**7th Grade Advanced Math**

**Instructional Plan 2014-2015**

**Mathematics Instructional Plan Writing Committee**

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We would like to express our appreciation for the time, effort and expertise contributed to the writing of the secondary Mathematics Instructional Plans by our team of Seminole County math teachers.

**Purpose:**

The purpose of the Seminole County Public Schools Instructional Plan is to present an organized, responsible strategy of Benchmark presentation that incorporates Math Florida Standards (MAFS) while using the Glencoe Course 2 Textbook. This document will serve as a guide for teachers of mathematics. Latitude in the execution of this document shall be determined by a school rather than by an individual teacher.

**Goals:**

* To establish a classroom environment that values mathematical student discourse
* To engage students in cognitively challenging mathematical tasks
* To promote discussions that focus on student thinking, reasoning, problem solving and student presentation
* To build on student thinking while ensuring the discussion remains focused on the mathematical ideas of the lesson
* Employ questioning techniques that require students to justify, defend and support their ideas

**Instructional Plan Caveats:**

* Suggested practice corresponds to the associated lesson and left at the discretion of the instructor to be used as additional practice or assignment. Problems within the suggested pages may be exhausted or selected for targeted skills.
* Descriptions of the Mathematical Practices can be found on pages 3 – 4. Teachers are encouraged to embed the Questions to Develop Mathematical Thinking on pages 5 – 6 in their daily lessons.
* Learning goals and scales can be accessed through the hyperlinks within the Instructional Plan.
* Each learning scale will include links for formative assessment tasks that teachers are encouraged to use while students are progressing through the learning scale.
* Extended time has been allocated for authentic assessment tasks. Recommendations are made within the instructional plan to include summative assessments and review, authentic assessments, as well as culminating tasks (Amplify projects). District training will be provided on successful implementation of the Amplify projects throughout the year.
* Teachers are encouraged to use appropriate questioning strategies to fully address the instructional standards and expectations, by paying attention to the recommended caveats included throughout the IP to include discussion that may not be included as part of the textbook.
* When drafting your diagnostic, target the standards taught in Units 1 and 2, because a majority should have been covered in 6th Advanced. If students show mastery in these standards the time allotted in these units can be reduced and the assessment can be combined to allow more time for later units.
* Please look ahead and plan accordingly for time and copy needs that may arise throughout this year so that all MAFS standards are thoroughly addressed.
* Due to the fact that we do not have Test Item Specifications at this time the targeted Mathematical Practices for each unit are a projection.
* Common Assessments need to be readdressed by PLCs to fit the new units and fully address the standards.
* In order to cover all of the standards directed by the course description, many eighth grade standards need to be addressed prior to the FSA. This is necessary so as to provide sufficient time for students to develop proficiency.
* **Each unit will include at least one learning goal listed under the unit heading. The learning goals and scales correspond to the grade/level specific clusters as defined by the MAFS.**
* **The learning goals and scales are a work in progress and may be modified as needed. They are meant to be a starting point for PLCs to use as they customize the learning goals and scales to best demonstrate student learning.**

**Test Items Specifications:** [fsassessments.org](http://fsassessments.org/)

**STANDARDS FOR MATHEMATICAL PRACTICE**

**1. (MAFS.K12.MP.1.1) Make sense of problems and persevere in solving them.**

Mathematically proficient students start by explaining to themselves the meaning of a problem and looking for entry points to its solution. They analyze givens, constraints, relationships, and goals. They make conjectures about the form and meaning of the solution and plan a solution pathway rather than simply jumping into a solution attempt. They consider analogous problems, and try special cases and simpler forms of the original problem in order to gain insight into its solution. They monitor and evaluate their progress and change course if necessary. Older students might, depending on the context of the problem, transform algebraic expressions or change the viewing window on their graphing calculator to get the information they need. Mathematically proficient students can explain correspondences between equations, verbal descriptions, tables, and graphs or draw diagrams of important features and relationships, graph data, and search for regularity or trends. Younger students might rely on using concrete objects or pictures to help conceptualize and solve a problem. Mathematically proficient students check their answers to problems using a different method, and they continually ask themselves, “Does this make sense?” They can understand the approaches of others to solving complex problems and identify correspondences between different approaches.

**2. (MAFS.K12.MP.2.1) Reason abstractly and quantitatively.**

Mathematically proficient students make sense of quantities and their relationships in problem situations. They bring two complementary abilities to bear on problems involving quantitative relationships: the ability to *decontextualize*—to abstract a given situation and represent it symbolically and manipulate the representing symbols as if they have a life of their own, without necessarily attending to their referents—and the ability to *contextualize*, to pause as needed during the manipulation process in order to probe into the referents for the symbols involved. Quantitative reasoning entails habits of creating a coherent representation of the problem at hand; considering the units involved; attending to the meaning of quantities, not just how to compute them; and knowing and flexibly using different properties of operations and objects.

**3. (MAFS.K12.MP.3.1) Construct viable arguments and critique the reasoning of others.**

Mathematically proficient students understand and use stated assumptions, definitions, and previously established results in constructing arguments. They make conjectures and build a logical progression of statements to explore the truth of their conjectures. They are able to analyze situations by breaking them into cases, and can recognize and use counterexamples. They justify their conclusions, communicate them to others, and respond to the arguments of others. They reason inductively about data, making plausible arguments that take into account the context from which the data arose. Mathematically proficient students are also able to compare the effectiveness of two plausible arguments, distinguish correct logic or reasoning from that which is flawed, and—if there is a flaw in an argument—explain what it is. Elementary students can construct arguments using concrete referents such as objects, drawings, diagrams, and actions. Such arguments can make sense and be correct, even though they are not generalized or made formal until later grades. Later, students learn to determine domains to which an argument applies. Students at all grades can listen or read the arguments of others, decide whether they make sense, and ask useful questions to clarify or improve the arguments.

**4. (MAFS.K12.MP.4.1) Model with mathematics.**

Mathematically proficient students can apply the mathematics they know to solve problems arising in everyday life, society, and the workplace. In early grades, this might be as simple as writing an addition equation to describe a situation. In middle grades, a student might apply proportional reasoning to plan a school event or analyze a problem in the community. By high school, a student might use geometry to solve a design problem or use a function to describe how one quantity of interest depends on another. Mathematically proficient students who can apply what they know are comfortable making assumptions and approximations to simplify a complicated situation, realizing that these may need revision later. They are able to identify important quantities in a practical situation and map their relationships using such tools as diagrams, two-way tables, graphs, flowcharts and formulas. They can analyze those relationships mathematically to draw conclusions. They routinely interpret their mathematical results in the context of the situation and reflect on whether the results make sense, possibly improving the model if it has not served its purpose.

**5. (MAFS.K12.MP.5.1) Use appropriate tools strategically.**

Mathematically proficient students consider the available tools when solving a mathematical problem. These tools might include pencil and paper, concrete models, a ruler, a protractor, a calculator, a spreadsheet, a computer algebra system, a statistical package, or dynamic geometry software. Proficient students are sufficiently familiar with tools appropriate for their grade or course to make sound decisions about when each of these tools might be helpful, recognizing both the insight to be gained and their limitations. For example, mathematically proficient high school students analyze graphs of functions and solutions generated using a graphing calculator. They detect possible errors by strategically using estimation and other mathematical knowledge. When making mathematical models, they know that technology can enable them to visualize the results of varying assumptions, explore consequences, and compare predictions with data. Mathematically proficient students at various grade levels are able to identify relevant external mathematical resources, such as digital content located on a website, and use them to pose or solve problems. They are able to use technological tools to explore and deepen their understanding of concepts.

**6. (MAFS.K12.MP.6.1) Attend to precision.**

Mathematically proficient students try to communicate precisely to others. They try to use clear definitions in discussion with others and in their own reasoning. They state the meaning of the symbols they choose, including using the equal sign consistently and appropriately. They are careful about specifying units of measure, and labeling axes to clarify the correspondence with quantities in a problem. They calculate accurately and efficiently, express numerical answers with a degree of precision appropriate for the problem context. In the elementary grades, student’s give carefully formulated explanations to each other. By the time they reach high school they have learned to examine claims and make explicit use of definitions.

**7. (MAFS.K12.MP.7.1) Look for and make use of structure.**

Mathematically proficient students look closely to discern a pattern or structure. Young students, for example, might notice that three and seven more is the same amount as seven and three more, or they may sort a collection of shapes according to how many sides the shapes have. Later, students will see 7 × 8 equals the well-remembered 7 × 5 + 7 × 3, in preparation for learning about the distributive property. In the expression *x*2 + 9*x* + 14, older students can see the 14 as 2 × 7 and the 9 as 2 + 7. They recognize the significance of an existing line in a geometric figure and can use the strategy of drawing an auxiliary line for solving problems. They also can step back for an overview and shift perspective. They can see complicated things, such as some algebraic expressions, as single objects or as being composed of several objects. For example, they can see 5 – 3(*x* – *y*) 2 as 5 minus a positive number times a square and use that to realize that its value cannot be more than 5 for any real numbers *x* and *y*.

**8. (MAFS.K12.MP.8.1) Look for and express regularity in repeated reasoning.**

Mathematically proficient students notice if calculations are repeated, and look both for general methods and for shortcuts. Upper elementary students might notice when dividing 25 by 11 that they are repeating the same calculations over and over again, and conclude they have a repeating decimal. By paying attention to the calculation of slope as they repeatedly check whether points are on the line through (1, 2) with slope 3, middle school students might abstract the equation (*y* – 2)/(*x* – 1) = 3. Noticing the regularity in the way terms cancel when expanding (*x* – 1)(*x* + 1), (*x* – 1)(*x*2 + *x* + 1), and (*x* – 1)(*x*3 + *x*2 + *x* + 1) might lead them to the general formula for the sum of a geometric series. As they work to solve a problem, mathematically proficient students maintain oversight of the process, while attending to the details. They continually evaluate the reasonableness of their intermediate results.

| **Summary of Standards for Mathematical Practice** | **Questions to Develop Mathematical Thinking** |
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| **1. Make sense of problems and persevere in solving them.** | |
| * Interpret and make meaning of the problem to find a starting point. Analyze what is given in order to explain to them the meaning of the problem. * Plan a solution pathway instead of jumping to a solution. * Monitor their progress and change the approach if necessary. * See relationships between various representations. * Relate current situations to concepts or skills previously learned and connect mathematical ideas to one another. * Continually ask them, “Does this make sense?” Can understand various approaches to solutions. | * How would you describe the problem in your own words? * How would you describe what you are trying to find? * What do you notice about...? * What information is given in the problem? * Describe the relationship between the quantities. * Describe what you have already tried. What might you change? * Talk me through the steps you’ve used to this point. * What steps in the process are you most confident about? * What are some other strategies you might try? * What are some other problems that are similar to this one? * How might you use one of your previous problems to help you begin? * How else might you organize...represent... show...? |
| **2. Reason abstractly and quantitatively.** | |
| * Make sense of quantities and their relationships. * Decontextualize (represent a situation symbolically and manipulate the symbols) and contextualize (make meaning of the symbols in a problem) quantitative relationships. * Understand the meaning of quantities and are flexible in the use of operations and their properties. * Create a logical representation of the problem. * Attends to the meaning of quantities, not just how to compute them. | * What do the numbers used in the problem represent? * What is the relationship of the quantities? * How is \_\_\_\_\_\_\_ related to \_\_\_\_\_\_\_\_? * What is the relationship between \_\_\_\_\_\_and \_\_\_\_\_\_? * What does\_\_\_\_\_\_\_mean to you? (e.g. symbol, quantity, diagram) * What properties might we use to find a solution? * How did you decide in this task that you needed to use...? * Could we have used another operation or property to solve this task? Why or why not? |
| **3. Construct viable arguments and critique the reasoning of others.** | |
| * Analyze problems and use stated mathematical assumptions, definitions, and established results in constructing arguments. * Justify conclusions with mathematical ideas. * Listen to the arguments of others and ask useful questions to determine if an argument makes sense. * Ask clarifying questions or suggest ideas to improve/revise the argument. * Compare two arguments and determine correct or flawed logic. | * What mathematical evidence would support your solution? * How can we be sure that...? / How could you prove that...? * Will it still work if...? * What were you considering when...? * How did you decide to try that strategy? * How did you test whether your approach worked? * How did you decide what the problem was asking you to find? (What was unknown?) * Did you try a method that did not work? Why didn’t it work? Would it ever work? Why or why not? * What is the same and what is different about...? * How could you demonstrate a counter-example? |
| **4. Model with mathematics.** | |
| * Understand this is a way to reason quantitatively and abstractly (able to decontextualize and contextualize). * Apply the mathematics they know to solve everyday problems. * Are able to simplify a complex problem and identify important quantities to look at relationships. * Represent mathematics to describe a situation either with an equation or a diagram and interpret the results of a mathematical situation. * Reflect on whether the results make sense, possibly improving/revising the model. * Ask them, “How can I represent this mathematically?” | * What number model could you construct to represent the problem? * What are some ways to represent the quantities? * What is an equation or expression that matches the diagram, number line..., chart..., table..? * Where did you see one of the quantities in the task in your equation or expression? * How would it help to create a diagram, graph, and table...? * What are some ways to visually represent...? * What formula might apply in this situation? |

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| **5. Use appropriate tools strategically.** | |
| * Use available tools recognizing the strengths and limitations of each Unit * Use estimation and other mathematical knowledge to detect possible errors. * Identify relevant external mathematical resources to pose and solve problems. * Use technological tools to deepen their understanding of mathematics. | * What mathematical tools could we use to visualize and represent the situation? * What information do you have? * What do you know that is not stated in the problem? * What approach are you considering trying first? * What estimate did you make for the solution? * In this situation would it be helpful to use...a graph..., number line..., ruler..., diagram..., calculator..., manipulative? * Why was it helpful to use...? * What can using a \_\_\_\_\_\_ show us that \_\_\_\_\_may not? * In what situations might it be more informative or helpful to use...? |
| **6. Attend to precision.** | |
| * Communicate precisely with others and try to use clear mathematical language when discussing their reasoning. * Understand the meanings of symbols used in mathematics and can label quantities appropriately. * Express numerical answers with a degree of precision appropriate for the problem context. * Calculate efficiently and accurately. | * What mathematical terms apply in this situation? * How did you know your solution was reasonable? * Explain how you might show that your solution answers the problem. * What would be a more efficient strategy? * How are you showing the meaning of the quantities? * What symbols or mathematical notations are important in this problem? * What mathematical language...,definitions..., properties can you use to explain...? * How could you test your solution to see if it answers the problem? |
| **7. Look for and make use of structure.** | |
| * Apply general mathematical rules to specific situations. * Look for the overall structure and patterns in mathematics. * See complicated things as single objects or as being composed of several objects. | * What observations do you make about...? * What do you notice when...? * What parts of the problem might you eliminate.., simplify..? * What patterns do you find in...? * How do you know if something is a pattern? * What ideas that we have learned before were useful in solving this problem? * What are some other problems that are similar to this one? * How does this relate to...? * In what ways does this problem connect to other mathematical concepts? |
| **8. Look for and express regularity in repeated reasoning.** | |
| * See repeated calculations and look for generalizations and shortcuts. * See the overall process of the problem and still attend to the details. * Understand the broader application of patterns and see the structure in similar situations. * Continually evaluate the reasonableness of their intermediate results | * Explain how this strategy works in other situations? * Is this always true, sometimes true or never true? * How would we prove that...? * What do you notice about...? * What is happening in this situation? * What would happen if...? * Is there a mathematical rule for...? * What predictions or generalizations can this pattern support? * What mathematical consistencies do you notice? |

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| **FIRST QUARTER (August 11 – October 9)** | | **42 DAYS** |
| **Topic/Assessment** | **Dates Covered** | **Approximate # of Days** |
| UNIT 1: Integers |  | 10 |
| UNIT 2: Rational Numbers  UNI |  | 10 |
| UNIT 3: Linear Equations & Functions |  | 18 |
| District Assessment (2 days), 9 Weeks Exams (2 days) |  | 4 |
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| **SECOND QUARTER (October 13 – December 18)** | | **46 DAYS** |
| **Topic/Assessment** | **Dates Covered** | **Approximate # of Days** |
| UNIT 4: Ratios & Proportions |  | 17 |
| UNIT 5: Probability |  | 8 |
| UNIT 6: Data Analysis |  | 15 |
| District Assessment (2 days); 9 Weeks Exams/Semester Exams (3 days) |  | 5 |
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| **THIRD QUARTER (January 6 – March 12)** | | **46 DAYS** |
| **Topic/Assessment** | **Dates Covered** | **Approximate # of Days** |
| UNIT 7: Two-Dimensional Geometry |  | 15 |
| UNIT 8: Angle Relationships |  | 7 |
| UNIT 9: Three-Dimensional Geometry (Part I) |  | 16 |
| UNIT 10: Pythagorean Theorem (Part I) |  | 3 |
| District Assessment (2 days); FSA ELA/Writing (1 day); 9 Weeks Exams (2 days) |  | 5 |
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| **FOURTH QUARTER (March 23 – May 27)** | | **46 DAYS** |
| **Topic/Assessment** | **Dates Covered** | **Approximate # of Days** |
| UNIT 10 (cont.): Pythagorean Theorem (Part II) |  | 9 |
| UNIT 11: Exponent Laws & Scientific Notation |  | 9 |
| UNIT 12: Three-Dimensional Geometry (Part II) |  | 5 |
| UNIT 13: Transformations |  | 8 |
| State Test Review (3 days); FSA Tests (7 days); Cumulative Review (2 days); 9 Weeks Exams (3 days) |  | 15 |

*\*Please note that the suggested number of instructional days per unit and quarter are designed to be a guide. Teachers are encouraged to work within their schools and their PLCs to make the most appropriate timing decisions for their students.\**

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| **Unit 1: Integers** | | | | |
| **Code** | **Mathematics Florida Standard** | | | |
| 6.NS.3.6 | Understand a rational number as a point on the number line. Extend number line diagrams and coordinate axes familiar from previous grades to represent points on the line and in the plane with negative number coordinates.   1. Find and position integers and other rational numbers on a horizontal or vertical number line diagram; find and position pairs of integers and other rational numbers on a coordinate plane | | | |
| 6.NS.3.7 | Understand ordering and absolute value of rational numbers.   1. Understand the absolute value of a rational number as its distance from 0 on the number line; interpret absolute value as magnitude for a positive or negative quantity in a real-world situation. | | | |
| 7.NS.1.1 | Apply and extend previous understandings of addition and subtraction to add and subtract rational numbers; represent addition and subtraction on a horizontal or vertical number line diagram.   1. Describe situations in which opposite quantities combine to make 0. For example, a hydrogen atom has 0 charge because its two constituents are oppositely charged. 2. Understand p + q as the number located a distance |q| from p, in the positive or negative direction depending on whether q is positive or negative. Show that a number and its opposite have a sum of 0 (are additive inverses). Interpret sums of rational numbers by describing real-world contexts. 3. Understand subtraction of rational numbers as adding the additive inverse, p – q = p + (–q). Show that the distance between two rational numbers on the number line is the absolute value of their difference, and apply this principle in real-world contexts. 4. Apply properties of operations as strategies to add and subtract rational numbers. | | | |
| 7.RP.1.2 | Recognize and represent proportional relationships between quantities.   1. Decide whether two quantities are in a proportional relationship, e.g., by testing for equivalent ratios in a table or graphing on a coordinate plane and observing whether the graph is a straight line through the origin. 2. Identify the constant of proportionality (unit rate) in tables, graphs, equations, diagrams, and verbal descriptions of proportional relationships. 3. Represent proportional relationships by equations. | | | |
| 7.RP.1.3 | Use proportional relationships to solve multistep ratio and percent problems. | | | |
| **Learning Goal and Scale** | | | | **Instructional Strategies & Misconceptions** |
| [**702:** Apply and extend previous understandings of operations to add and subtract rational numbers.](http://scpsmath.weebly.com/uploads/2/9/1/7/29174797/702.docx) | | | | * Students may confuse the term *opposite* with absolute value. * Students may have trouble graphing points with 0 as the *x*- or *y*-coordinate. * Students should be reminded to perform operations inside the absolute value symbol before taking the absolute value. * Students should be told that a negative sign in front of a variable means that it is the product of -1 and a variable. |
| **Math Practices for Unit** | | | **Unit Connections** | |
| 1. Make sense of problems and persevere in solving them. | | 5. Use appropriate tools strategically. | **Related 2013 – 2014 6th Grade Standards Summary:**   * Fluentlyadd, subtract,multiply, and divide multi-digit decimals using the standard algorithm for each operation. * Understand that positive and negative numbers are used together to describe quantities having opposite directions or values * Use positive and negative numbers to represent quantities in real-world contexts. * Recognize opposite signs of numbers * Find and position integers and other rational numbers on a horizontal or vertical number line diagram; find and position pairs of integers and other rational numbers on a coordinate plane. * Understand the absolute value of a rational number as its distance from 0 on the number line * Solve real-world and mathematical problems by graphing points in all four quadrants of the coordinate plane. | |
| 2. Reason abstractly and quantitatively. | | 6. Attend to precision. |
| 3. Construct viable arguments & critique reasoning of others. | | 7. Look for and make use of structure. |
| 4. Model with mathematics. | | 8. Look for and express regularity in repeated reasoning. |

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| **FIRST QUARTER** | | | | | | |
| **Unit 1: Integers** | | | | | | |
| **Learning Goal** | [***702:*** *Apply and extend previous understandings of operations to add and subtract rational numbers.*](http://scpsmath.weebly.com/uploads/2/9/1/7/29174797/702.docx) | | | | **Suggested # of Days** | **10** |
| **Approx. # of Day(s)** | **MAFS** | **Lesson Objective (Instructional Resources)** | **Suggested Assignments/Assessments** | **Ancillary Materials** | | |
| 3 |  | Policies, Procedures, and Diagnostic test | PLC created diagnostic |  | | |
| 1 | 6.NS.3.7  6.NS.3.7c | 1-1B Integers and Absolute Value pgs. 29 – 32 | TB pg. 31‐32  WB pg. 11‐12 |  | | |
| 1 | 6.NS.3.6  6.NS.3.6c | 1-1C The Coordinate Plane pgs. 33 – 37 | TB pg. 35-37  WB pg. 9-10 |  | | |
| 1 | 7.NS.1.1a  7.NS.1.1b  7.N.S1.1d  7.NS.1.3 | 1-2A/B Adding Integers pgs. 38 – 44 | TB pg. 39  TB p. 43-44  WB p. 11-12 |  | | |
| 1 | 7.NS.1.1c  7.NS.1.1d  7.NS.1.3 | 1-2C/D Subtract Integers pgs. 45 – 50 | TB pg. 49-50  WB pg. 13-14 |  | | |
| 1 | 7.NS.1.2a  7.NS.1.2b  7.NS.1.2c  7.NS.1.3 | 1-3B-D Multiply and Divide Integers pgs. 54 – 65 | TB pg. 55  TB pg. 58-60/WB pg. 17-18  TB pg. 63-65/WB pg. 19-20 |  | | |
| 2 | 6.NS.3.6c  6.NS.3.7c  7.NS.1.1a-d  7.NS.1.2a-c  7.NS.1.3 | Unit 1 Review and Problem Solving (Supplement or 1-3A)  Unit 1 PLC Created Assessment | Review pg. 68-71  Practice Test pg. 72 | **(Blackboard Resource)**  [**Integer Applications**](http://scpsmath.weebly.com/uploads/2/9/1/7/29174797/uint_1_integer_applications.docx) | | |

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| **Unit 2: Rational Numbers** | | | | |
| **Code** | **Mathematics Florida Standard** | | | |
| 6.EE.1.2 | Write, read, and evaluate expressions involving whole-number exponents.   1. Evaluate expressions at specific values of their variables. Include expressions that arise from formulas used in real-world problems. Perform arithmetic operations, including those involving whole-number exponents in the conventional order when there are no parentheses to specify a particular order (Order of Operations). | | | |
| 6.NS.3.7 | Understand ordering and absolute value of rational numbers.   1. Write, interpret, and explain statements of order for rational numbers in real-world contexts. | | | |
| 7.NS.1.1 | Apply and extend previous understandings of addition and subtraction to add and subtract rational numbers; represent addition and subtraction on a horizontal or vertical number line diagram.   1. Describe situations in which opposite quantities combine to make 0. For example, a hydrogen atom has 0 charge because its two constituents are oppositely charged. 2. Understand p + q as the number located a distance |q| from p, in the positive or negative direction depending on whether q is positive or negative. Show that a number and its opposite have a sum of 0 (are additive inverses). Interpret sums of rational numbers by describing real-world contexts. 3. Understand subtraction of rational numbers as adding the additive inverse,  p – q = p + (–q). Show that the distance between two rational numbers on the number line is the absolute value of their difference, and apply this principle in real-world contexts. 4. Apply properties of operations as strategies to add and subtract rational numbers. | | | |
| 7.NS.1.2 | Apply and extend previous understandings of multiplication and division and of fractions to multiply and divide rational numbers.   1. Convert a rational number to a decimal using long division; know that the decimal form of a rational number terminates in 0s or eventually repeats. | | | |
| **Learning Goal and Scale** | | | | **Instructional Strategies & Misconceptions** |
| [**702:** Apply and extend previous understandings of operations to add and subtract rational numbers.](http://scpsmath.weebly.com/uploads/2/9/1/7/29174797/702.docx)  [**703:** Apply and extend previous understandings of operations with fractions to multiply, and divide rational numbers.](http://scpsmath.weebly.com/uploads/2/9/1/7/29174797/703.docx) | | | | * Clarify bar placement on repeating decimals. * Remind students that when adding or subtracting unlike fractions that they need a common denominator and that the denominator should remain the same. * Students may have trouble with the placement of the negative sign in a fraction. Students often place the sign in both the numerator and denominator. Point out that only one negative sign is needed. * Students may have difficulty simplifying powers because they multiply the base and the exponent. Suggest to students that they write each power as the product of the same factor before they find its value. |
| **Math Practices for Unit** | | | **Unit Connections** | |
| 1. Make sense of problems and persevere in solving them. | | 5. Use appropriate tools strategically. | **Related 2013 – 2014 6th Grade Standards Summary:**   * Interpret and compute quotients of fractions, and solve word problems involving division of fractions by fractions. * Find the greatest common factor of two whole numbers less than or equal to 100 and the least common multiple of two whole numbers less than or equal to 12. * Explain and justify procedures for multiplying and dividing fractions and decimals. * Multiply and divide fractions and decimals efficiently. * Solve real-world problems involving multiplication and division of fractions and decimals. * Estimate of computations with fractions, decimals, and percents and judge the reasonableness of the results. | |
| 2. Reason abstractly and quantitatively. | | 6. Attend to precision. |
| 3. Construct viable arguments & critique reasoning of others. | | 7. Look for and make use of structure. |
| 4. Model with mathematics. | | 8. Look for and express regularity in repeated reasoning. |

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| **FIRST QUARTER** | | | | | | |
| **Unit 2: Rational Numbers** | | | | | | |
| **Learning Goal** | [***702:*** *Apply and extend previous understandings of operations to add and subtract rational numbers.*](http://scpsmath.weebly.com/uploads/2/9/1/7/29174797/702.docx)  [***703:*** *Apply and extend previous understandings of operations with fractions to multiply, and divide rational numbers.*](http://scpsmath.weebly.com/uploads/2/9/1/7/29174797/703.docx) | | | | **Suggested # of Days** | **10** |
| **Approx. # of Day(s)** | **MAFS** | **Lesson Objective (Instructional Resources)** | **Suggested Assignments/Assessments** | **Ancillary Materials** | | |
| 1 | 7.NS.1.2d | 2-1A/B Number Line and Terminating/ Repeating Decimals pgs. 79 – 84 | TB pg. 79  TB pg. 83-84  WB pg. 21-22 |  | | |
| 1 | 6.NS.3.7b | 2-1C Compare and Order Rational Numbers  pgs. 85 – 90 | TB pg. 88-89  WB pg. 23-24 |  | | |
| 5 | *5.NF.1.1*  *5.NF.1.2*  *(pre-requisite)* | 2-2A/B Add Like and Unlike Fractions pgs. 91 – 97 | TB pg. 94-95  TB pg. 97 | *\*\*Adding, subtracting, multiplying, and dividing fractions should have been covered in 5th and 6th grade. These days are in the IP solely as review if necessary. Please assess student knowledge in the diagnostic exam to determine what time, if any, needs to be allocated reviewing these skills.* | | |
| 2-2C Add and Subtract Unlike Fractions  pgs. 98 – 103 | TB pg.100-103 |
| 2-2D Add and Subtract Mixed Numbers  pgs. 104 – 108 | TB pg. 106-108 |
| *5.NF.2.4a*  *(pre-requisite)* | 2-3A/B Multiply Fractions pgs. 110 – 117 | TB pg. 111  TB pg. 115-117 |
| *5.NF.2.7*  *(pre-requisite)*  6.NS.1.1 | 2-3D Divide Fractions pgs. 120 – 125 | TB pg. 122-125 |
| 1 | 6.EE.1.2c | 2-3E Powers and Exponents pgs. 126 – 129 | TB pg. 127-129  WB pg. 37-38 |  | | |
| 2 | 6.EE.1.2c  6.NS.3.7b  7.NS.1.2d | Unit 2 Review and Problem Solving (Supplement or 2-3C)  Unit 2 PLC Created Assessment | Review pg. 184-187  Practice test pg. 188 | **(Blackboard Resource)**  [**Rational Numbers Applications**](http://scpsmath.weebly.com/uploads/2/9/1/7/29174797/unit_2_rational_numbers_applications.docx) | | |

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| **Unit 3: Linear Equations & Functions** | | | | |
| **Code** | **Mathematics Florida Standard** | | | |
| 6.EE.2.7 | Solve real-world and mathematical problems by writing and solving equations of the form x + p = q and px = q for cases in which p, q and x are all non-negative rational numbers. | | | |
| 6.EE.2.8 | Write an inequality of the form x > c or x < c to represent a constraint or condition in a real-world or mathematical problem. Recognize that inequalities of the form x > c or x < c have infinitely many solutions; represent solutions of such inequalities on number line diagrams. | | | |
| 7.EE.1.1 | Apply properties of operations as strategies to add, subtract, factor, and expand linear expressions with rational coefficients. | | | |
| 7.EE.1.2 | Understand that rewriting an expression in different forms in a problem context can shed light on the problem and how the quantities in it are related. | | | |
| 7.EE.2.3 | Solve multi-step real-life and mathematical problems posed with positive and negative rational numbers in any form (whole numbers, fractions, and decimals), using tools strategically. Apply properties of operations to calculate with numbers in any form; convert between forms as appropriate; and assess the reasonableness of answers using mental computation and estimation strategies. | | | |
| 7.EE.2.4 | Use variables to represent quantities in a real-world or mathematical problem, and construct simple equations and inequalities to solve problems by reasoning about the quantities.   1. Solve word problems leading to equations of the form px + q = r and p(x + q) = r, where p, q, and r are specific rational numbers. Solve equations of these forms fluently. Compare an algebraic solution to an arithmetic solution, identifying the sequence of the operations used in each approach. 2. Solve word problems leading to inequalities of the form px + q > r or px + q < r, where p, q, and r are specific rational numbers. Graph the solution set of the inequality and interpret it in the context of the problem. | | | |
| 8.EE.3.7 | Solve linear equations in one variable.   1. Give examples of linear equations in one variable with one solution, infinitely many solutions, or no solutions. Show which of these possibilities is the case by successively transforming the given equation into simpler forms, until an equivalent equation of the form x = a, a = a, or a = b results (where a and b are different numbers) 2. Solve linear equations with rational number coefficients, including equations with rational number coefficients, including equations whose solutions require expanding expressions using the distributive property and collecting like terms. | | | |
| 8.F.1.1 | Understand that a function is a rule that assigns to each input exactly one output. The graph of a function is the set of ordered pairs consisting of an input and the corresponding output. | | | |
| 8.F.1.2 | Compare properties of two functions each represented in a different way (algebraically, graphically, numerically in tables, or by verbal descriptions). | | | |
| 8.F.1.3 | Interpret the equation y = mx + b as defining a linear function, whose graph is a straight line; give examples of functions that are not linear. | | | |
| 8.F.2.4 | Construct a function to model a linear relationship between two quantities. Determine the rate of change and initial value of the function from a description of a relationship or from two (x,y) values, including reading these from a table or from a graph. Interpret the rate of change and initial value of a linear function in terms of the situation it models, in terms of its graph or a table of values. | | | |
| 8.F.2.5 | Describe qualitatively the functional relationship between two quantities by analyzing a graph (e.g., where the function is increasing or decreasing, linear or nonlinear). Sketch a graph that exhibits the qualitative features of a function that has been described verbally. | | | |
| **Learning Goal and Scale** | | | | **Instructional Strategies & Misconceptions** |
| [**704:** Use properties of operations to generate equivalent expressions.](http://scpsmath.weebly.com/uploads/2/9/1/7/29174797/704.docx)  [**705:** Solve real-world and mathematical problems using numerical and algebraic expressions and equations.](http://scpsmath.weebly.com/uploads/2/9/1/7/29174797/705.docx)  [**805:** Solve linear equations with rational coefficients where there is one solution, infinitely many solutions, or no solution.](http://scpsmath.weebly.com/uploads/2/9/1/7/29174797/805.docx)  [**807:** Define, evaluate, and compare functions.](http://scpsmath.weebly.com/uploads/2/9/1/7/29174797/807.docx)  [**808:** Use functions to model relationships between quantities.](http://scpsmath.weebly.com/uploads/2/9/1/7/29174797/808.docx) | | | | * Students may have trouble solving equations when the variable is on the right side of the equal sign. * Student may have trouble finding the reciprocal of a whole number such as 5. Remind them that all whole numbers can be written as a fraction with a denominator of 1. * Remind students to divide by the entire coefficient, including the sign for negative coefficients. * In multi-step equations students may have trouble deciding which variable term to eliminate. * When writing a function rule for a table, students should be prompted to test their rule beyond the first set of values. * When finding the slope from an equation remind students that they may need to re-write the equation in slope-intercept form first. |
| **Math Practices for Unit** | | | **Unit Connections** | |
| 1. Make sense of problems and persevere in solving them. | | 5. Use appropriate tools strategically. | **Related 2013 – 2014 6th Grade Standards Summary:**   * Write and evaluate numerical expressions involving whole-number exponents. * Write, read, and evaluate expressions in which letters stand for numbers, and use correct terminology. * Evaluate expressions at specific values of their variables. * Perform arithmetic operations, including those involving whole-number exponents, in the conventional order (Order of Operations). * Apply the properties of operations to generate equivalent expressions. * Identify when two expressions are equivalent. * Understand solving an equation or inequality as a process of answering a question: Which values from a specified set, if any, make the equation or inequality true? * Use substitution to determine whether a given number in a specified set makes an equation or inequality true. * Write an inequality of the form x > c or x < c to represent a constraint or condition in a real-world or mathematical problem. * Recognize that inequalities of the form x > c or x < c have infinitely many solutions; represent solutions of such inequalities on number line diagrams. | |
| 2. Reason abstractly and quantitatively. | | 6. Attend to precision. |
| 3. Construct viable arguments & critique reasoning of others. | | 7. Look for and make use of structure. |
| 4. Model with mathematics. | | 8. Look for and express regularity in repeated reasoning. |

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| **FIRST QUARTER** | | | | | | |
| **Unit 3: Linear Equations and Functions** | | | | | | |
| **Learning Goal** | [***704:*** *Use properties of operations to generate equivalent expressions.*](http://scpsmath.weebly.com/uploads/2/9/1/7/29174797/704.docx)  [***705:*** *Solve real-world and mathematical problems using numerical and algebraic expressions and equations.*](http://scpsmath.weebly.com/uploads/2/9/1/7/29174797/705.docx)  [***805:*** *Solve linear equations with rational coefficients where there is one solution, infinitely many solutions, or no solution.*](http://scpsmath.weebly.com/uploads/2/9/1/7/29174797/805.docx)  [***807:*** *Define, evaluate, and compare functions.*](http://scpsmath.weebly.com/uploads/2/9/1/7/29174797/807.docx)  [***808:*** *Use functions to model relationships between quantities.*](http://scpsmath.weebly.com/uploads/2/9/1/7/29174797/808.docx) | | | | **Suggested # of Days** | **18**  **(4)** |
| **Approx. # of Day(s)** | **MAFS** | **Lesson Objective (Instructional Resources)** | **Suggested Assignments/Assessments** | **Ancillary Materials** | | |
| 2 | 6.EE.2.7  7.EE.1.1  7.EE.1.2  7.EE.2.3  7.EE.2.4a  8.EE.3.7 | 3-1B-D and 3-2A-D Solving One-Step Equations  pgs. 144 – 155 and pgs. 156 – 168 | TB pg. 153-155  TB pg. 166-168 |  | | |
| 1 | 3-3B Solve Two-Step Equations pgs. 172 - 176 | TB pg. 174-176/WB pg. 47-48 | *\*\*Be sure to include examples in which students need to use the distributive property and/or combining like terms to first find an equivalent equation or inequality before solving them further.* | | |
| 2 | 3-3C/D Solve Multi-Step Equations pgs. 177 – 181 | TB pg. 177  TB pg. 180-181/WB pg. 49-50 |
| 2 | 7.EE.1.1  7.EE.1.2  6.EE.2.8  7.EE.2.4b | 13-1B/C Solving Inequalities pgs. 728 – 737 | TB pg. 730-732/WB p. 197-198  TB pg. 736-737/WB p. 199-200 |
| 1 | 7.EE.1.1 and 1.2  6.EE.2.7 and 2.8  7.EE.2.3 and 2.4 | Real World Applications and PLC Created Quiz |  | **(Blackboard Resource)**  [**Equations & Inequalities Applications**](http://scpsmath.weebly.com/uploads/2/9/1/7/29174797/unit_3_equations_inequalities_applications_student.docx) | | |
| 1 | 8.F.1.1  8.F.1.2 | 5-1A/B and 13-2A Equations and Functions (Written in Function Notation) pgs. 247 – 252 and pgs. 740 – 744 | TB pg. 247  TB pg. 250-252/WB pg. 65-66  TB pg. 742-744/WB p. 201-202 |  | | |
| 1 | 5-1C and 13-2B Representing Linear Functions in Graphs pgs. 253 – 257 and pgs. 745 – 749 | TB pg. 256-257/WB pg. 67-68  TB pg. 748-749/WB p. 203-204 |  | | |
| 1 | 5-2A/B Rate of Change and Constant Rate of Change pgs. 259 – 263 | TB pg. 259  TB pg. 261-262/WB pg. 69-70 |  | | |
| 1 | 8.F.1.3  8.F.2.4 | 5-2C Slope pgs. 264 – 267 | TB pg. 266-267  WB pg. 71-72 |  | | |
| 2 | 13-2C Slope-Intercept Form pgs. 750 – 753 | TB pg. 752-753  WB pg. 205-206 |  | | |
| 4 | 6.EE.2.7  6.EE.2.8  7.EE.1.1  7.EE.1.2  7.EE.2.3  7.EE.2.4  8.F.1.1  8.F.1.2  8.F.1.3  8.F.2.4 | Unit 3 Review and Problem Solving AND/OR  AMPLIFY Project: A Better Grade  Unit 3 PLC Created Assessment | Ch. 3 Review pg. 184-187  Ch. 3 Practice Test pg. 188  Ch. 5 Review pg. 286-289  Ch. 5 Practice Test pg. 290  Ch. 13 Check pg. 754  OR -------------------------------🡪 | **Resources found on Amplify Website** | | |
| 4 |  | District Assessments/ 9 Weeks Review and Exam |  |  | | |

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| **Unit 4: Ratios and Proportions** | | | | |
| **Code** | **Mathematics Florida Standard** | | | |
| 6.RP.1.3 | Use ratio and rate reasoning to solve real-world and mathematical problems, e.g., by reasoning about tables of equivalent ratios, tape diagrams, double number line diagrams, or equations.   1. Find a percent of a quantity as a rate per 100 (e.g., 30% of a quantity means 30/100 times the quantity); solve problems involving finding the whole, given a part and the percent. | | | |
| 7.RP.1.1 | Compute unit rates associated with ratios of fractions, including ratios of lengths, areas and other quantities measured in like or different units. | | | |
| 7.RP.1.2 | Recognize and represent proportional relationships between quantities.   1. Decide whether two quantities are in a proportional relationship, e.g., by testing for equivalent ratios in a table or graphing on a coordinate plane and observing whether the graph is a straight line through the origin. 2. Identify the constant of proportionality (unit rate) in tables, graphs, equations, diagrams, and verbal descriptions of proportional relationships. 3. Represent proportional relationships by equations. | | | |
| 7.RP.1.3 | Use proportional relationships to solve multistep ratio and percent problems. | | | |
| 8.EE.2.5 | Graph proportional relationships, interpreting the unit rate as the slope of the graph. Compare two different proportional relationships represented in different ways. *For example, compare a distance-time graph to a distance-time equation to determine which of two moving objects has greater spread.* | | | |
| 8.EE.2.6 | Use similar triangles to explain why the slope m is the same between any two distinct points on a non-vertical line in the coordinate plane; derive the equation y = mx for a line through the origin and the equation y = mx + b for a line intercepting the vertical axis at b. | | | |
| **Learning Goal and Scale** | | | | **Instructional Strategies & Misconceptions** |
| [**701:** Analyze proportional relationships and use them to solve real-world and mathematical problems.](http://scpsmath.weebly.com/uploads/2/9/1/7/29174797/701.docx)  [**804:** Understand the connections between proportional relationships, lines, and linear equations.](http://scpsmath.weebly.com/uploads/2/9/1/7/29174797/804.docx) | | | | * Even though there may be an adding pattern in both sets of values, a proportional relationship may not exist. Student must check whether or not the two quantities have a constant ratio. * Some students may have trouble placing a decimal point when multiplying decimals. Encourage students to estimate to check their answers for reasonableness. * If students make computational errors when the percent is greater than 100, point out that the part should be greater than the whole. * Remind students of the difference between finding the tax, tip, or discount vs. the total/final amount. * Remind students that when solving for rate in the simple interest formula that their answer needs to be converted to a percent. |
| **Math Practices for Unit** | | | **Unit Connections** | |
| 1. Make sense of problems and persevere in solving them. | | 5. Use appropriate tools strategically. | **Related 2013 – 2014 6th Grade Standards Summary:**   * Understand the concept of a ratio and use ratio language to describe a ratio relationship between two quantities. * Understand the concept of a unit rate a/b associated with a ratio a:b with b ≠ 0, and use rate language in the context of a ratio relationship. * Use ratio and rate reasoning to solve real-world and mathematical problems. * Make tables of equivalent ratios relating quantities with whole-number measurements, find missing values in the tables, and plot the pairs of values on the coordinate plane. Use tables to compare ratios. * Solve unit rate problems including those involving unit pricing and constant speed. * Find a percent of a quantity as a rate per 100; solve problems involving finding the whole, given a part and the percent. | |
| 2. Reason abstractly and quantitatively. | | 6. Attend to precision. |
| 3. Construct viable arguments & critique reasoning of others. | | 7. Look for and make use of structure. |
| 4. Model with mathematics. | | 8. Look for and express regularity in repeated reasoning. |

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| **SECOND QUARTER** | | | | | | |
| **Unit 4: Ratios and Proportions** | | | | | | |
| **Learning Goal** | [***701:*** *Analyze proportional relationships and use them to solve real-world and mathematical problems.*](http://scpsmath.weebly.com/uploads/2/9/1/7/29174797/701.docx)  [***804:*** *Understand the connections between proportional relationships, lines, and linear equations.*](http://scpsmath.weebly.com/uploads/2/9/1/7/29174797/804.docx) | | | | **Suggested # of Days** | **17** |
| **Approx. # of Day(s)** | **MAFS** | **Lesson Objective (Instructional Resources)** | **Suggested Assignments/Assessments** | **Ancillary Materials** | | |
| 1 | 7.RP.1.1 | 4-1A/B Units Rates and Rates pgs. 195 – 201 | TB pg. 195  TB pg. 198-201/WB pg. 51-52 |  | | |
| 1 | 7.RP.1.2a | 4-1C Proportional and Non-Proportional Relationships pgs. 201 – 205 | TB pg. 203-205  WB pg. 53-54 |  | | |
| 1 | 7.RP.1.3 | 4-1D Solve Proportions pgs. 206 – 210 | TB pg. 208-210/WB pg. 55-56 |  | | |
| 2.5 | 7.RP.1.2a  7.RP.1.2b  7.RP.1.2c  8.EE.2.5  8.EE.2.6 | 5-3B/C Representing Proportions with Graphs and Equations pgs. 272 – 278 | TB pg. 272  TB pg. 276-278/WB pg. 75-76 |  | | |
| Real World Applications and PLC Created Quiz | PLC Created Quiz  OR -------------------------------🡪 | **(Blackboard Resource)**  [**Proportions Applications**](http://scpsmath.weebly.com/uploads/2/9/1/7/29174797/unit_4_proportions_applications.docx) | | |
| 1.5 | 6.RP.1.3c | 6-1B/C Percent and Estimation pgs. 300 – 310 | TB pg. 302-304/WB pg. 79-80  TB pg. 307-310/WB pg. 81-82 |  | | |
| 7.RP.1.2c  7.RP.1.3 | 6-2B/C The Percent Proportion and Equation  pgs. 312 – 321 | TB pg. 315-316/WB pg. 83-84  TB pg. 319-321/WB pg. 85-86 |  | | |
| 1 | 7.RP.1.3 | 6-3A/B Percent of Change pgs. 325 - 330 | TB pg. 325  TB pg. 328-330/WB pg. 89-90 |  | | |
| 1 | 7.RP.1.3 | 6-3C Sales Tax and Tips pgs. 331 – 334 | TB pg. 333-334  WB pg. 91-92 |  | | |
| 1 | 7.RP.1.3 | 6-3D Discount pgs. 335 – 338 | TB pg. 337-338  WB pg. 93-94 |  | | |
| 1 | 7.RP.1.3 | Commissions and Percent Applications Supplement |  | **(Blackboard Resource)**  [**Real World Percent Applications - SV**](http://scpsmath.weebly.com/uploads/2/9/1/7/29174797/unit_4_real_world_percent_applications_student.docx)  [**Real World Percent Applications - TV**](http://scpsmath.weebly.com/uploads/2/9/1/7/29174797/unit_4_real_world_percent_applications_teacher.docx) | | |
| 1 | 7.RP.1.3 | 6-3E Simple Interest pgs. 339 – 342 | TB pg. 341-342/WB pg. 95-96 |  | | |
| 5 | 6.RP.1.3c  7.RP.1.1  7.RP.1.2a-c  7.RP.1.3 | Unit 4 Review and Problem Solving AND/OR  AMPLIFY Project: Packing for the Iditarod  Unit 4 PLC Created Assessment | Ch. 4 Review pg. 237  Ch. 6 Review pg. 346-349  Ch. 6 Practice Test pg. 350  OR -------------------------------🡪 | **Resources found on Amplify Website** | | |

***\*TV = “Teacher Version”***

***\*SV = “Student Version”***

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| **Unit 5: Probability** | | | | |
| **Code** | **Mathematics Florida Standard** | | | |
| 7.SP.3.5 | Understand that the probability of a chance event is a number between 0 and 1 that expresses the likelihood of the event occurring. Larger numbers indicate greater likelihood. A probability near 0 indicates an unlikely event, a probability around 1/2 indicates an event that is neither unlikely nor likely, and a probability near 1 indicates a likely event. | | | |
| 7.SP.3.6 | Approximate the probability of a chance event by collecting data on the chance process that produces it and observing its long-run relative frequency, and predict the approximate relative frequency given the probability. | | | |
| 7.SP.3.7 | Develop a probability model and use it to find probabilities of events. Compare probabilities from a model to observed frequencies; if the agreement is not good, explain possible sources of the discrepancy.   1. Develop a uniform probability model by assigning equal probability to all outcomes, and use the model to determine probabilities of events. 2. Develop a probability model (which may not be uniform) by observing frequencies in data generated from a chance process | | | |
| 7.SP.3.8 | Find probabilities of compound events using organized lists, tables, tree diagrams, and simulation.   1. Understand that, just as with simple events, the probability of a compound event is the fraction of outcomes in the sample space for which the compound event occurs. 2. Represent sample spaces for compound events using methods such as organized lists, tables and tree diagrams. For an event described in everyday language (e.g., “rolling double sixes”), identify the outcomes in the sample space which compose the event. 3. Design and use a simulation to generate frequencies for compound events. | | | |
| **Learning Goal and Scale** | | | | **Instructional Strategies & Misconceptions** |
| [**714:** Investigate chance processes and develop, use, and evaluate probability models.](http://scpsmath.weebly.com/uploads/2/9/1/7/29174797/714.docx) | | | | * Emphasize to students that a theoretical probability cannot be used to predict exactly what will happen in a limited number of trials in an experiment. But for many trials, the experimental probability should approach the theoretical probability. |
| **Math Practices for Unit** | | | **Unit Connections** | |
| 1. Make sense of problems and persevere in solving them. | | 5. Use appropriate tools strategically. | **Related 2013 – 2014 6th Grade Standards Summary:**   * Recognize a statistical question as one that anticipates variability in the data related to the question and accounts for it in the answers. | |
| 2. Reason abstractly and quantitatively. | | 6. Attend to precision. |
| 3. Construct viable arguments & critique reasoning of others. | | 7. Look for and make use of structure. |
| 4. Model with mathematics. | | 8. Look for and express regularity in repeated reasoning. |

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| **SECOND QUARTER** | | | | | | |
| **Unit 5: Probability** | | | | | | |
| **Learning Goal** | [***714:*** *Investigate chance processes and develop, use, and evaluate probability models.*](http://scpsmath.weebly.com/uploads/2/9/1/7/29174797/714.docx) | | | | **Suggested # of Days** | **8** |
| **Approx. # of Day(s)** | **MAFS** | **Lesson Objective (Instructional Resources)** | **Suggested Assignments/Assessments** | **Ancillary Materials** | | |
| 1 | 7.SP.3.5 | 7-2A Probability pgs. 375 – 380 | TB pg. 377-380/WB p. 103-104 |  | | |
| 1 | 7.SP.3.8a | 7-2B Sample Spaces pgs. 381 – 385 | TB pg. 382-385/WB p. 105-106 |  | | |
| 1 | 7.SP.3.8a | 7-2C Counting Outcomes pgs. 386 – 389 | TB pg. 387-389/WB p. 107-108 |  | | |
| 1 | 7.SP.3.8a  7.SP.3.8b  7.SP.3.8c | 7-2D/E Independent and Dependent Events  pgs. 390 – 396 | TB pg. 390  TB pg. 393-396  WB pg. 109-110 |  | | |
| 1 | 7.SP.3.6  7.SP.3.7  7.SP.3.8c | Probability Experiments Supplement | OR ---------------------------------🡪 | **EngageNY Grade 7 – Module 5**  **Topic B: Lesson 10 –** [**TV**](https://www.engageny.org/file/61591/download/math-g7-m5-topic-b-lesson-10-teacher.pdf?token=hZtV2MxTm9IKtBn1hhBRe6H3hGnAoMRraNX_GUr4hQs) **and** [**SV**](https://www.engageny.org/file/61586/download/math-g7-m5-topic-b-lesson-10-student.pdf?token=Tl-N5T9MnYB7WEltZXIB8b8hyjD3o5e0rNIZ6Mr1srI)  **Topic B: Lesson 11 –** [**TV**](https://www.engageny.org/file/61616/download/math-g7-m5-topic-b-lesson-11-teacher.pdf?token=BKXR1B4o9VVBqtCUOCLJ5kvLI4mzbecr6B2Wfoo4k1Q) **and** [**SV**](https://www.engageny.org/file/61611/download/math-g7-m5-topic-b-lesson-11-student.pdf?token=OW8cIIWf8UJcg2pWa4LztKUh-XpZZd3bamClYElkQqQ) | | |
| 1 | 7-3D Fair and Unfair Games with Supplement | TB p. 408-409 |
| 2 | 7.SP.3.5  7.SP.3.6  7.SP.3.7  7.SP.3.8 | Unit 5 Review and Problem Solving  Unit 5 PLC Created Assessment | Review pg. 421-422 **#17-27** |  | | |

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| **Unit 6: Data Analysis** | | | | |
| **Code** | **Mathematics Florida Standard** | | | |
| 6.SP.2.4 | Display numerical data in plots on a number line, including dot plots, histograms, and box plots. | | | |
| 6.SP.2.5 | Summarize numerical data sets in relation to their context. | | | |
| 7.SP.1.1 | Understand that statistics can be used to gain information about a population by examining a sample of the population; generalizations about a population from a sample are valid only if the sample is representative of that population. Understand that random sampling tends to produce representative samples and support valid inferences. | | | |
| 7.SP.1.2 | Use data from a random sample to draw inferences about a population with an unknown characteristic of interest. Generate multiple samples (or simulated samples) of the same size to gauge the variation in estimates or predictions. | | | |
| 7.SP.2.3 | Informally assess the degree of visual overlap of two numerical data distributions with similar variabilities, measuring the difference between the centers by expressing it as a multiple of a measure of variability. | | | |
| 7.SP.2.4 | Use measures of center and measures of variability for numerical data from random samples to draw informal comparative inferences about two populations. | | | |
| 8.SP.1.1 | Construct and interpret scatter plots for bivariate measurement data to investigate patterns of association between two quantities. Describe patterns such as clustering, outliers, positive or negative association, linear association, and nonlinear association. | | | |
| 8.SP.1.2 | Know that straight lines are widely used to model relationships between two quantitative variables. For scatter plots that suggest a linear association, informally fit a straight line, and informally assess the model fit by judging the closeness of the data points to the line. | | | |
| 8.SP.1.3 | Use the equation of a linear model to solve problems in the context of bivariate measurement data, interpreting the slope and intercept*. For example, in a linear model for a biology experiment, interpret a slope of 1.5 cm/hr as meaning that an additional hour of sunlight each day is associated with an additional 1.5 cm in mature plant height.* | | | |
| 8.SP.1.4 | Understand that patterns of association can also be seen in bivariate categorical data by displaying frequencies and relative frequencies in a two-way table. Construct and interpret a two-way table summarizing data on two categorical variables collected from the same subjects. Use relative frequencies calculated for rows or columns to describe possible association between the two variables. | | | |
| **Learning Goal and Scale** | | | | **Instructional Strategies & Misconceptions** |
| [**712:** Use random sampling to draw inferences about a population.](http://scpsmath.weebly.com/uploads/2/9/1/7/29174797/712.docx)  [**713:** Draw informal comparative inferences about two populations.](http://scpsmath.weebly.com/uploads/2/9/1/7/29174797/713.docx)  [**814:** Investigate patterns of association in bivariate data.](http://scpsmath.weebly.com/uploads/2/9/1/7/29174797/814.docx) | | | | * Make students aware that there are 360° in a circle. * As students create their own histograms, caution them to double check that the intervals they use are equal. * When comparing two histograms, encourage student to first check to make sure that the scales and intervals are the same. * Students may forget to order the data when finding the median. Remind students that the numbers must always be ordered, to find the median. * Students may miscalculate the lower quartile or upper quartile when there is an even number od data value in the lower and upper halves of the data. * Students may accidently include outliers in the whiskers. |
| **Math Practices for Unit** | | | **Unit Connections** | |
| 1. Make sense of problems and persevere in solving them. | | 5. Use appropriate tools strategically. | **Related 2013-2014 6th Grade Standards Summary:**   * Recognize a statistical question as one that anticipates variability in the data related to the question and accounts for it in the answers. * Understand that a set of data collected to answer a statistical question has a distribution which can be described by its center, spread, and overall shape. * Recognize that a measure of center for a numerical data set summarizes all of its values with a single number, while a measure of variation describes how its values vary with a single number. * Display numerical data in plots on a number line, including dot plots(line plots), histograms, and box plots. * Summarize numerical data sets in relation to their context. * Determine the measures of central tendency (mean, median, mode) and variability (range) for a given set of data. | |
| 2. Reason abstractly and quantitatively. | | 6. Attend to precision. |
| 3. Construct viable arguments & critique reasoning of others. | | 7. Look for and make use of structure. |
| 4. Model with mathematics. | | 8. Look for and express regularity in repeated reasoning. |

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| **SECOND QUARTER** | | | | | | |
| **Unit 6: Data Analysis** | | | | | | |
| **Learning Goal** | [***712:*** *Use random sampling to draw inferences about a population.*](http://scpsmath.weebly.com/uploads/2/9/1/7/29174797/712.docx)  [***713:*** *Draw informal comparative inferences about two populations.*](http://scpsmath.weebly.com/uploads/2/9/1/7/29174797/713.docx)  [***814:*** *Investigate patterns of association in bivariate data.*](http://scpsmath.weebly.com/uploads/2/9/1/7/29174797/814.docx) | | | | **Suggested # of Days** | **15**  **(5)** |
| **Approx. # of Day(s)** | **MAFS** | **Lesson Objective (Instructional Resources)** | **Suggested Assignments/Assessments** | **Ancillary Materials** | | |
| 1 | 6.SP.2.4 | 7-1B Circle Graphs pgs. 358 – 363 | TB pg. 360-363/WB pg. 97-98 |  | | |
| 1 | 6.SP.2.4 | 7-1C and 7-1E Histograms and Stem-and-Leaf Plots  pgs.364 – 368 and pgs. 370 – 374 | TB pg. 366-368/WB pg. 99-100  TB pg. 372-374/WB p. 101-102 |  | | |
| 1 | 7.SP.2.4 | 12-1B Measure of Central Tendency pgs. 679 – 684 | TB pg. 681-684/WB p. 183-184 |  | | |
| 1 | 7.SP.2.3 | 12-2A Measure of Variation pgs. 687 – 692 | TB pg. 689-692/WB p. 185-186 |  | | |
| 1 | 6.SP.2.4 | 12-2B Box and Whisker Plots pgs. 693 – 698 | TB pg. 695-698/WB p. 187-188 |  | | |
| 1 | 6.SP.2.5 | 12-2D Selecting an Appropriate Display pgs. 705 – 709 | TB pg. 707-709/WB p. 191-192 |  | | |
| 1 | 7.SP.1.1  7.SP.1.2 | 7-3E Use Data to Predict pgs. 410 – 413 | TB pg. 411-413/WB p. 115-116 | **EngageNY Grade 7 – Module 5**  **Topic C: Lesson 13 –** [**TV**](https://content.engageny.org/file/61666/download/math-g7-m5-topic-c-lesson-13-teacher.pdf?token=Sn1xP6f-B75rWeTLIz45SRLH_xfQGYQ815ORw7JOsLE) **and** [**SV**](https://content.engageny.org/file/61661/download/math-g7-m5-topic-c-lesson-13-student.pdf?token=wVrK5E6uxVccoM6ozyeBVvz15s0VtZDjrYB0XlDkwho)  **Topic C: Lesson 14 –** [**TV**](https://content.engageny.org/file/61691/download/math-g7-m5-topic-c-lesson-14-teacher.pdf?token=6CRHFNQ4IElUJ6qKcMaSM4p7XtkJbeADz_L4M1VwPFg) **and** [**SV**](https://content.engageny.org/file/61686/download/math-g7-m5-topic-c-lesson-14-student.pdf?token=NIvy6kXncp7z4aSrCFNox4Buz18eQcRyZ7Mvlg_9Xdc)  **Topic C: Lesson 18 –** [**TV**](https://content.engageny.org/file/63291/download/math-g7-m5-topic-c-lesson-18-teacher.pdf?token=YoMC-RhOat8zA33GncWgeBJvxtI7I2pvaRTIRLWz7dA) **and** [**SV**](https://content.engageny.org/file/63286/download/math-g7-m5-topic-c-lesson-18-student.pdf?token=Y3KBTk_z5Eb0YjqwG2f63f_hiYAGw_nTP13VKqDFQGk) | | |
| 1 | 7.SP.1.1 | 7-3F Unbiased and Biased Samples pgs. 414 – 418 | TB pg. 416-418/WB p.117-118 |
| 1 | 8.SP.1.2 | 13-3A/B Linear and Non-Linear Functions pgs. 755 – 760 | TB pg. 755-756  TB pg. 758-760/WB p. 209-210 |  | | |
| 1 | 8.SP.1.1  8.SP.1.2  8.SP.1.3 | 12 – 2C Scatter Plots and Lines of Best Fit pgs. 699 – 704 | TB pg. 701-704/WB p. 189-190 |  | | |
| 3 | Scatter Plot Supplement  *(The number of days allocated does not match the number of lessons recommended from the EngageNY module. Teachers are encouraged to use discretion in selecting appropriate components of the recommended lessons.)* | ***Pearson Algebra I Textbook***  p. 363-370  OR--------------------------------🡪 | **EngageNY Grade 8 – Module 6**  **Topic B: Lesson 6 –** [**TV**](https://www.engageny.org/file/48716/download/math-g8-m6-topic-b-lesson-6-teacher.pdf?token=yuTK0rPSec5oxDWdXCxgs9voJr2FoMIXXQwdsrVmlS0) **and** [**SV**](https://www.engageny.org/file/48711/download/math-g8-m6-topic-b-lesson-6-student.pdf?token=i7cjEaIQ4e_TpNnh3mtWf3C3Ha8-ZHEyXnP1xZZKHiA)  **Topic B: Lesson 7 –** [**TV**](https://www.engageny.org/file/48741/download/math-g8-m6-topic-b-lesson-7-teacher.pdf?token=PfdJRxvyoIitNZem1kB44T-iACk-0Zra0KmdoL3k6y0) **and** [**SV**](https://www.engageny.org/file/48736/download/math-g8-m6-topic-b-lesson-7-student.pdf?token=x2uPPTAWAqOynb_Y9gjPIB40mWdOsGqGtUmcOsvXUVk)  **Topic B: Lesson 8 –** [**TV**](https://www.engageny.org/file/48781/download/math-g8-m6-topic-b-lesson-8-teacher.pdf?token=ppEyDZ9KcorZMp9-9iygsfSL6dEDi2dDqjmdwKBHMyY) **and** [**SV**](https://www.engageny.org/file/48776/download/math-g8-m6-topic-b-lesson-8-student.pdf?token=eAPgriNk2ymkzdromyhM7w7q6j7SjbQkzo9ZkJS-YeU)  **Topic C: Lesson 9 –** [**TV**](https://www.engageny.org/file/48821/download/math-g8-m6-topic-b-lesson-9-teacher.pdf?token=7OnU2z-skcrMj0vpEHNz3d1w9NdoAIfK4KI8hFYk6b4) **and** [**SV**](https://www.engageny.org/file/48811/download/math-g8-m6-topic-b-lesson-9-student.pdf?token=UqfFAFC0pdVyc7zRwM0Ib3fkOWk588VyfxRyiKdDEpY) | | |
| 2 | 8.SP.1.3  8.SP.1.4 | Two-Way Tables and Relative Frequency Supplement |  | **EngageNY Grade 8 – Module 6**  **Topic D: Lesson 13 –** [**TV**](https://www.engageny.org/file/48981/download/math-g8-m6-topic-d-lesson-13-teacher.pdf?token=0cNZivsTI2oBlwuj_5XlHIh_Ys3IPEJik27ck7qydh4) **and** [**SV**](https://www.engageny.org/file/48976/download/math-g8-m6-topic-d-lesson-13-student.pdf?token=W3aGKcZKMjcKVZT85m01giLVfOL8_eU42nOMANfyeA0)  **Topic D: Lesson 14 –** [**TV**](https://www.engageny.org/file/49011/download/math-g8-m6-topic-d-lesson-14-teacher.pdf?token=Nq9EA2O_r2hZbKa2436l__yKL1sh2EXrK3FYRobqNjM) **and** [**SV**](https://www.engageny.org/file/49001/download/math-g8-m6-topic-d-lesson-14-student.pdf?token=bPmjfpKxCVhQ0LmLs0EeT_-qcbNDfD8UthOEtm5g2tY) | | |
| 5 |  | District Assessments/ Unit 6 OR 9 Weeks Review and Exam |  |  | | |

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| **Unit 7: Two-Dimensional Geometry** | | | | |
| **Code** | **Mathematics Florida Standard** | | | |
| 7.G.1.1 | Solve problems involving scale drawings of geometric figures, including computing actual lengths and areas from a scale drawing and reproducing a scale drawing at a different scale. | | | |
| 7.G.1.2 | Draw (freehand, with ruler and protractor, and with technology) geometric shapes with given conditions. Focus on constructing triangles from three measures of angles or sides, noticing when the conditions determine a unique triangle, more than one triangle, or no triangle. | | | |
| 7.G.2.4 | Know the formulas for the area and circumference of a circle and use them to solve problems; give an informal derivation of the relationship between the circumference and area of a circle. | | | |
| **Learning Goal and Scale** | | | | **Instructional Strategies & Misconceptions** |
| [**706:** Solve problems involving scale drawing of geometric figures.](http://scpsmath.weebly.com/uploads/2/9/1/7/29174797/706.docx)  [**707:** Use given conditions to draw and construct triangles and other geometric figures and describe the relationships between them.](http://scpsmath.weebly.com/uploads/2/9/1/7/29174797/707.docx)  [**708:** Use the formulas for the area and circumference of a circle to solve problems.](http://scpsmath.weebly.com/uploads/2/9/1/7/29174797/708.docx) | | | | * When similar figures are oriented differently remind students to re-draw or reposition them prior to setting up the proportion. * Students may read the wrong scale on the protractor. |
| **Math Practices for Unit** | | | **Unit Connections** | |
| 1. Make sense of problems and persevere in solving them. | | 5. Use appropriate tools strategically. | **Related 2013-2014 6th Grade Standards Summary:**   * Find the area of polygons by composing into rectangles or decomposing into triangles and other shapes; apply these techniques in the context of solving real-world and mathematical problems. * Understand the concept of π, know common estimates of π (3.14 and 22/7) and use these values to estimate and calculate the circumference and the area of circles. * Find the perimeters and areas of composite two-dimensional figures, including non-rectangular figures using various strategies. * Determine a missing dimension of a plane figure or prism, given its area or volume and some of the dimensions, or determine the area of volume given the dimensions. | |
| 2. Reason abstractly and quantitatively. | | 6. Attend to precision. |
| 3. Construct viable arguments & critique reasoning of others. | | 7. Look for and make use of structure. |
| 4. Model with mathematics. | | 8. Look for and express regularity in repeated reasoning. |

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| **THIRD QUARTER** | | | | | | |
| **Unit 7: Two-Dimensional Geometry** | | | | | | |
| **Learning Goal** | [***706:*** *Solve problems involving scale drawing of geometric figures.*](http://scpsmath.weebly.com/uploads/2/9/1/7/29174797/706.docx)  [***707:*** *Use given conditions to draw and construct triangles and other geometric figures and describe the relationships between them.*](http://scpsmath.weebly.com/uploads/2/9/1/7/29174797/707.docx)  [***708:*** *Use the formulas for the area and circumference of a circle to solve problems.*](http://scpsmath.weebly.com/uploads/2/9/1/7/29174797/708.docx) | | | | **Suggested # of Days** | **15** |
| **Approx. # of Day(s)** | **MAFS** | **Lesson Objective (Instructional Resources)** | **Suggested Assignments/Assessments** | **Ancillary Materials** | | |
| 5 | 7.G.1.1 | 4-2B Scale Drawings with Supplement pgs. 214 – 220 | TB pg. 217-220  WB pg. 59-60  AND/OR---------------------------🡪 | **EngageNY Grade 7 – Module 1**  **Topic D: Lesson 20 –** [**TV**](https://www.engageny.org/file/59566/download/math-g7-m1-topic-d-lesson-20-teacher.pdf?token=g0SmtFNuqsW8wz2oONCi_zid4-_zLFbJTQDqVPjB2mU) **and** [**SV**](https://www.engageny.org/file/59561/download/math-g7-m1-topic-d-lesson-20-student.pdf?token=QFAOJbZRXSTRQaYIg_4p0KV4UMYWkwA4oebuW09OGZs) | | |
| 4-3A Similar Figures pgs. 223 – 228 | TB pg. 226-228/WB pg. 61-62 |  | | |
| 4-3B Perimeter and Area of Similar Figures  pgs. 229 – 232 | TB pg. 231-232/WB pg. 63-64 |  | | |
| 1 | 7.G.1.1 | Problem Solving and PLC Created Quiz |  |  | | |
| 3 | 7.G.2.4 | Area of Circle and Circumference Review with Supplement |  | **EngageNY Grade 7 – Module 3**  **Topic C: Lesson 16 –** [**TV**](https://www.engageny.org/file/60636/download/math-g7-m3-topic-c-lesson-16-teacher.pdf?token=MxZpBlToqOowsUnH_N5hcICpOh5_lRTuM0eYD1sVDf8) **and** [**SV**](https://www.engageny.org/file/60631/download/math-g7-m3-topic-c-lesson-16-student.pdf?token=413JRDFvU87FfY1J1nIhFBhKczVpI42gcGc3Gc45KUw)  **Topic C: Lesson 17 –** [**TV**](https://www.engageny.org/file/60661/download/math-g7-m3-topic-c-lesson-17-teacher.pdf?token=y6_YI4Gix6dgdxkMKDLXqXi-RmuaO_6MrumzpVAFJyo) **and** [**SV**](https://www.engageny.org/file/60656/download/math-g7-m3-topic-c-lesson-17-student.pdf?token=AH4ETN3RRS7-exkomYPRftH2tiiukVseWwqPm52Gapo) | | |
| Derive Area of a Circle from a Parallelogram with Supplement |  |
| Determine Radius or Diameter with Given Circumference with Supplement  *(The number of days allocated does not match the number of lessons recommended from the EngageNY module. Teachers are encouraged to use discretion in selecting appropriate components of the recommended lessons.)* |  | **EngageNY Grade 7 – Module 3**  **Topic C: Lesson 18 –** [**TV**](https://www.engageny.org/file/60686/download/math-g7-m3-topic-c-lesson-18-teacher.pdf?token=a5Qi_4bijYgP-h8MVVizK4ga9ZXuULciDJmqilem4DE) **and** [**SV**](https://www.engageny.org/file/60681/download/math-g7-m3-topic-c-lesson-18-student.pdf?token=_Ihkmite5FMYUY6tWeSOe9LCGKAqgP279INrWOpj3Y8)  **Topic C: Lesson 19 –** [**TV**](https://www.engageny.org/file/60711/download/math-g7-m3-topic-c-lesson-19-teacher.pdf?token=fM0MKVPB8hUdxm2eVxQevnxT1F2Sz3a5HRwFoaIyq8k) **and** [**SV**](https://www.engageny.org/file/60706/download/math-g7-m3-topic-c-lesson-19-student.pdf?token=u2Rplg6UFYL4IdrGyXXANzzeMuNf7j0JsQ_4yfAl11o)  **Topic C: Lesson 20 –** [**TV**](https://www.engageny.org/file/60736/download/math-g7-m3-topic-c-lesson-20-teacher.pdf?token=ysFcVSVQa4ZkuStjvFF5JsU6CfVgB2rhW16MbKJkKYE) **and** [**SV**](https://www.engageny.org/file/60731/download/math-g7-m3-topic-c-lesson-20-student.pdf?token=RjSpl7IjVCv9sIiVK3WJ_t8YRn9jrqBR9ZHj189SKXA) | | |
| 4 | 7.G.1.2 | 11-2B/D Triangles, Quadrilaterals and Polygons (Classifying Only) pgs. 616 – 629 | TB pg. 619-621 #6-8, 19-26, 46  TB pg. 626-629 #3, 12-20, 24, 28-31, 34 | **EngageNY Grade 7 – Module 6**  **Topic B: Lesson 7 –** [**TV**](https://www.engageny.org/file/63591/download/math-g7-m6-topic-b-lesson-7-teacher.pdf?token=N3jipFndKN2_x0azI9SxB8RPUpWt1eDAbfV3ItVAlB8) **and** [**SV**](https://www.engageny.org/file/63586/download/math-g7-m6-topic-b-lesson-7-student.pdf?token=N9wAZdHQV8dBLUo9YE4cek0rqU6cBQwK9e3qcB30AOI)  **Topic B: Lesson 8 –** [**TV**](https://www.engageny.org/file/63616/download/math-g7-m6-topic-b-lesson-8-teacher.pdf?token=BJFA4uw9Z_L4Ed6v2ZhNn4JDwgJImehNifgnfUtfzkE) **and** [**SV**](https://www.engageny.org/file/63611/download/math-g7-m6-topic-b-lesson-8-student.pdf?token=KWUzBzyRV7BwVqWU-ckGrSmLiyX6kvJ2KKPYJQaLX-E)  **Topic B: Lesson 9 –** [**TV**](https://www.engageny.org/file/63641/download/math-g7-m6-topic-b-lesson-9-teacher.pdf?token=RCzWB6GQv95Y9Fe3BeiPiWv6BRpfGaLQe6efo1gvLtU) **and** [**SV**](https://www.engageny.org/file/63636/download/math-g7-m6-topic-b-lesson-9-student.pdf?token=-EWZZFIAARcG4Vkfc4X1F-c13ewJtpBPvzsj_y2Edis)  **Topic B: Lesson 10 –** [**TV**](https://www.engageny.org/file/63666/download/math-g7-m6-topic-b-lesson-10-teacher.pdf?token=j0QMZ4xFs5m0EShOYJgg316oL6eXMSSNdAhitUB390s) **and** [**SV**](https://www.engageny.org/file/63661/download/math-g7-m6-topic-b-lesson-10-student.pdf?token=VqXX8-ztkdDZBj4G7pPQQWM8y3o4WqFdwqLszr0Sn6E)  **Topic B: Lesson 11 –** [**TV**](https://www.engageny.org/file/63691/download/math-g7-m6-topic-b-lesson-11-teacher.pdf?token=CwiFv_M9s0f9obodsrtrhKbdXyGXLUIA5JNN8kTIZwU) **and** [**SV**](https://www.engageny.org/file/63686/download/math-g7-m6-topic-b-lesson-11-student.pdf?token=khqjXn0kwd99Kz2dsAmgqmtoUQgZM-tsyhUc5cYgIQ8)  **Topic B: Lesson 12 –** [**TV**](https://www.engageny.org/file/63716/download/math-g7-m6-topic-b-lesson-12-teacher.pdf?token=l5qEDYxUZI5vvuAfABdIbV0MVDY8AJ5CGAZav6VC4z8) **and** [**SV**](https://www.engageny.org/file/63711/download/math-g7-m6-topic-b-lesson-12-student.pdf?token=4BLEbY9jzvPQBW1kQDqJv1mYpaSCZJZcSBrzjT1IeRA)  **Topic B: Lesson 15 –** [**TV**](https://www.engageny.org/file/63791/download/math-g7-m6-topic-b-lesson-15-teacher.pdf?token=TITRrTAhhC1nAh2WT-2PW71Pg63OJ7iCd1SVkNka4p0) **and** [**SV**](https://www.engageny.org/file/63786/download/math-g7-m6-topic-b-lesson-15-student.pdf?token=gnD6sb3ewVGND0guhdjA1HzroqxR3teqvv8ptp8a83w) | | |
| Constructing Triangles Supplement | TB pg. 619-621 #9-10, 27-30, 42, 44  OR ------------------------------🡪 |
| Constructing Polygons with Supplement  *(The number of days allocated does not match the number of lessons recommended from the EngageNY module. Teachers are encouraged to use discretion in selecting appropriate components of the recommended lessons.)* |
| 2 | 7.G.1.1  7.G.1.2  7.G.2.4 | Unit 7 Problem Solving and Review  Unit 7 PLC Created Assessment |  |  | | |

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| **Unit 8: Angle Relationships** | | | | |
| **Code** | **Mathematics Florida Standard** | | | |
| 7.G.2.5 | Use facts about supplementary, complementary, vertical, and adjacent angles in a multi-step problem to write and solve simple equations for an unknown angle in a figure. | | | |
| 8.G.1.5 | Use informal arguments to establish facts about the angle sum and exterior angle of triangles, about the angles created when parallel lines are cut by a transversal, and the angle-angle criterion for similarity of triangles. | | | |
| **Learning Goal and Scale** | | | | **Instructional Strategies & Misconceptions** |
| [**711:** Use facts about a variety of angles in a multi-step problem to write and solve simple equations of unknown angles.](http://scpsmath.weebly.com/uploads/2/9/1/7/29174797/711.docx)  [**811:** Use informal arguments to establish facts about angle relationships with parallel lines, triangles, and polygons.](http://scpsmath.weebly.com/uploads/2/9/1/7/29174797/811.docx) | | | | * Students may be tempted to assume some angles are congruent in a figure just by looking at the figure. * Students may be tempted to assume some angles are right angles just by looking at the figure. |
| **Math Practices for Unit** | | | **Unit Connections** | |
| 1. Make sense of problems and persevere in solving them. | | 5. Use appropriate tools strategically. | **Related 2013 – 2014 4th Grade Standards Summary:**   * Classify angles of two-dimensional shapes | |
| 2. Reason abstractly and quantitatively. | | 6. Attend to precision. |
| 3. Construct viable arguments & critique reasoning of others. | | 7. Look for and make use of structure. |
| 4. Model with mathematics. | | 8. Look for and express regularity in repeated reasoning. |

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| **THIRD QUARTER** | | | | | | |
| **Unit 8: Angle Relationships** | | | | | | |
| **Learning Goal** | [***711:*** *Use facts about a variety of angles in a multi-step problem to write and solve simple equations of unknown angles.*](http://scpsmath.weebly.com/uploads/2/9/1/7/29174797/711.docx)  [***811:*** *Use informal arguments to establish facts about angle relationships with parallel lines, triangles, and polygons.*](http://scpsmath.weebly.com/uploads/2/9/1/7/29174797/811.docx) | | | | **Suggested # of Days** | **7** |
| **Approx. # of Day(s)** | **MAFS** | **Lesson Objective (Instructional Resources)** | **Suggested Assignments/Assessments** | **Ancillary Materials** | | |
| 3 | 7.G.2.5  8.G.1.5 | 11-1A/B Angle Relationships and Parallel Lines  pgs. 604 – 614 | TB pg. 607-609/WB p. 161-162  TB pg. 612-614/WB p. 163-164 |  | | |
| 1 | 11-2B and 11-2D Finding Unknown Angles in Triangles and Quadrilaterals pgs. 616 – 621 and pgs. 624 - 629 | TB pg. 619-621/WB p. 165-166  TB pg. 624-626/WB p. 169-170 |  | | |
| 1 | 11-2E Polygons and Angles pgs. 630 – 633 | TB pg. 632-635/WB p. 171-172 |  | | |
| 2 | Unit 8 Problem Solving and Review  Unit 8 PLC Created Assessment | TB pg. 640 |  | | |

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| **Unit 9: Three-Dimensional Geometry** | | | | |
| **Code** | **Mathematics Florida Standard** | | | |
| 7.G.2.6 | Solve real-world and mathematical problems involving area, volume and surface area of two- and three-dimensional objects composed of triangles, quadrilaterals, polygons, cubes, and right prisms. | | | |
| 7.G.1.3 | Describe the two-dimensional figures that result from slicing three-dimensional figures, as in plane sections of right rectangular prisms and right rectangular pyramids. | | | |
| 7.G.2.6 | Solve real-world and mathematical problems involving area, volume and surface area of two- and three-dimensional objects composed of triangles, quadrilaterals, polygons, cubes, and right prisms. | | | |
| **Learning Goal and Scale** | | | | **Instructional Strategies & Misconceptions** |
| [**709:** Solve real-world and mathematical problems involving the surface area of 3D shapes composed of triangles and polygons.](http://scpsmath.weebly.com/uploads/2/9/1/7/29174797/709.docx)  [**710:** Solve real-world and mathematical problems involving the volume of 3D shapes composed of cubes and right prisms.](http://scpsmath.weebly.com/uploads/2/9/1/7/29174797/710.docx) | | | | * Students may accidentally leave out the area of a face when calculating the surface area. * Make sure that when finding the surface of area of a pyramid students are reminded that they may be given the area of the base or they may have to calculate it. * Remind students that the formula for finding the area of the base of a pyramid, *B*, differs depending on the shape of the base. * When calculating surface areas of composite figures students may erroneously find the surface areas of each simpler figure and add them together. |
| **Math Practices for Unit** | | | **Unit Connections** | |
| 1. Make sense of problems and persevere in solving them. | | 5. Use appropriate tools strategically. | **Related 2013 – 2014 6th Grade Standards:**   * Find the volume of a right rectangular prism. * Represent three-dimensional figures using nets made up of rectangles and triangles, and use the nets to find the surface area of these figures. Apply these techniques in the context of solving real-world and mathematical problems. * Determine a missing dimension of a plane figure or prism, given its area or volume and some of the dimensions, or determine the area of volume given the dimensions. | |
| 2. Reason abstractly and quantitatively. | | 6. Attend to precision. |
| 3. Construct viable arguments & critique reasoning of others. | | 7. Look for and make use of structure. |
| 4. Model with mathematics. | | 8. Look for and express regularity in repeated reasoning. |

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| **THIRD QUARTER** | | | | | | |
| **Unit 9: Three-Dimensional Geometry** | | | | | | |
| **Learning Goal** | [***709:*** *Solve real-world and mathematical problems involving the surface area of 3D shapes composed of triangles and polygons.*](http://scpsmath.weebly.com/uploads/2/9/1/7/29174797/709.docx)  [***710:*** *Solve real-world and mathematical problems involving the volume of 3D shapes composed of cubes and right prisms.*](http://scpsmath.weebly.com/uploads/2/9/1/7/29174797/710.docx) | | | | **Suggested # of Days** | **16** |
| **Approx. # of Day(s)** | **MAFS** | **Lesson Objective (Instructional Resources)** | **Suggested Assignments/Assessments** | **Ancillary Materials** | | |
| 1 | 7.G.2.6 | 8-2A Nets of 3-D Figures pgs. 454 – 455 | TB pg. 454-455 |  | | |
| 1 | 8-2B Surface Area Concept and Surface Area of Rectangular Prisms Only pgs. 456 – 461 | TB pg. 459-461  WB pg. 127-128 | \*\*Teachers need to ensure that they are changing/creating some examples so that students can solve for a missing dimension when given the surface area and some dimensions of a 3D Figure. | | |
| 1 | 8-2B Surface Area of Triangle Prisms Only pgs. 456 – 461 |
| 1 | 8-2E Surface Area of Pyramids pgs. 468 – 471 | TB pg. 470-471/WB p. 131-132 |
| 1 | Surface Area Applications |  | **EngageNY Grade 7 – Module 6**  **Topic D: Lesson 23 –** [**TV**](https://www.engageny.org/file/63991/download/math-g7-m6-topic-d-lesson-23-teacher.pdf?token=6CX8sWkzNn5Gfn34weL0bEs_4MX7YoB-gRavdey7NN0) **and** [**SV**](https://www.engageny.org/file/63986/download/math-g7-m6-topic-d-lesson-23-student.pdf?token=c8jPgWooJSH1VUbvZ-o5lwkY4iM55Qn3Ai0wreqWzYE)  **Topic D: Lesson 24 –** [**TV**](https://www.engageny.org/file/64016/download/math-g7-m6-topic-d-lesson-24-teacher.pdf?token=cYZ4jmJ-y0KNJNKupB8xx_alSJ4Iuke-ZH8oZIVmzIk) **and** [**SV**](https://www.engageny.org/file/64011/download/math-g7-m6-topic-d-lesson-24-student.pdf?token=xYw13C21EweNStuauaxrijGlTLH3M_EaLV79eR2pR3M) | | |
| 1 | Problem Solving and PLC Created Quiz |  |
| 2 | 7.G.1.3 | Slicing 3-D Figures Supplement  *(The number of days allocated does not match the number of lessons recommended from the EngageNY module. Teachers are encouraged to use discretion in selecting appropriate components of the recommended lessons.)* |  | **EngageNY Grade 7 – Module 6**  **Topic C: Lesson 16 –** [**TV**](https://www.engageny.org/file/63816/download/math-g7-m6-topic-c-lesson-16-teacher.pdf?token=mATRzA5p5NQ7WupQCHE-9Ivhe7lJFleHvBidd1sgeIU) **and** [**SV**](https://www.engageny.org/file/63811/download/math-g7-m6-topic-c-lesson-16-student.pdf?token=Hs6XpJHeGUpVU0HTcAZsOoQLr4rpBV7ogMQVBhaA9CY)  **Topic C: Lesson 17 –** [**TV**](https://www.engageny.org/file/63841/download/math-g7-m6-topic-c-lesson-17-teacher.pdf?token=RasWpOzcXACgESIPUkXTmAkKCuLHHx_eJM1vw3oV_C8) **and** [**SV**](https://www.engageny.org/file/63836/download/math-g7-m6-topic-c-lesson-17-student.pdf?token=Q__GItyEoFXYqWZYVlHsiEu2nQv8uT3upVlvtWZhxUE)  **Topic C: Lesson 18 –** [**TV**](https://www.engageny.org/file/63866/download/math-g7-m6-topic-c-lesson-18-teacher.pdf?token=aEJ-wPStcJg_rZit2LVGqDzyKVHf6mxH8bi88WbApiY) **and** [**SV**](https://www.engageny.org/file/63861/download/math-g7-m6-topic-c-lesson-18-student.pdf?token=royWVjQDgPsPsCkRiqs__0D5GapmQncyBq-C287chWE) | | |
| 1 | 7.G.2.6 | 8-1A/B Volume Concept and Volume of Prisms  pgs. 431 – 437 | TB pg. 431  TB pg. 435-437/WB p. 119-120 |  | | |
| 1 | 8-1E Volume of Pyramids pgs. 445 – 448 | TB pg. 447-448/WB p. 123-124 |  | | |
| 1 | 8-2D Surface Area vs. Volume pgs. 466 – 467  Problem Solving and PLC Created Quiz | TB pg. 466-467 |  | | |
| 1 | 8-3B Composite Figures pgs. 478 – 479 | TB pg. 478-479 |  | | |
| 1 | 8-3C Composite Figures (Volume ONLY) pgs. 480 – 484 | TB pg. 482-484  WB pg. 135-136 |  | | |
| 1 | 8-3C Composite Figures (Surface Area ONLY)  pgs. 480 – 484 |  | | |
| 2 | 7.G.1.3  7.G.2.6 | Unit 9 Problem Solving and Review  Unit 9 PLC Created Assessment | Review pg. 485-489  Practice Test pg. 490 |  | | |

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| **Unit 10: Exponents, Roots and The Pythagorean Theorem** | | | | |
| **Code** | **Mathematics Florida Standard** | | | |
| 8.NS.1.1 | Know that numbers that are not rational are called irrational. Understand that informally that every number has a decimal expansion; for rational numbers show that the decimal expansions repeats eventually, and convert a decimal expansion which repeats eventually into a rational number. | | | |
| 8.NS.1.2 | Use rational approximations of irrational numbers to compare the size of irrational numbers, locate them approximately on a number line diagram, and estimate the value of expressions (e.g., π2). | | | |
| 8.EE.1.1 | Know and apply the properties of integer exponents to generate equivalent numerical expressions. *For example, 32 × 3-5 = 3-3 = 1/33 = 1/27* | | | |
| 8.EE.1.2 | Use square root and cube root symbols to represent solutions to equations of the form x2 = p and x3 = p, where p is a positive rational number. Evaluate square roots of small perfect squares and cube roots of small perfect cubes. Know that √2 is irrational. | | | |
| 8.G.2.6 | Explain a proof of the Pythagorean Theorem and its converse. | | | |
| 8.G.2.7 | Apply the Pythagorean Theorem to determine unknown side lengths in right triangles in real-world and mathematical problems in two and three dimensions. | | | |
| 8.G.2.8 | Apply the Pythagorean Theorem to find the distance between two points in a coordinate system. | | | |
| **Learning Goal and Scale** | | | | **Instructional Strategies & Misconceptions** |
| [**801:** Use rational approximates to compare and estimate expressions with irrational numbers.](http://scpsmath.weebly.com/uploads/2/9/1/7/29174797/801.docx)  [**802:** Work with radicals and integer exponents.](http://scpsmath.weebly.com/uploads/2/9/1/7/29174797/802.docx)  [**812:** Understand and apply the Pythagorean Theorem.](http://scpsmath.weebly.com/uploads/2/9/1/7/29174797/812.docx) | | | | * When finding the square root of a number students may try to divide by 2. * Make sure students understand that when using the Pythagorean Theorem formula the length of either leg of a triangle can be *a* or *b*. * Students should be reminded to check the scale on the coordinate plan before counting units. * When finding the cube root of a number students may try to divide by 3. |
| **Math Practices for Unit** | | | **Unit Connections** | |
| 1. Make sense of problems and persevere in solving them. | | 5. Use appropriate tools strategically. | **Related 2013 – 2014 6th Grade Standards Summary:**   * Estimate and calculate the area of circles. | |
| 2. Reason abstractly and quantitatively. | | 6. Attend to precision. |
| 3. Construct viable arguments & critique reasoning of others. | | 7. Look for and make use of structure. |
| 4. Model with mathematics. | | 8. Look for and express regularity in repeated reasoning. |

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| **THIRD QUARTER** | | | | | | |
| **Unit 10: Exponents, Roots and The Pythagorean Theorem** | | | | | | |
| **Learning Goal** | [***801:*** *Use rational approximates to compare and estimate expressions with irrational numbers.*](http://scpsmath.weebly.com/uploads/2/9/1/7/29174797/801.docx)  [***802:*** *Work with radicals and integer exponents.*](http://scpsmath.weebly.com/uploads/2/9/1/7/29174797/802.docx)  [***812:*** *Understand and apply the Pythagorean Theorem.*](http://scpsmath.weebly.com/uploads/2/9/1/7/29174797/812.docx) | | | | **Suggested # of Days** | **3**  **(5)** |
| **Approx. # of Day(s)** | **MAFS** | **Lesson Objective (Instructional Resources)** | **Suggested Assignments/Assessments** | **Ancillary Materials** | | |
| 1.5 | 8.NS.1.1  8.NS.1.2 | 11-3A/B Square Roots and Estimating Roots  pgs. 641 – 648 | TB pg. 643-644/WB p. 173-174  TB pg. 646-648/WB p. 175-176 |  | | |
| 1.5 | 11-3C The Real Number System pgs. 649 – 653 | TB pg. 652-653/WB p. 177-178 |  | | |
| 5 |  | District Assessments (2 days)  FSA ELA/Writing (1 day)  9 Weeks Exam (2 days) |  |  | | |

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| **FOURTH QUARTER** | | | | | | |
| **Unit 10: Exponents, Roots and The Pythagorean Theorem** | | | | | | |
| **Learning Goal** | [***801:*** *Use rational approximates to compare and estimate expressions with irrational numbers.*](http://scpsmath.weebly.com/uploads/2/9/1/7/29174797/801.docx)  [***802:*** *Work with radicals and integer exponents.*](http://scpsmath.weebly.com/uploads/2/9/1/7/29174797/802.docx)  [***812:*** *Understand and apply the Pythagorean Theorem.*](http://scpsmath.weebly.com/uploads/2/9/1/7/29174797/812.docx) | | | | **Suggested # of Days** | **9** |
| **Approx. # of Day(s)** | **MAFS** | **Lesson Objective (Instructional Resources)** | **Suggested Assignments/Assessments** | **Ancillary Materials** | | |
| 1.5 | 8.G.2.7 | 11-3D/E Pythagorean Theorem pgs. 654 – 660 | TB pg. 654  TB pg. 658-660/WB p. 179-180 |  | | |
| 1.5 | 8.G.2.6 | Explain a proof of the Pythagorean Theorem and its converse |  | **EngageNY Grade 8 – Module 3**  **Topic C: Lesson 13 –** [**TV**](https://content.engageny.org/file/47171/download/math-g8-m3-topic-c-lesson-13-teacher.pdf?token=ipa8Lh1l3SsHY_6cBKyMTpKO0ug48_N4vul9LEYuMNg) **and** [**SV**](https://content.engageny.org/file/47166/download/math-g8-m3-topic-c-lesson-13-student.pdf?token=VYR2gXbj-BPIfp7BqFhIleD_6nud0gqDq6dQDUXdySE)  **Topic C: Lesson 14 –** [**TV**](https://content.engageny.org/file/47196/download/math-g8-m3-topic-c-lesson-14-teacher.pdf?token=DFD6zhh1k7IfqebnyoRuaxq5StQ7G28gphHeGMHjY7k) **and** [**SV**](https://content.engageny.org/file/47191/download/math-g8-m3-topic-c-lesson-14-student.pdf?token=XnublnB8eX2cUYpMp2AM1d6_XHPa1n71yai6HhQ6K9Y) | | |
| 2 | 8.G.2.8 | 11-3F Distance on the Coordinate Plane pgs. 661 – 664 | TB pg. 662-664/WB p. 181-182 |  | | |
| 0.5 | 8.EE.1.1 | Cube Root with Supplement |  | **EngageNY Grade 8 – Module 7**  **Topic A: Lesson 3 –** [**TV**](https://www.engageny.org/file/49101/download/math-g8-m7-topic-a-lesson-3-teacher.pdf?token=WxOB9jfFlsmveML0fV6s9GYJyV68r0PgQ663m1ktHpk) **and** [**SV**](https://www.engageny.org/file/49096/download/math-g8-m7-topic-a-lesson-3-student.pdf?token=d9-ixBJ4oIEye3HMTgeT8GW0uqTV-Bcy5hALo5SO4uE) | | |
| 1.5 | Equations with Square and Cube Roots and Exponents with Supplement |  |
| 2 | 8.NS.1.1  8.NS.1.2  8.EE.1.2  8.G.2.7  8.G.2.8 | Unit 10 Problem Solving and Review  Unit 10 PLC Created Assessment | Review pg. 668-669 #25-50 |  | | |

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| **Unit 11: Exponents Laws and Scientific Notation** | | | | |
| **Code** | **Mathematics Florida Standard** | | | |
| 8.EE.1.1 | Know and apply the properties of integer exponents to generate equivalent numerical expressions. *For example, 32 × 3-5 = 3-3 = 1/33 = 1/27* | | | |
| 8.EE.1.3 | Use numbers expressed in the form of a single digit times an integer power of 10 to estimate very large or very small quantities, and to express how many times as much one is than the other. For example, estimate the population of the United States as 3 × 108 and the population of the world as 7 × 109, and determine that the world population is more than 20 times larger. | | | |
| 8.EE.1.4 | Perform operations with numbers expressed in scientific notation, including problems where both decimal and scientific notation are used. Use scientific notation and choose units of appropriate size for measurements of very large or very small quantities (e.g., use millimeters per year for seafloor spreading). Interpret scientific notation that has been generated by technology. | | | |
| **Learning Goal and Scale** | | | | **Instructional Strategies & Misconceptions** |
| [**802:** Work with radicals and integer exponents.](http://scpsmath.weebly.com/uploads/2/9/1/7/29174797/802.docx)  [**803:** Apply integer exponents to perform operations involving scientific notation.](http://scpsmath.weebly.com/uploads/2/9/1/7/29174797/803.docx) | | | | * When multiplying and dividing monomials some students may overlook bases with an exponent of 1. * Be careful of student misconceptions about the power of 10’s relationship to the number of zeroes in standard form. |
| **Math Practices for Unit** | | | **Unit Connections** | |
| 1. Make sense of problems and persevere in solving them. | | 5. Use appropriate tools strategically. | **Related 2013 – 2014 6th Grade Standards Summary:**   * Estimate and calculate the area of circles. | |
| 2. Reason abstractly and quantitatively. | | 6. Attend to precision. |
| 3. Construct viable arguments & critique reasoning of others. | | 7. Look for and make use of structure. |
| 4. Model with mathematics. | | 8. Look for and express regularity in repeated reasoning. |

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| **FOURTH QUARTER** | | | | | | |
| **Unit 11: Exponents Laws and Scientific Notation** | | | | | | |
| **Learning Goal** | [***802:*** *Work with radicals and integer exponents.*](http://scpsmath.weebly.com/uploads/2/9/1/7/29174797/802.docx)  [***803:*** *Apply integer exponents to perform operations involving scientific notation.*](http://scpsmath.weebly.com/uploads/2/9/1/7/29174797/803.docx) | | | | **Suggested # of Days** | **9**  **(10)** |
| **Approx. # of Day(s)** | **MAFS** | **Lesson Objective (Instructional Resources)** | **Suggested Assignments/Assessments** | **Ancillary Materials** | | |
| 2 | 8.EE.1.1 | 13-4A Product, Quotient, and Identity Law of Exponents with Supplement pgs. 761 – 765 | TB pg. 764-765/WB p.209-210 | **EngageNY Grade 8 – Module 1**  **Topic A: Lesson 1 –** [**TV**](https://www.engageny.org/file/46096/download/math-g8-m1-topic-a-lesson-1-teacher.pdf?token=cjQxJfBM3gX5IYjK1-6o5sJ4wiN_0flJz5_HsF6ojLw) **and** [**SV**](https://www.engageny.org/file/46091/download/math-g8-m1-topic-a-lesson-1-student.pdf?token=jQAjedNCblLMGPmwbAJJo3CvDOv0KLgbSm8kmexKJPg)  **Topic A: Lesson 2 –** [**TV**](https://www.engageny.org/file/46121/download/math-g8-m1-topic-a-lesson-2-teacher.pdf?token=ukxh9DOplrRwum_NG6pc2InzdAZetYiaTld_M_IXnpg) **and** [**SV**](https://www.engageny.org/file/46116/download/math-g8-m1-topic-a-lesson-2-student.pdf?token=6Nyy2tfsa2XkoHSC-TAoOY3doaweYZnIgU99uBTBuKs)  **Topic A: Lesson 3 –** [**TV**](https://www.engageny.org/file/46146/download/math-g8-m1-topic-a-lesson-3-teacher.pdf?token=iUL21A0dC15pndv_hBGvr0ErUEXdJfNjWrtjT7mf3XY) **and** [**SV**](https://www.engageny.org/file/46141/download/math-g8-m1-topic-a-lesson-3-student.pdf?token=XeS3zyJo5Pml-jALsDXiZaDF4shE-1IfcrDyZ2fdIAs)  **Topic A: Lesson 4 –** [**TV**](https://www.engageny.org/file/46171/download/math-g8-m1-topic-a-lesson-4-teacher.pdf?token=06Q7d5RNqDXIKbhVQbYPcoLSBA4FFKbaMm4pAGac580) **and** [**SV**](https://www.engageny.org/file/46166/download/math-g8-m1-topic-a-lesson-4-student.pdf?token=4CA_2c8quDVwhHJ4H1kpd_WhlhqUAncQGePkRsv5pTY)  **Topic A: Lesson 5 –** [**TV**](https://www.engageny.org/file/46206/download/math-g8-m1-topic-a-lesson-5-teacher.pdf?token=theYwfrDRCrM2Llmpu2BVGeR8EbVmeZUWlLT_ldEYP0) **and** [**SV**](https://www.engageny.org/file/46201/download/math-g8-m1-topic-a-lesson-5-student.pdf?token=oCW_Jzqak4VIMMNvsiY9czzT350fTycSgYoKbp0UrzE)  **Topic A: Lesson 6 –** [**TV**](https://www.engageny.org/file/46231/download/math-g8-m1-topic-a-lesson-6-teacher.pdf?token=JDzCG8p485Qi6ECeCfDc_6lKMtT3quumFfojF42H5O8) **and** [**SV**](https://www.engageny.org/file/46226/download/math-g8-m1-topic-a-lesson-6-student.pdf?token=zC_nJu0BAnnPJAP0I49oXcAG3q_3gWBvUShRUJbIBYw) | | |
| 8.EE.1.1 | 13-4B Negative and Zero Law of Exponents with Supplement pgs. 766 – 769 | TB pg. 768-769/WB p. 211-212  AND/OR---------------------------🡪 |
| 2 | 8.EE.1.3 | 13-4C Scientific Notation pgs. 770 – 774 | TB pg. 772-774/WB p. 213-214 |  | | |
| 1 | 8.EE.1.3 | Comparing Numbers Written in Scientific Notation with Supplement |  | **EngageNY Grade 8 – Module 1**  **Topic B: Lesson 13 –** [**TV**](https://www.engageny.org/file/46426/download/math-g8-m1-topic-b-lesson-13-teacher.pdf?token=WTDVZYsxIWeiE14Ax7c0h6hzJt-3HpBdpDh-1lgavws) **and** [**SV**](https://www.engageny.org/file/46421/download/math-g8-m1-topic-b-lesson-13-student.pdf?token=FDZNJ0iS4a2BL0pel5Vwfdjoinf4JuBatOUq_W3UeYs) | | |
| 2 | 8.EE.1.4 | Performing Operations with Numbers in Scientific Notation with Supplement |  | **EngageNY Grade 8 – Module 1**  **Topic B: Lesson 10 –** [**TV**](https://www.engageny.org/file/46351/download/math-g8-m1-topic-b-lesson-10-teacher.pdf?token=sgjfXhegjA2tM3ixajI7dSkRA_Rtl150joViIUtw5H4) **and** [**SV**](https://www.engageny.org/file/46346/download/math-g8-m1-topic-b-lesson-10-student.pdf?token=xim28n7ovuhIJgC1IVDMBeaOwxJW9Vdmndn55e6cCQ8)  **Topic B: Lesson 11 –** [**TV**](https://www.engageny.org/file/46376/download/math-g8-m1-topic-b-lesson-11-teacher.pdf?token=o5qn0uX9aLXgj5HpgkwGCg6WgpkjonnkfHu7hVg1S6Y) **and** [**SV**](https://www.engageny.org/file/46371/download/math-g8-m1-topic-b-lesson-11-student.pdf?token=-WER4t_VSO5jjAl0lWnRE3ZaGNN2paZuYxDwCtfgJdk) | | |
| 2 | 8.EE.1.1  8.EE.1.3  8.EE.1.4 | Unit 11 Problem Solving and Review  Unit 11 PLC Created Assessment | Review pg. 778-779 #38-64 |  | | |
| 10 |  | State Test Review(3 days)/FSA Testing (7 days)  State Testing Window begins April 13th and closes May 8th. |  |  | | |

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| **Unit 12: Three-Dimensional Geometry – Pt. II** | | | | |
| **Code** | **Mathematics Florida Standard** | | | |
| 8.G.3.9 | Know the formulas for the volumes of cones, cylinders, and spheres and use them to solve real-world and mathematical problems. | | | |
| **Learning Goal and Scale** | | | | **Instructional Strategies & Misconceptions** |
| [**813:** Solve real-world and mathematical problems involving volume of cylinders, cones, and spheres.](http://scpsmath.weebly.com/uploads/2/9/1/7/29174797/813.docx) | | | | * Remind students that the height of the cylinder is not how tall it is but the distance between the bases. * The height of a cone is the distance from the apex to the center for the circle, not the slant height. |
| **Math Practices for Unit** | | | **Unit Connections** | |
| 1. Make sense of problems and persevere in solving them. | | 5. Use appropriate tools strategically. | **Related 2013 – 2014 6th Grade Standards:**   * Find the volume of a right rectangular prism. * Represent three-dimensional figures using nets made up of rectangles and triangles, and use the nets to find the surface area of these figures. Apply these techniques in the context of solving real-world and mathematical problems. * Determine a missing dimension of a plane figure or prism, given its area or volume and some of the dimensions, or determine the area of volume given the dimensions. | |
| 2. Reason abstractly and quantitatively. | | 6. Attend to precision. |
| 3. Construct viable arguments & critique reasoning of others. | | 7. Look for and make use of structure. |
| 4. Model with mathematics. | | 8. Look for and express regularity in repeated reasoning. |

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| **FOURTH QUARTER** | | | | | | |
| **Unit 12: Three-Dimensional Geometry – Pt. II** | | | | | | |
| **Learning Goal** | [***813:*** *Solve real-world and mathematical problems involving volume of cylinders, cones, and spheres.*](http://scpsmath.weebly.com/uploads/2/9/1/7/29174797/813.docx) | | | | **Suggested # of Days** | **5** |
| **Approx. # of Day(s)** | **MAFS** | **Lesson Objective (Instructional Resources)** | **Suggested Assignments/Assessments** | **Ancillary Materials** | | |
| 1 | 8.G.3.9 | 8-1C Volume of Cylinders pgs. 438 – 442 | TB pg. 439-442/WB p. 121-122 |  | | |
| 1 | 8-1F Volume of Cones pgs. 449 - 452 | TB pg. 450-452/WB p. 125-126 |  | | |
| 1 | Volume of Spheres with Supplement |  | **EngageNY Grade 8 – Module 5**  **Topic B: Lesson 11 –** [**TV**](https://www.engageny.org/file/48471/download/math-g8-m5-topic-b-lesson-11-teacher.pdf?token=of4G-q-e1gcGlheAZW0Van0Yh9B6v8ObrRWEYqNJ108) **and** [**SV**](https://www.engageny.org/file/48466/download/math-g8-m5-topic-b-lesson-11-student.pdf?token=nSpVrLgdaVvE0mxtmt7Dc1dXeiy5NoU1ilECi1K_2uk) | | |
| 2 | 8.G.3.9 | Unit 12 Problem Solving and Review  Unit 12 PLC Created Assessment |  |  | | |

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| **Unit 13: Transformations** | | | | |
| **Code** | **Mathematics Florida Standard** | | | |
| 8.G.1.1 | Verify experimentally the properties of rations, reflections, and translations:   1. Lines are taken to lines, and line segments to line segments of the same length. 2. Angles are taken to angles of the same measure. 3. Parallel lines are taken to parallel lines. | | | |
| 8.G.1.2 | Understand that a two-dimensional figure is congruent to another if the second can be obtained from the first by a sequence of rotations, reflections, and translations; Given two congruent figures, describe a sequence that exhibits the congruence between them. | | | |
| 8.G.1.3 | Describe the effect of dilations, translations, rotations, and reflections on two dimensional figures using coordinates. | | | |
| 8.G.1.4 | Understand that a two-dimensional figure is similar to another if the second can be obtained from the first by a sequence of rotations, reflections, translations, and dilations; given two similar two-dimensional figures, describe a sequence that exhibits the similarity between them. | | | |
| **Learning Goal and Scale** | | | | **Instructional Strategies & Misconceptions** |
| [**809:** Understand congruence using physical models, transparencies, or geometry software.](http://scpsmath.weebly.com/uploads/2/9/1/7/29174797/809.docx)  [**810:** Understand similarity using physical models, transparencies, or geometry software.](http://scpsmath.weebly.com/uploads/2/9/1/7/29174797/810.docx) | | | | * Stress the difference between line symmetry and rotational symmetry. * Caution students to first determine whether the shape is being enlarged or reduced prior to calculating the scale factor of dilation. |
| **Math Practices for Unit** | | | **Unit Connections** | |
| 1. Make sense of problems and persevere in solving them. | | 5. Use appropriate tools strategically. | **Related 2013 – 2014 4th Grade Standards Summary:**   * Identify and describe the results of translations, reflections, and rotations of 45, 90, 180, 270, and 360 degrees, including figures with line and rotational symmetry. | |
| 2. Reason abstractly and quantitatively. | | 6. Attend to precision. |
| 3. Construct viable arguments & critique reasoning of others. | | 7. Look for and make use of structure. |
| 4. Model with mathematics. | | 8. Look for and express regularity in repeated reasoning. |

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| **FOURTH QUARTER** | | | | | | |
| **Unit 13: Transformations** | | | | | | |
| **Learning Goal** | [***809:*** *Understand congruence using physical models, transparencies, or geometry software.*](http://scpsmath.weebly.com/uploads/2/9/1/7/29174797/809.docx)  [***810:*** *Understand similarity using physical models, transparencies, or geometry software.*](http://scpsmath.weebly.com/uploads/2/9/1/7/29174797/810.docx) | | | | **Suggested # of Days** | **8**  **(5)** |
| **Approx. # of Day(s)** | **MAFS** | **Lesson Objective (Instructional Resources)** | **Suggested Assignments/Assessments** | **Ancillary Materials** | | |
| 1 | 8.G.1.1  8.G.1.2 | 10-1A/B Translations pgs. 547 – 553 | TB pg. 547  TB pg. 551-553/WB p. 151-152 |  | | |
| 1 | 10-2A/B Reflections pgs. 554 - 561 | TB pg. 554-555  TB pg. 559-561/WB p. 153-154 |  | | |
| 1 | 10-3A/B Rotations pgs. 563 – 569 | TB pg. 563-564  TB pg. 567-568/WB p. 155-156 |  | | |
| 2 | 10-1A/B Continued with Transformations of Lines, Segments and Parallel Lines with Supplement | TB pg. 547  TB pg. 551-553/WB p. 151-152  AND/OR --------------------------🡪 | **EngageNY Grade 8 – Module 2**  **Topic A: Lesson 3 –** [**TV**](https://www.engageny.org/file/46501/download/math-g8-m2-topic-a-lesson-3-teacher.pdf?token=-G4v3EkoyZ_vWMw8znlnvKonjOW9jhMwWeBSZv0R9eY) **and** [**SV**](https://www.engageny.org/file/46496/download/math-g8-m2-topic-a-lesson-3-student.pdf?token=7Zyt6vwTTvTPtfzTvp-7dBxCkOClmZ2heN0a9hjBco0) | | |
| 2 | 8.G.1.3  8.G.1.4 | 10-4A Dilations pgs. 570 – 575 | TB pg. 576-577/WB p. 159-160 |  | | |
| 1 | 8.G.1.2  8.G.1.4 | Describe Sequence of Transformations When Given Figure and Image with Supplement |  | **EngageNY Grade 8 – Module 2**  **Topic B: Lesson 10 –** [**TV**](https://www.engageny.org/file/46691/download/math-g8-m2-topic-b-lesson-10-teacher.pdf?token=klGUccbPLR9Cn2c1WDh3Ndo7pkI6epOLUSBLFuNVV_4) **and** [**SV**](https://www.engageny.org/file/46671/download/math-g8-m2-topic-b-lesson-10-student.pdf?token=Wba60-eyzZpKUDYjEHsjss99xDItw1NY9tBWT7FTr1g) | | |
| 5 |  | Unit 13 AND/OR Cumulative Review (2 days)  Unit 13 AND/OR 9 Weeks Exam (3 days) |  |  | | |