**6th Grade Intensive**

**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 the Florida Standards (MAFS) while using the Connected Mathematics Project 3 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**
* **Employ questioning techniques that require students to justify, defend and support their ideas**
* **For all students to be able to reason and communicate proficiently in mathematics**

In pursuit of the stated goals, teachers are encouraged to develop a classroom atmosphere that **promotes inquiry, discussion of mathematics, justification of thinking and a joy for exploring.** Concurrently, teachers should strive to develop:

* **respect** in the classroom
* **academic excellence and rigor**
* student **success**
* student **confidence**
* a **“safe place”** to share/collaborate/question

**Instructional Plan Caveats:**

* The **purpose of Week 1** in each Instructional Plan is to establish “social norms”: establish procedures and expectations that will lead to daily classroom success (how to work in partners and groups, how to explain/justify, focus on academic rigor, etc.); all grades will use the problem solving exercises posted on SCPS Blackboard. **During Week 2,** continue to establish social norms while beginning to use math content.
* Suggested ACE problems can be used after each individual lesson or after an entire investigation based on teacher preference.
* Limited or no homework should be prescribed in the intensive classes.
* Descriptions of the Mathematical Practices can be found on pages 3 – 4. Teachers are encouraged to embed the Questions to Develop Mathematical Thinking (located on pages 5 – 6) in their daily lessons.
* **No assessment or assignment will receive a score of less than 50%**
* **Tests and quizzes will count for no more than 20%** of the entire nine-week grade
* The **remaining 80%** of the nine-week grade should be a collaborative decision within the PLC and may include classwork, participation, notebook/journal, projects, etc.
* Common Unit Assessments are available on SCPS Blackboard; in addition, there is a Unit Test Item Bank available for “chunking” the assessments throughout each unit or authentic tasks such as the Amplify Projects can be used. PLC’s should determine the school decision.
* It is essential that teachers do the Required TE Reading in preparation for successful presentation of each problem
* Learning goals and scales can be accessed through the hyperlinks within the Instructional Plan.
* 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.

**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** |
| --- | --- |
| **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? |
| **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: Prime Time |  | 5 |
| Unit 2: Bits and Pieces I |  | 25 |
| Unit 3: Bits and Pieces II |  | 12 |
| District Assessment (0 day), 9 Weeks Exams (0 days) |  |  |
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| **SECOND QUARTER (October 13 – December 18)** | | **46 DAYS** |
| **Topic/Assessment** | **Dates Covered** | **Approximate # of Days** |
| Unit 3: Bits and Pieces II (cont.) |  | 7 |
| Unit 4: Bits and Pieces III |  | 14 |
| Unit 5: Expressions & Equations |  | 25 |
| District Assessment (0 day); 9 Weeks Exams (0 days) |  |  |
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| **THIRD QUARTER (January 6 – March 12)** | | **46 DAYS** |
| **Topic/Assessment** | **Dates Covered** | **Approximate # of Days** |
| Unit 5: Expressions & Equations (cont.) |  | 18 |
| Unit 6: Ratio and Rates |  | 18 |
| Unit 7: Covering and Surrounding |  | 9 |
| District Assessment (0 day); 9 Weeks Exams (0 days); FSA ELA Write (1 day) |  | 1 |
|  | | |
| **FOURTH QUARTER (March 23 – May 27)** | | **46 DAYS** |
| **Topic/Assessment** | **Dates Covered** | **Approximate # of Days** |
| Unit 7: Covering and Surrounding (cont.) |  | 8 |
| Unit 8: Data and Statistics |  | 28 |
| FSA Tests (7days); 9 Weeks Exams (3 days) |  | 10 |

*\*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: Prime Time** | | | | | | | |
| **Code** | **Mathematics Florida Standard** | | | | | | **SMP** |
| 6.NS.2.4: | 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. Use the distributive property to express a sum of two whole numbers 1–100 with a common factor as a multiple of a sum of two whole numbers with no common factor. For example, express 36 + 8 as 4 (9 + 2). | | | | | | 6, 7 |
| **Learning Goal and Scale** | | | | **Instructional Strategies & Misconceptions** | | | |
| [**606:** Compute fluently with multi-digit numbers and find common factors and multiples.](http://scpsmath.weebly.com/uploads/2/9/1/7/29174797/606.docx) | | | | * Students confuse the meanings of multiple and factor. A strategy to correct is to over teach one concept. * Student may need to review divisibility rules. | | | |
| **Math Practices for Unit** | | | **Unit Connections** | | **Instructional Resources** | | |
| 1. Make sense of problems and persevere in solving them. | | 5. Use appropriate tools strategically. | 5th Grade Number Sense:   * Recognize that a digit has a place value * Explain patterns * Compare decimals to thousandths place value * Add, subtract, multiply and divide decimals | | **2.3:** Labsheets 2.3A and 2.3B  **3.1:** Calculators  **3.3:** Calculators |  | |
| 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: Prime Time** | | | | | | |
| **Lesson Objective** | [**606:** Compute fluently with multi-digit numbers and find common factors and multiples.](http://scpsmath.weebly.com/uploads/2/9/1/7/29174797/606.docx) | | | | **Suggested # of Days** | **5** |
| **Approx. # of Day(s)** | **MAFS** | **Lesson Objective (Instructional Resources)** | **Suggested Assignments/Assessments** | **Ancillary Materials: Teacher Edition** | | |
| 2 |  | Social Norms & Class Expectations |  |  | | |
| 1 | 6.NS.2.4 | Prime Time 2.3 Classifying Numbers | Problems: A & C | p. 45 - 48 | | |
| 1 | Prime Time: 3.1 Riding the Ferris Wheels/Choosing Common Multiplies or Common Factors | Problems: A-D | p. 54 - 58 | | |
| 1 | Prime Time: 3.3 Bagging Snacks/ Choosing Common Multiplies or Common Factors | Problems: A-B | p. 63 - 66 | | |

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| **Unit 2: Bits and Pieces I** | | | | | | | |
| **Code** | **Mathematics Florida Standard** | | | | | | **SMP** |
| 6.NS.3.6 | Understand a rational number as a point on the number line. | | | | | | 5,8 |
| **Learning Goal and Scale** | | | | **Instructional Strategies & Misconceptions** | | | |
| [**607:** Apply and extend previous understandings of numbers to the system of rational numbers.](http://scpsmath.weebly.com/uploads/2/9/1/7/29174797/607.docx) | | | | * Students often confuse the bigger the number in the denominator, the bigger the piece. * Students often estimate 1/3 to ½ but estimate 2/3 to a whole instead of ½ * Students often add the numerators and the denominators. * Students will not read a decimal properly which make the building of a fraction more difficult. | | | |
| **Math Practices for Unit** | | | **Unit Connections** | | **Instructional Resources** | | |
| 1. Make sense of problems and persevere in solving them. | | **5. Use appropriate tools strategically**. | 5th Grade Number Sense: Fractions   * Fluently multiply multi-digit whole numbers using standard algorithm * Add, subtract, multiply and divide decimals * Use equivalent fraction as a strategy to add and subtract fractions * Multiply and divide fractions | | 1.3: Transparency 1.3A, precut 8 ½ fraction strips  1.4: labsheet 1.4  2.1: transparency 2.1A, Labsheet 2.1  2.2: transparencies 2.2A and 2.2B, labsheet 2.2  2.5: transparency 2.5  3.1: transparencies 3.1 A and B, labsheet 3.1  3.2: Transparencies 3.1 B,C and 3.2 A-E  3.3: Labsheet 3.3 | 3.5: Transparencies 3.5 A & B, Labsheet 3.5(optional)  4.3: transparency 4.3  4.4: Transparency 4.4, labsheet 4.4 | |
| 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: Bits and Pieces I** | | | | | | | | | |
| **Lesson Objective** | [**607:** Apply and extend previous understandings of numbers to the system of rational numbers.](http://scpsmath.weebly.com/uploads/2/9/1/7/29174797/607.docx) | | | | | | **Suggested # of Days** | **4** | |
| **Approx. # of Day(s)** | **MAFS** | **Lesson Objective (Instructional Resources)** | **Suggested Assignments/Assessments** | **Ancillary Materials: Teacher Edition** | | | | | |
| 1.5 | 6.NS.3.6 | 1.3 Measuring Progress/Finding Fractional Parts | 3-12, 27 | p. 29-34; Copy fraction strips from TE. | | | | | |
| 1.5 | 1.4 Comparing Classes/Using Fractions to Compare | 13-17, 19, 28-30, 31-37 | p. 35-40 | | | | | |
| 1 | Review/Assessment |  | p. 41-43 | | | | | |
| **Lesson Objectives**  **(Inv. 2)** | The students will be able to:  - Recognize the role of the numerator and denominator when partitioning. (2.1)  - Understand that a place on a number line can have more than one fraction name. (2.2)  - Use benchmarks to estimate the size of fractions and compare fractions. (2.3)  - Develop strategies for representing fraction amounts larger than one. (2.5) | | | | | | **Suggested # of Days** | **7** | |
| **Approx. # of Day(s)** | **MAFS** | **Lesson Objective (Instructional Resources)** | **Suggested Assignments/Assessments** | | **Ancillary Materials** | | | | |
| 1 | 6.NS.3.6 | 2.1 Equivalent Fractions and Equal Shares | 1-3, 46-48 | | p. 44-50 | | | | |
| 1 | 2.2 Finding Equivalent Fractions | 4-11, 34-35, 59-64 | | p. 51-56 | | | | |
| 1 | 2.3 Comparing Fractions to Benchmarks | 12-23, 36-37, 65-69 | | p. 57-62 | | | | |
| 1 | 2.5 Naming Fractions Greater Than 1 | 24, 41-45, 49-58 | | p. 67-72 | | | | |
| 3 | Review/Assessment |  | | p. 76 | | | | |
| **Lesson Objectives**  **(Inv. 3)** | The students will be able to:  - Represent decimals as fractions with denominators of 10 and 100. (3.1)  - Understand fractions and decimals with place values greater than hundredths. (3.2)  - Use knowledge of fractions to find equivalent decimal benchmarks. (3.3)  - Use the decimal place value system to interpret, compare, and order decimals. (3.5) | | | | | **Suggested # of Days** | | | **8** |
| **Approx. # of Day(s)** | **MAFS** | **Lesson Objective (Instructional Resources)** | **Suggested Assignments/Assessments** | | **Ancillary Materials** | | | | |
| 2 | 6.NS.3.6 | 3.1 Making smaller Parts/Using Tenths and Hundredths | 1-18, 51 | | p. 77-84 | | | | |
| 1 | 3.2 Making Even Smaller Parts/Place Values Greater Than Hundredths | 19-24, 52-53 | | p. 85-90 | | | | |
| 1 | 3.3 Decimal Benchmarks | 25-28, 55-60 | | p. 91-96 | | | | |
| 1 | 3.5 Ordering Decimals | 29, 33-50 | | p. 101-106 | | | | |
| 3 | Review/Assessment |  | | p. 107-111 | | | | |
| **Lesson Objectives (Inv. 4)** | The students will be able to:  - Understand how to compare situations with different number of trials. (4.2)  - Develop strategies for expressing data in percent form. (4.3)  - Move between fractions, decimals, and percents. (4.4) | | | | | | **Suggested # of Days** | **6** | |
| **Approx. # of Day(s)** | **MAFS** | **Lesson Objective (Instructional Resources)** | **Suggested Assignments/Assessments** | **Ancillary Materials** | | | | | |
| 1 | 6.NS.3.6 | 4.2 Choosing the Best/Using Percents to Compare | 3-6, 32 | p. 119-124 | | | | | |
| 1 | 4.3 Finding a General Strategy/Expressing Data in Percent Form | 7-21, 34-39 | p. 125-128 | | | | | |
| 1 | 4.4 Changing Forms/Moving Between Representations | 22-25, 33, 40-44 | p. 129-132 | | | | | |
| 3 | Review/Assessment |  | p. 133-136 | | | | | |

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| **Unit 3: Bits and Pieces II** | | | | | | | |
| **Code** | **Mathematics Florida Standard** | | | | | | **SMP** |
| 6.NS.1.1 | Apply and extend previous understandings of multiplication and division to divide fractions by fractions. Add and subtract fractions and decimals fluently, and verify the reasonableness of results, including problem situations | | | | | | 4,6 |
| **Learning Goal and Scale** | | | | **Instructional Strategies & Misconceptions** | | | |
| [**605:** Apply and extend previous understandings of multiplication and division to divide fractions by fractions.](http://scpsmath.weebly.com/uploads/2/9/1/7/29174797/605.docx)  [**606:** Compute fluently with multi-digit numbers and find common factors and multiples.](http://scpsmath.weebly.com/uploads/2/9/1/7/29174797/606.docx) | | | | * Students might add denominators * Students will find a multiple for one of the fractions and just make it work for the other fraction. * Students confuse what to multiply, they multiply a denominator to a numerator. * Students confuse multiplication and division of fractions by flipping the fraction during multiplication or flipping the first fraction in division. | | | |
| **Math Practices for Unit** | | | **Unit Connections** | | **Instructional Resources** | | |
| 1. Make sense of problems and persevere in solving them. | | 5. Use appropriate tools strategically. | 5th Grade Numbers and Operations: Fractions   * Fluently multiply multi-digit whole numbers using standard algorithm * Add, subtract, multiply and divide decimals * Use equivalent fraction as a strategy to add and subtract fractions * Multiply and divide fraction and whole number * Multiply and divide fractions * Interpret the meaning of a fraction | | 2.1: transparency 2.1, labsheet 2.1  2.4: Transparencies 2.4A and 2.4B, chart paper, markers  3.1: labsheet 3.1 colored pencils  3.2: transparency 3.2, large paper, markers  3.4: transparency 3.4 and blank transparencies, markers  3.5: transparency 3.5, chart paper, markers  4.1: Transparency 4.1, blank transparency  4.4: transparency 4.4, chart paper, markers |  | |
| 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/SECOND QUARTER** | | | | | | | |
| **Unit 3: Bits and Pieces II** | | | | | | | |
| **Lesson Objectives**  **(Inv. 2)** | The students will be able to:  - Develop strategies for adding and subtracting fractions. (2.1)  - Develop strategies for fractions and mixed numbers. (2.2)  - Develop an efficient algorithm for adding and subtracting fractions. (2.4) | | | | **Suggested # of Days** | | **4** |
| **Approx. # of Day(s)** | **MAFS** | **Lesson Objective (Instructional Resources)** | **Suggested Assignments/Assessments** | **Ancillary Materials** | | | |
| 1 | 6.NS.1.1 | 2.2 Visiting the Spice Shop/Using Addition and Subtraction | 3-13, 30-38 | 41-46 | | | |
| 1 | 2.4 Designing Algorithms for Addition and Subtraction | 19-27, 45-47, 50 | 51-54 | | | |
| 2 | Review/Assessment |  | 55-58 | | | |
| **Lesson Objectives (Inv. 3)** | The students will be able to:  - Use Models to represent the product of two fractions. (3.1)  - Understand that finding a fraction of a number means multiplication. (3.2)  - Develop and use algorithms for multiplying combinations of fractions, whole numbers, and mixed numbers. (3.4)  - Develop and use an efficient algorithm to solve any fraction multiplication problem. (3.5)*Insert Learning Goal Here* | | | | **Suggested # of Days** | **8** | |
| **Approx. # of Day(s)** | **MAFS** | **Lesson Objective (Instructional Resources)** | **Suggested Assignments/Assessments** | **Ancillary Materials** | | | |
| 1.5 | 6.NS.1.1 | 3.1 How Much of the Pan Have We Sold?/A Model for Multiplication | 1-5, 36-37 | 59-64 | | | |
| 1.5 | 3.2 Finding a Part of a Part / Another Model for Multiplication | 6-10, 38-39 | 65-70 | | | |
| 1 | 3.4 Changing Forms/Multiplication with Mixed Numbers | 16-20, 46-49 | 75-80 | | | |
| 1 | 3.5 Writing a Multiplication Algorithm | 21-35 | 21-35 | | | |
| 3 | Review/Assessment |  | 85-88 | | | |
| **1ST QUARTER ENDS** | | | | | | | |
| **Lesson Objectives (Inv. 4)** | The students will be able to:  - Use models to represent a whole number divided by a fraction. (4.1)  - Develop and use strategies for dividing a fraction by a whole number. (4.2)  - Develop and use strategies for dividing a fraction by a fraction. (4.3)  - Develop an efficient algorithm to solve any fraction division problem. (4.4) | | | | **Suggested # of Days** | | **7** |
| **Approx. # of Day(s)** | **MAFS** | **Lesson Objective (Instructional Resources)** | **Suggested Assignments/Assessments** | **Ancillary Materials** | | | |
| 1 | 6.NS.1.1 | 4.1 Preparing Food/Dividing a Fraction by a Whole Number | 1-4, 24-29 | 89-96 | | | |
| 1 | 4.2 Fundraising Continues/Dividing a Fraction by a Whole Number | 5-10, 30-35 | 97-102 | | | |
| 1 | 4.3 Summer Work/Dividing a Fraction by a Fraction | 11-14, 36-37 | 103-108 | | | |
| 1 | 4.4 Writing a Division Algorithm | 15-23, 38-40 | 109-114 | | | |
| 3 | Review/Assessment |  | 115-118 | | | |

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| **Unit 4: Bits and Pieces III** | | | | | | | |
| **Code** | **Mathematics Florida Standard** | | | | | | **SMP** |
| 6.NS.2.3 | Fluently add, subtract, multiply and divide multi-digit decimals using the standard algorithm for each operation.  Explain and justify procedures for multiplying and dividing decimals. | | | | | | 6,7 |
| **Learning Goal and Scale** | | | | **Instructional Strategies & Misconceptions** | | | |
| [**606:** Compute fluently with multi-digit numbers and find common factors and multiples.](http://scpsmath.weebly.com/uploads/2/9/1/7/29174797/606.docx) | | | | * Students often move the decimals the wrong direction * Students do not check if the answer makes sense. * Students confuse place values | | | |
| **Math Practices for Unit** | | | **Unit Connections** | | **Instructional Resources** | | |
| 1. Make sense of problems and persevere in solving them. | | 5. Use appropriate tools strategically. | 5th Grade Measurement and data   * Convert like measurement units with metric system * Apply and extend previous understanding of multiplication and division to decimals * Understand that the dividing of a fraction can be a decimal | | 2.1: Transparency 2.1,  2.2:  2.3:  2.4: Transparency 2.4, labsheet 2.4  3.1:  3.2: Transparency 3.2  3.3:Transparency 3.3 |  | |
| 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: Bits and Pieces III** | | | | | | |
| **Lesson Objectives (Inv. 2)** | The students will be able to:  - Develop place value understanding of decimal multiplication. (2.1)  - Use place value to reason about decimal multiplication. (2.2)  - Develop estimation strategies for finding decimal products. (2.3)  - Understand what happens to place value and the position of the decimal when you multiply by powers of 10. (2.4) | | | | **Suggested # of Days** | **8** |
| **Approx. # of Day(s)** | **MAFS** | **Lesson Objective (Instructional Resources)** | **Suggested Assignments/Assessments** | **Ancillary Materials** | | |
| 1 | 6.NS.2.3 | Assess background knowledge (Briefly review concepts from Investigation 1 that were omitted.) |  |  | | |
| 1 | 2.1 Relating Fraction and Decimal Multiplication | 1-6, 34-39 | 37-42 | | |
| 1 | 2.2 Missing Factors | 7-16 | 43-46 | | |
| 1 | 2.3 Find Decimal Products | 17-24, 40-44 | 47-50 | | |
| 1 | 2.4 Factor-Product Relationships | 25-33, 45, 50-55 | 51-56 | | |
| 3 | Review/Assessment |  |  | | |
| **Lesson Objectives (Inv. 3)** | Students will be able to:  - Use models and the context to find solutions to division problems. (3.1)  - Use the common denominator approach to fraction division as a strategy to understand and develop an algorithm for dividing decimals. (3.2)  - Develop and use efficient algorithms for dividing decimals. (3.3) | | | | **Suggested # of Days** | **6** |
| **Approx. # of Day(s)** | **MAFS** | **Lesson Objective (Instructional Resources)** | **Suggested Assignments/Assessments** | **Ancillary Materials** | | |
| 1 | 6.NS.2.3 | 3.1 Deciphering Decimal Situations | 1-4, 28-30 | 60-64 | | |
| 1 | 3.2 The Great Equalizer: Common Denominators/Using Common Denominators to Divide Decimals | 5-14, 31 | 65-70 | | |
| 1 | 3.3 Exploring Dividing Decimals | 15-24, 27, 34 | 71-74 | | |
| 3 | Review/Assessment |  | 79-82 | | |

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| **Unit 5: Expressions and Equations** | | | | | | | |
| **Code** | **Mathematics Florida Standard** | | | | | | **SMP** |
| 6.EE.2.5 | 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. | | | | | | 5,6 |
| 6.EE.2.6 | Use variables to represent numbers and write expressions when solving a real-world or mathematical problem; understand that a variable can represent an unknown number, or, depending on the purpose at hand, any number in a specified set. | | | | | | 2,6,7 |
| 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 nonnegative rational numbers. | | | | | | 1,2,6,7 |
| 6.EE.3.9 | Use variables to represent two quantities in a real-world problem that change in relationship to one another; write an equation to express one quantity, thought of as the dependent variable, in terms of the other quantity, thought of as the independent variable. Analyze the relationship between the dependent and independent variables using graphs and tables, and relate these to the equation | | | | | | 2,4,6,8 |
| **Learning Goal and Scale** | | | | **Instructional Strategies & Misconceptions** | | | |
| [**601:** Apply and extend previous understandings of arithmetic to algebraic expressions.](http://scpsmath.weebly.com/uploads/2/9/1/7/29174797/601.docx)  [**602:** Reason about and solve one-variable equations and inequalities.](http://scpsmath.weebly.com/uploads/2/9/1/7/29174797/602.docx)  [**603:** Represent and analyze quantitative relationships between dependent and independent variables.](http://scpsmath.weebly.com/uploads/2/9/1/7/29174797/603.docx) | | | | * Students confuse that “X” can be a variable as well as a coordinate. * Students understand how to undo an equation in order to solve for variable but they usually forget to undo division and think about fact families. Ex: n/15 = 5. Student state that n=3 | | | |
| **Math Practices for Unit** | | | **Unit Connections** | | **Instructional Resources** | | |
| 1. Make sense of problems and persevere in solving them. | | 5. Use appropriate tools strategically. | 5th grade operations and algebraic thinking   * Write and interpret numerical expressions * Analyze patterns and relationships | | Print packet for each student:  -Candy Shop  -Hands on Equations Sheets |  | |
| 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/THIRD QUARTER** | | | | | | | |
| **Unit 5: Expressions & Equations** | | | | | | | |
| **Lesson Objectives** | **Candy Shop (Available on Blackboard)**  Students will be able to:  - Use models to show the effects on the total when a specific quantity changes (Launch of the Candy Shop).  - Use different groupings to show the same number (Krazy Kustomer Chaos).  - Use models to write expressions with variables (Mischevious Maggy and The Mystery Rolls).  - Use the distributive property to rewrite an expression (Saturday Special).  - Use models to solve for a variable when given the total (Saturday Special).  - Use models to solve equations (Making Sense of Algebraic Expressions).  - Solve one and two-step equations (Making Sense of Algebraic Expressions). | | | | **Suggested # of Days** | | **13** |
| **Approx. # of Day(s)** | **MAFS** | **Lesson Objective (Instructional Resources)** | **Suggested Assignments/Assessments** | **Ancillary Materials** | | | |
| .5 |  | Assess Background Knowledge |  | **(On Blackboard)**  [Candy Shop Packet](http://scpsmath.weebly.com/uploads/2/9/1/7/29174797/candy_shop.docx)  [Candy Shop Quizzes](http://scpsmath.weebly.com/uploads/2/9/1/7/29174797/candy_shop_quiz_1_and_quiz_2.docx) | | | |
| 1 | 6.EE.2.5 | Launch of The Candy Shop | S (1-2) |
| 1 | 6.EE.2.5  6.EE.2.6 | Krazy Kustomer Chaos | S-3 |
| 2.5 | 6.EE.2.5  6.EE.2.6  6.EE.2.7 | Mischevious Maggy and They Mystery Rolls | S (4-7) |
| .5 |  | Quiz |  |
| 2.5 | 6.EE.2.5  6.EE.2.6  6.EE.2.7 | Saturday Special | S (8-12) |
| 4 | 6.EE.2.5  6.EE.2.6  6.EE.2.7 | Making Sense of Algebraic Expressions | S (13-17) |
| 1 |  | Quiz |  |
| **Lesson Objectives** | **Hands on Equations**  The students will be able to:  ‐ Understand how Hands on Equations balance scales work, and how to set up equations with the pawns and cubes.  ‐ Use trial and error to find the value of symbols to balance equations.  ‐ Perform legal moves on the balance scale math in Hands on Equations with pawns.  ‐ Perform legal moves on the balance scale math in Hands on Equations with cubes.  ‐ Apply the Distributive Property to the balance model and solve equations.  ‐ Translate symbolic and numeric representations into algebraic equations and solve. | | | | | **Suggested # of Days** | **12** |
| **Approx. # of Day(s)** | **MAFS** | **Lesson Objective (Instructional Resources)** | **Suggested Assignments/Assessments** | **Ancillary Materials** | | | |
| 2 | 6.EE.2.5  6.EE.2.7 | Lesson 1 and Lesson 2 – Trial and Error and  Getting Acquainted with the Hands on  Equations Model | Classwork Sheet 1  Classwork Sheet 2 |  | | | |
| 2 | Lesson 3 – Legal Moves: Removing Pawns from  Both Sides of the Equation | Classwork Sheet 3  Extra Practice Sheet 3 |  | | | |
| 2 | Lesson 4 – Legal Moves: Removing Number  Cubes from Both Sides of the Equation | Classwork Sheet 4  Extra Practice Sheet 4 |  | | | |
| 2 | Lesson 5 – Removing Pawns as Part of the Set  Up Process | Classwork Sheet 5  Extra Practice Sheet 5 |  | | | |
| 1 | Lesson 6 – Distributive Property | Classwork Sheet 6  Extra Practice Sheet 6 |  | | | |
| 2 | Lesson 7 – Moving to Algebraic Notation | Classwork Sheet 7  Extra Practice Sheet 7 |  | | | |
| 1 | Lesson 1‐7 Review | Select Questions from Classwork Sheets 1‐7  and Extra Practice Sheets 1‐7 | | | | |
| **2ND QUARTER ENDS** | | | | | | | |
| **Lesson Objective** | **Variables & Patterns (CMP2 Grade 7)**  Students will be able to:  - Understand how to make a graph to show the relationship between two variables (mini lesson).  - Compare data sets given in tables and graphs. (2.1)  - Use tables and graphs to analyze data and make decisions. (2.2)  - Predict the pattern in the graph of the relationship between variables. (2.3) Students will be able to:  - Write one-step equations to represent the relationship between variables as shown on a graph or table. (3.1) | | | | **Suggested # of Days** | | **18** |
| **Approx. # of Day(s)** | **MAFS** | **Lesson Objective (Instructional Resources)** | **Suggested Assignments/Assessments** | **Ancillary Materials** | | | |
| 1 | 6.EE.2.7  6.EE.3.9 | 1.1 Preparing for a Bicycle Tour/Interpreting Tables | 13-17 | p. 15-20 | | | |
| 1 | 1.2 Making Graphs | 1-3, 18-20 | p. 21-24 | | | |
| 1 | 6.EE.3.9 | 2.1 Renting Bicycles and Analyzing a Table and Graph | 1‐4, 15‐16, 20‐21 | 44‐50 | | | |
| 1 | 2.2 Finding Customers/Making and Analyzing a Graph | 5‐7, 17‐18, 22‐23 | 51‐54 | | | |
| 1 | 2.3 What’s the Story/Interpreting Graphs | 8‐14, 19, 24 | 55‐58 | | | |
| 4 | Time allotted for ACE questions and Mathematical  Reflection and assessment |  | 59‐67 | | | |
| 2 | 6.EE.2.7  6.EE.3.9 | 3.1 Writing Equations  \*To save time, make copies of table and graph from part A and B | 1-4, 21-27, 38-43 | 68-72 | | | |
| 2 | 3.2 Writing More Equations | 5‐20, 28‐37, 44‐47 | 73‐76 | | | |
| 5 |  | Review/Assessment and/or Amplify Project (Make That Money) | | | | | |

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| **Unit 6: Ratio and Rates** | | | | | | | |
| **Code** | **Mathematics Florida Standard** | | | | | | **SMP** |
| 6.RP.1.1 | Understand the concept of a ratio and use ratio language to describe a ratio relationship between two quantities. For example, “The ratio of wings to beaks in the bird house at the zoo was 2:1, because for every 2 wings there was 1 beak.” “For every vote candidate A received, candidate C received nearly three votes.” | | | | | | 2 |
| 6.RP.1.2 | 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. For example, “This recipe has a ratio of 3 cups of flour to 4 cups of sugar, so there is 3/4 cup of flour for each cup of sugar.” “We paid $75 for 15 hamburgers, which is a rate of $5 per hamburger.” | | | | | | 2 |
| 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. 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. 2. Solve unit rate problems including those involving unit pricing and constant speed. For example, if it took 7 hours to mow 4 lawns, then at that rate, how many lawns could be mowed in 35 hours? At what rate were lawns being mowed? 3. 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. 4. Use ratio reasoning to convert measurement units; manipulate and transform units appropriately when multiplying or dividing quantities. 5. Understand the concept of Pi as the ratio of the circumference of a circle to its diameter. | | | | | | 2,4,5,6,7,8 |
| **Learning Goal and Scale** | | | | **Instructional Strategies & Misconceptions** | | | |
| [**604:** Understand ratio concepts and use ratio reasoning to solve problems.](http://scpsmath.weebly.com/uploads/2/9/1/7/29174797/604.docx) | | | | * Students may not remember that a numerator of a unit rate may be a decimal * Students think a ratio is a fraction * Students forget that the labels need to match going across from one ratio to other | | | |
| **Math Practices for Unit** | | | **Unit Connections** | | **Instructional Resources** | | |
| 1. Make sense of problems and persevere in solving them. | | 5. Use appropriate tools strategically. | **5th Grade Operations and Algebraic Thinking**   * Write and interpret numerical expressions, * Analyze patterns and relationships   **5th grade number and operations: Fractions**   * Apply and extend previous understandings of multiplication and division to multiply and dividing fractions. | | packets |  | |
| 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 6: Ratio and Unit Rate** | | | | | | |
| **Lesson Objective** | [**604:** Understand ratio concepts and use ratio reasoning to solve problems.](http://scpsmath.weebly.com/uploads/2/9/1/7/29174797/604.docx) | | | | **Suggested # of Days** | **18** |
| **Approx. # of Day(s)** | **MAFS** | **Lesson Objective (Instructional Resources)** | **Suggested Assignments/Assessments** | **Ancillary Materials** | | |
| 1 | 6.RP.1.1 | Step by Step  Ratio problems | Pg. 1  Pg. 2  Pg. 3 | [Ratio & Rates Packet (on Blackboard)](http://scpsmath.weebly.com/uploads/2/9/1/7/29174797/ratio_and_rates_packet.doc) | | |
| 1 | 6.RP.1.1 | Guide Lesson  Matching Ratios  Ratio problems  Ratio Practice | Pg. 4  Pg. 5  Pg. 6  Pg. 7 |
| 1 | 6.RP.1.2  6.RP.1.3 | Proportion Lesson  Proportion Practice | Pg. 8 & 9  Pg. 10 |
| 1 | Proportion Practice | Pg. 11 & 12 |
| 2 | Unit Rate  Unit Rate Practice | Pg. 13  Pg. 14 |
| 2 | Unit Price  The Better Buy  Unit Price Practice | Pg. 15  Pg. 16  Pg. 17 |
| 2 | 6.RP.1.3 | Scaling with Percents  Modeling Percents  Practice | Pg. 18  Pg. 19  Pg. 20 & 21 |
| 1 | Ratio Review | Lesson 16 | **(On Blackboard)**  Lesson 16 – [SV](http://scpsmath.weebly.com/uploads/2/9/1/7/29174797/ratio_unit_4th_qtr_-_ratio_review_student_guide_lesson_16.docx) and [TV](http://scpsmath.weebly.com/uploads/2/9/1/7/29174797/ratio_unit_4th_qtr_-_ratio_review_teacher_guide_lesson_16.docx) | | |
| 1 | Ratio Review | Lesson 17 | **(On Blackboard)**  Lesson 17 – [SV](http://scpsmath.weebly.com/uploads/2/9/1/7/29174797/ratio_unit_4th_qtr_-_ratio_review_student_guide_lesson_17.docx) and [TV](http://scpsmath.weebly.com/uploads/2/9/1/7/29174797/ratio_unit_4th_qtr_-_ratio_review_teacher_guide_lesson_17.docx) | | |
| 1 | Ratio Review | Lesson 23 | **(On Blackboard)**  Lesson 23 – [SV](http://scpsmath.weebly.com/uploads/2/9/1/7/29174797/ratio_unit_4th_qtr_-_ratio_review_student_guide_lesson_23.docx) and [TV](http://scpsmath.weebly.com/uploads/2/9/1/7/29174797/ratio_unit_4th_qtr_-_ratio_review_teacher_guide_lesson_23.docx) | | |
| 5 | 6.RP.1.3  6.EE.2.6  6.EE.2.7 | Assessment AND/OR  Amplify Project: Sizing up Home Runs |  |  | | |

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| **Unit 7: Covering and Surrounding** | | | | | | | |
| **Code** | **Mathematics Florida Standard** | | | | | | **SMP** |
| 6.G.1.1 | Find the area of right triangles, other triangles, special quadrilaterals, and 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. | | | | | | 1,2,5,7 |
| **Learning Goal and Scale** | | | | **Instructional Strategies & Misconceptions** | | | |
| [**610:** Solve real-world and mathematical problems involving area.](http://scpsmath.weebly.com/uploads/2/9/1/7/29174797/610.docx) | | | | * Students confuse the meaning of area and perimeter. * Students confuse the units for area and perimeter. | | | |
| **Math Practices for Unit** | | | **Unit Connections** | | **Instructional Resources** | | |
| 1. Make sense of problems and persevere in solving them. | | 5. Use appropriate tools strategically. | **5th Grade measurement and data**   * Geometric measurement: understand concepts of volume and relate volume to multiplication   **5th grade Geometry**   * Classify tow-dimensional figures into categories base on their properties * Graph points on a coordinate plane to solve real-world and mathematical problems. | | 1.1 square tile and grid paper, transparency 1.1  1.2: square tile and labsheet 1.2, transparency 1.2  1.3: transparency 1.3A, labsheet 1.3, string 18 cm per student  3.1: transparencies 3.1 C & D  3.2: transparencies 3.1 A, 3.2 A & B, Labsheet 3.2B  4.1: transparencies 4.1A & B, labsheet 4.1  4.2: transparencies 4.2 A & B, Labsheet 4.1 and 4.1A, scissors |  | |
| 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/FOURTH QUARTER** | | | | | | |
| **Unit 7: Covering and Surrounding** | | | | | | |
| **Lesson Objectives (Inv. 1)** | Students will be able to:  - Learn that the area of a figure is the number of square units needed to cover it. (1.1)  - learn that the perimeter of an object is the number of units of length needed to surround it. (1.1)  - Understand that two figures with the same area might have different perimeters. (1.2)  - Use the relationship between length and width to develop formulas for the area and perimeter of a rectangle. (1.3) | | | | **Suggested # of Days** | **7** |
| **Approx. # of Day(s)** | **MAFS** | **Lesson Objective (Instructional Resources)** | **Suggested Assignments/Assessments** | **Ancillary Materials: Teacher Edition** | | |
| 1 | 6.G.1.1 | Access background knowledge |  |  | | |
| 1 | 1.1 Designing Bumper-Car Rides | 1-6 | p. 18-22 | | |
| 1 | 1.2 Pricing Bumper-Car Rides | 7-15, 28-30, 34-35, 39-40 | p. 23-26 | | |
| 2 | 1.3 Decoding Designs | 16-27, 31-33, 36-38, 41-42 | p. 27-32 | | |
| 2 |  | Review/Assessment |  | p.33-36 | | |
| **Lesson Objective (Inv. 3 & 4)** | Students will be able to:  - Develop reasonable strategies for finding the area of a triangle. (3.1)  - Distinguish among base, height and side lengths of triangles. (3.2)  - Develop reasonable strategies for finding area and perimeter of parallelograms. (4.1) | | | | **Suggested # of Days** | **Q3: 2**  **Q4: 8** |
| **Approx. # of Day(s)** | **MAFS** | **Lesson Objective (Instructional Resources)** | **Suggested Assignments/Assessments** | **Ancillary Materials: Teacher Edition** | | |
| 1 | 6.G.1.1 | 3.1 Triangles on Grids | 1-6 | p. 65-68 | | |
| 1 | 3.2 More Triangles | 7-20,32-34 | p. 69-74 | | |
| **3RD QUARTER ENDS** | | | | | | |
| 1 | 6.G.1.1 | 4.1 Finding Measures of Parallelogram | 1-8, 32 | p. 88-92 | | |
| 2 | 4.2 Parallelograms from Triangles | 9-21, 33-35 | p. 93-96 | | |
| 2 | Time allotted for ACE questions and Mathematical Reflection and Assessment |  |  | | |
| 1.5 | Area of trapezoids: decomposing and composing: investigation 4 extension, p.67, #39 trapezoid | 39 | \*\*Calculate the areas using decomposing and composing (NOT THE DIRECTIONS FROM THE PROBLEM.) | | |
| 1.5 | Area of kite: decomposing and composing: investigation 4 extension, p.64, Kite | 29 |

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| **Unit 8: Data and Statistics** | | | | | | | |
| **Code** | **Mathematics Florida Standard** | | | | | | **SMP** |
| 6.SP.1.2 | 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. | | | | | | 4 |
| 6.SP.1.3 | 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. | | | | | | 4 |
| 6.SP.2.5 | Summarize numerical data sets in relation to their context, such as by:   1. Reporting the number of observations. 2. Describing the nature of the attribute under investigation, including how it was measured and its units of measurement. 3. Giving quantitative measures of center (median and/or mean) and variability (interquartile range and/or mean absolute deviation), as well as describing any overall pattern and any striking deviations from the overall pattern with reference to the context in which the data were gathered. 4. Relating the choice of measures of center and variability to the shape of the data distribution and the context in which the data were gathered. | | | | | | 4 |
| **Learning Goal and Scale** | | | | **Instructional Strategies & Misconceptions** | | | |
| [**608:** Develop understanding of statistical variability.](http://scpsmath.weebly.com/uploads/2/9/1/7/29174797/608.docx)  [**609:** Summarize and describe distributions.](http://scpsmath.weebly.com/uploads/2/9/1/7/29174797/609.docx) | | | | * Students have difficulty interpreting that on a line plot, the number of X’s tell the student how many times that number appears. * Students confuse definitions for mean, median and mode. * Students confuse meaning of central tendency. * Students forget to put numbers in order before finding range or median. * Students do not set up graph with equal distances from zero. * Students confuse the independent and dependent labels | | | |
| **Math Practices for Unit** | | | **Unit Connections** | | **Instructional Resources** | | |
| 1. Make sense of problems and persevere in solving them. | | 5. Use appropriate tools strategically. | **5th Grade Measurement and Data**   * Represent and interpret data   **5th Grade Number and operation – Fractions**   * Apply and extend previous understands of multiplication and division to multiply and divide fractions   **5th Grade Geometry**   * Graph points on the coordinate plane to solve real-world and mathematical problems. | | 1.1: transparencies 1.1 A&B, class list of names  1.2: Transparencies 1.2 A&B, sticky notes, centime grid paper , graph paper, scissors  Statistics packet | 2.1:Transparencies 2.1 A-C, local street map(opt)  2.2:Transparency 2.2  2.3: Transparencies 2.3A,B, large grid paper (opt), yard stick or tape measure, large grid paper, string  2.4:Transparency 2.4, large grid paper (opt), colored stick-0on dots (opt), labsheet 2.4, 2ace exercise 15 copy per student, | |
| 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 8: Data and Statistics** | | | | | | |
| **Lesson Objectives**  **(Data About Us – Inv. 1)** | The student will be able to:  - Describe data distributions and use line plots and bar graphs to display data distributions. (1.1)  - Use mode, median by ordering data and describe what is typical about a data distribution. (1.2) | | | | **Suggested # of Days** | **5** |
| **Approx. # of Day(s)** | **MAFS** | **Lesson Objective (Instructional Resources)** | **Suggested Assignments/Assessments** | **Ancillary Materials: Teacher Edition** | | |
| 2 | 6.SP.1.2  6.SP.1.3 | 1.1 Organizing and Interpreting Data | 1, 22-25 | p. 17-20 | | |
| 2 | 1.2 Useful Statistics | 2-12, 26-28 | p. 21-26 | | |
| 1 | Review/Assessment |  |  | | |
| **Lesson Objective** | [**608:** Develop understanding of statistical variability.](http://scpsmath.weebly.com/uploads/2/9/1/7/29174797/608.docx)  [**609:** Summarize and describe distributions.](http://scpsmath.weebly.com/uploads/2/9/1/7/29174797/609.docx) | | | | **Suggested # of Days** | **13**  **(11)** |
| **Approx. # of Day(s)** | **MAFS** | **Lesson Objective (Instructional Resources)** | **Suggested Assignments/Assessments** | **Ancillary Materials** | | |
| 1 | 6.SP.1.3  6.SP.2.5 | Definitions and Examples | Pg. 1 & 2 | [**Statistics Packet (on Blackboard)**](http://scpsmath.weebly.com/uploads/2/9/1/7/29174797/stats_unit_box-and-whisker-plots-packet.pdf) | | |
| 1 | 6.SP.2.5 | Definitions and Examples | Pg. 3 |
| 1 | 6.SP.1.3  6.SP.2.5 | Practice | Pg. 4 |
| 1 | 6.SP.2.5 | Practice | Pg. 5 |
| 2 | 6.SP.2.5 | Practice | Pg. 6 |
| 2 | 6.SP.1.2  6.SP.2.5 | Additional Practice | separate page |
| 10 |  | Test Taking Strategies and Review during Testing Schedule | | | | |
| 5 | 6.SP.4  6.SP.5  6.SP.5C  6.SP.5D | Review/Assessment AND/OR  Amplify Project: Hot Air Balloon Races |  |  | | |
| **Lesson Objectives**  **(Data About Us – Inv. 2)** | [**608:** Develop understanding of statistical variability.](http://scpsmath.weebly.com/uploads/2/9/1/7/29174797/608.docx)  [**609:** Summarize and describe distributions.](http://scpsmath.weebly.com/uploads/2/9/1/7/29174797/609.docx) | | | | **Suggested # of Days** | **10** |
| **Approx. # of Day(s)** | **MAFS** | **Lesson Objective (Instructional Resources)** | **Suggested Assignments/Assessments** | **Ancillary Materials** | | |
| 2 | 6.SP.1.2 | 2.1 Traveling to School/Making a Stem and Leaf Plot | 1-4 | TE: 47 - 52 | | |
| 2 | 2.2 Jumping Rope/Comparing Distributions | 5-7, 10, 13, 14 | TE: 53 - 56 | | |
| 2 | 2.3 Relating Height to Arm Span/Making and reading Coordinate graphs | 8, 11 | TE: 57 - 62 | | |
| 2 | 2.4 Relating travel Time to Distance/Using Coordinate Graphs to Find relationships | 9, 12, 15 | TE: 63 - 66 | | |
| 2 | Review/Assessment |  | TE: 67 – 72 | | |