Assessment. For more information on how this benchmark is assessed view the United States History End-of-Course Assessment Test Item Specifications pages 19-21. Additional resources may be found on the FLDOE End-of-Course (EOC) Assessments webpage and the FLDOE Social Studies webpage.
SS.912.A.2.2:	Assess the influence of significant people or groups on Reconstruction. **Clarifications:** Examples may include, but are not limited to, Alexander H. Stephens, Andrew Johnson, carpetbaggers, Charles Sumner, Elizabeth Cady Stanton, Frederick Douglass, Hiram Revels, Hiram Rhodes Revels, Jefferson Davis, Ku Klux Klan, Oliver O. Howard, Radical Republicans, Rutherford B. Hayes, scalawags, Thaddeus Stevens, Ulysses S. Grant, and William T. Sherman. This benchmark is annually evaluated on the United States History End-of-Course Assessment. For more information on how this benchmark is evaluated view the United States History End-of-Course Assessment Test Item Specifications pages 19-21. Additional resources may be found on the FLDOE End-of-Course (EOC) Assessments webpage and the FLDOE Social Studies webpage.
SS.912.A.2.3:	Describe the issues that divided Republicans during the early Reconstruction era. **Clarifications:** Examples may include, but are not limited to, the impeachment of Andrew Johnson, southern whites, blacks, black legislators and white extremist organizations such as the KKK, Knights of the White Camellia, The White League, Red Shirts, and Pale Faces. This benchmark is annually evaluated on the United States History End-of-Course Assessment. For more information on how this benchmark is evaluated view the United States History End-of-Course Assessment Test Item Specifications pages 19-21. Additional resources may be found on the FLDOE End-of-Course (EOC) Assessments webpage and the FLDOE Social Studies webpage.
SS.912.A.2.4:	Distinguish the freedoms guaranteed to African Americans and other groups with the 13th, 14th, and 15th Amendments to the Constitution. **Clarifications:** Examples may include, but are not limited to, abolition of slavery, citizenship, suffrage, equal protection. This benchmark is annually evaluated on the United States History End-of-Course Assessment. For more information on how this benchmark is evaluated view the United States History End-of-Course Assessment Test Item Specifications pages 19-21. Additional resources may be found on the FLDOE End-of-Course (EOC) Assessments webpage and the FLDOE Social Studies webpage.
SS.912.A.2.5:	Assess how Jim Crow Laws influenced life for African Americans and other racial/ethnic minority groups. **Clarifications:** This benchmark is annually evaluated on the United States History End-of-Course Assessment. For more information on how this benchmark is evaluated view the United States History End-of-Course Assessment Test Item Specifications pages 19-21. Additional resources may be found on the FLDOE End-of-Course (EOC) Assessments webpage and the FLDOE Social Studies webpage.
SS.912.A.2.6:	Compare the effects of the Black Codes and the Nadir on freed people, and analyze the sharecropping system and debt peonage as practiced in the United States. **Clarifications:** This benchmark is annually evaluated on the United States History End-of-Course Assessment. For more information on how this benchmark is evaluated view the United States History End-of-Course Assessment Test Item Specifications pages 19-21. Additional resources may be found on the FLDOE End-of-Course (EOC) Assessments webpage and the FLDOE Social Studies webpage.