

<b>Grade:</b> 3	<b>Unit 1</b> Numbers & Operations Review	<b>Duration:</b> 2 weeks
<b>Essential Questions:</b> <ul style="list-style-type: none"> <li>• How can numbers be expressed, ordered, and compared?</li> <li>• How are operations of addition and subtraction related?</li> <li>• How can place value help me add and subtract larger numbers?</li> <li>• How can fractions be used to represents numbers and their parts?</li> <li>• How do I use algebraic expressions to analyze or solve problems?</li> </ul>		<b>Real World Problems/Applications:</b> <ul style="list-style-type: none"> <li>• Shopping, sports, banking, games, cooking, medical, music</li> <li>• Reasonable answers</li> <li>• Increase math accuracy</li> </ul>
<b>Standards/Eligible Content (Skills):</b> <ul style="list-style-type: none"> <li>• CC.2.1.3.B.1 Apply place-value understanding and properties of operations to perform multi-digit arithmetic.</li> <li>• M03.A-T.1.1.1 Round two- and three-digit whole numbers to the nearest ten or hundred, respectively.</li> <li>• M03.A-T.1.1.2 Add two- and three-digit whole numbers (limit sums from 100 through 1,000) and/or subtract two- and three-digit numbers from three-digit whole numbers.</li> <li>• M03.A-T.1.1.4 Order a set of whole numbers from least to greatest or greatest to least (up through 9,999, and limit sets to no more than four numbers).</li> <li>• CC.2.1.3.C.1Explore and develop an understanding of fractions as numbers.</li> </ul>		<b>Standards Reinforced:</b> <ul style="list-style-type: none"> <li>• CC.2.1.1.B.3 Use place-value understanding and properties of operations to add and subtract within 1,000.</li> <li>• M03.A-F.1.1.5 Compare two fractions with the same denominator...</li> </ul>
<b>Critical Thinking/Reasoning Skills:</b> <ul style="list-style-type: none"> <li>• Participate in mathematical discussions providing evidence of answers.</li> <li>• Self-check through questionings and other methods.</li> </ul>		
<b>Reading/Writing/Listening/Speaking Skills:</b> <ul style="list-style-type: none"> <li>• Math journals</li> <li>• Number talk (utilizing vocabulary, explain process)</li> </ul>		
<b>Fluency:</b>		

- Add/subtract within 1,000
- Rounding to the nearest tens & hundreds
- Identify and create common fractions

**Vocabulary:**

- Denominator/numerator
- Estimate/round
- Fraction (1, 2, 3, 4, 6, 8)
- Addend
- Equation/number sentence/algebraic expression
- Even/odd
- Expanded form/word form/standard form
- Place value up to thousands
- Sum/difference
- Fact family
- Compose/decompose
- Less than/greater than/equal to
- Communitive property

**Technology/Manipulatives/Resources:**

- Websites: Go Math, First in Math, Numberock, Math Playground, Prodigy, Math Nook, Timez Attack, Shepard Software, Khan Academy, SAS Portal
- Counters, number lines, base ten blocks, place value charts, pattern blocks, fraction strips/circles, graph papers, deck of cards, dice, clothes line/pin for number lines

**Authentic Performance Assessments:**

- Add/subtract computation test
- SAS Portal-assessment creator
- When given four numbers cards students will: place numbers in order by least, greatest, round, different forms, add, subtract etc. (explain)
- Students will create and model basic fractions (poster, book, etc.)
- <http://www.insidemathematics.org/assets/common-core-math-tasks/a%20question%20of%20numbers.pdf>
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<b>Grade:</b> 3	<b>Unit 2</b> Multiplication & Division with Factors of 2, 3 ,4, 5, and 10	<b>Duration:</b> 5 weeks
<b>Essential Questions:</b> <ul style="list-style-type: none"> <li>• What does multiplication mean?</li> <li>• What does division mean?</li> <li>• What is the importance of patterns in learning multiplication and division?</li> <li>• What strategies can be used to learn multiplication and division facts?</li> </ul>	<b>Real World Problems/Applications:</b> <ul style="list-style-type: none"> <li>• Party planning, purchasing multiples, skip counting</li> <li>• Construction, farming, traveling, chef, nurse,</li> </ul>	
<b>Standards/Eligible Content (Skills):</b> <ul style="list-style-type: none"> <li>• CC.2.2.3.A.1 Represent and solve problems involving multiplication and division.</li> <li>• CC.2.2.3.A.2 Understand properties of multiplication and the relationship between multiplication and division.</li> <li>• CC.2.2.3.A.3 Demonstrate multiplication and division fluency.</li> </ul>	<b>Standards Reinforced:</b> <ul style="list-style-type: none"> <li>• CC.2.2.2.A.3 Work with equal groups of objects to gain foundations for multiplication.</li> </ul>	
<b>Critical Thinking/Reasoning Skills:</b> <ul style="list-style-type: none"> <li>• Explain the meaning of the problem and different ways to show the product &amp; quotient.</li> <li>• Construct arguments using concrete referents, such as objects, pictures, and drawings.</li> <li>• Students will identify missing factors within algebraic expressions.</li> <li>• Students will be able to apply the fact family to solve for an unknown.</li> </ul>		
<b>Reading/Writing/Listening/Speaking Skills:</b> <ul style="list-style-type: none"> <li>• Math journal (Example: Given the factors 2, and 4 write a word problem and solve for the product. Then write the fact family that fits the word problem.)</li> <li>• Oral explanation</li> </ul>		
<b>Fluency:</b> <ul style="list-style-type: none"> <li>• Multiply/divide within 100.</li> </ul>		
<b>Vocabulary:</b> <ul style="list-style-type: none"> <li>• Multiply/multiplication/times</li> <li>• Divide/division/divisor/dividend</li> </ul>		

- Repeated addition
- Equal groups/number of groups/size of groups
- Equations/expression
- Skip counting
- Array/row/column
- Product/factor/quotient

**Technology/Manipulatives/Resources:**

- Websites: Go Math, First in Math, Numberock, Math Playground, Prodigy, Math Nook, Timez Attack, Shepard Software, Khan Academy, SAS Portal, insidemathematics.org, school house rock multiplication
- White board, markers, counters, cubes, dice, number cards, flash cards, number line, clay, multiplication chart
- <https://drive.google.com/file/d/0B5dsPzSIPOCeTIZORVBzM0dUN2s/view> (fun activity to practice facts)

**Authentic Performance Assessments:**

- SAS Portal: assessment creator
- Create an urban, or suburban, or a rural community using arrays-multiplication/division/fact families (for the windows).
- <http://www.elementaryamc.com/2013/01/multiplication-city-art.html>
- <https://www.rcampus.com/rubricshowc.cfm?sp=yes&code=BXXW453>

<b>Grade:</b> 3	<b>Unit 4</b> Problem Solving with Mass, Time, Capacity, Length and Money	<b>Duration:</b> 6 weeks
<p>Essential Questions:</p> <ul style="list-style-type: none"> <li>• How can I use a ruler to measure objects?</li> <li>• How do I give change?</li> <li>• How can we use money?</li> <li>• Why do we measure?</li> <li>• How can telling tell help us in our daily lives?</li> </ul>	<p>Real World Problems/Applications:</p> <ul style="list-style-type: none"> <li>• Banking, budgeting, cooking, appointments, schedules, sports, classes, restaurants, shopping</li> </ul>	
<p>Standards/Eligible Content (Skills):</p> <p>CC.2.4.3.A.2 Tell and write time to the nearest minute and solve problems by calculating time intervals.</p> <p>M03.D-M.1.1.1 Tell, show, and/or write time (analog) to the nearest minute.</p> <p>M03.D-M.1.1.2 Calculate elapsed time to the minute in a given situation (total elapsed time limited to 60 minutes or less).</p> <p>CC.2.4.3.A.1 Solve problems involving measurement and estimation of temperature, liquid volume, mass or length.</p> <p>M03.D-M.1.2.1 Measure and estimate liquid volumes and masses of objects using standard units (cups [c], pints [pt], quarts [qt], gallons [gal], ounces [oz.], and pounds [lb]) and metric units (liters [l], grams [g], and kilograms [kg]).</p> <p>M03.D-M.1.2.2 Add, subtract, multiply, and divide to solve one step word problems involving masses or liquid volumes that are given in the same units.</p> <p>M03.D-M.1.2.3 Use a ruler to measure lengths to the nearest quarter inch or centimeter.</p> <p>CC.2.4.3.A.3</p>	<p>Standards Reinforced:</p> <p>CC2.4.2.A.2 Tell and write time to the nearest five minutes using analog/digital clocks.</p> <p>CC2.4.2.A.1 Measure and estimate lengths in standard units using appropriate tools.</p> <p>CC.2.4.2.A.3 Solve problems and make change using coins and paper currency with appropriate symbols.</p>	

<p>Solve problems and make change involving money using a combination of coins and bills.</p> <p>M03.D-M.1.3.1 Compare total values of combinations of coins (penny, nickel, dime, and quarter) and/or dollar bills less than \$5.00.</p> <p>M03.D-M.1.3.2 Make change for an amount up to \$5.00 with no more than \$2.00 change given (penny, nickel, dime, quarter, and dollar).</p> <p>M03.D-M.1.3.3 Round amounts of money to the nearest dollar.</p>	
<p>Critical Thinking/Reasoning Skills:</p> <ul style="list-style-type: none"> <li>• Determine tools appropriate for solving a measuring problem.</li> <li>• Make a reasonable measurement estimate.</li> </ul>	
<p>Reading/Writing/Listening/Speaking Skills:</p> <ul style="list-style-type: none"> <li>• Use clear and precise language within math talks</li> <li>• Explain the process for measuring accurately</li> <li>• Math journal</li> <li>• Choose the appropriate measuring label</li> <li>• Compare/contrast different units of measurement (Venn diagram)</li> </ul>	
<p>Fluency:</p> <ul style="list-style-type: none"> <li>• Telling time to the hour, half hour and nearest minute.</li> <li>• Measurement of length to the nearest <math>\frac{1}{4}</math> in. and centimeter.</li> <li>• Rounding money to the nearest dollar.</li> <li>• Compare total value of coins.</li> <li>• Solve problems and make change up to \$5.00.</li> </ul>	
<p>Vocabulary:</p> <ul style="list-style-type: none"> <li>• Inch/half inch/ quarter inch</li> <li>• Ruler</li> <li>• Centimeter/meter</li> <li>• Make change</li> </ul>	

- Round
- Elapsed time
- Analog/digital
- A.M./P.M.
- Quarter to, half past, half hour, quarter after, quarter till
- Name of coins up to half dollar
- Dollar sign/cent sign/ decimal point
- Capacity
- Gallon, quart, pint, cups,
- Liter, milliliter
- Gram/kilogram
- Ounces/pound
- mass

#### Technology/Manipulatives/Resources:

- clocks, money, rulers, scales, weights, measuring cups, liquid volume examples, money/clock games, number line, string, clothes pin, math lit books, advertisements, menus
- Websites: Go Math, First in Math, Numberock, Math Playground, Prodigy, Math Nook, Timez Attack, Shepard Software, Khan Academy, SAS Portal

#### Authentic Performance Assessments:

- Using an ad/class store/restaurant to create order, add total, and make change.
- Connect time to tv show/movie/game: what time did it start, end, elapsed time.
- Given various objects and measure them.
- Build/draw an object to specific dimensions.
- [https://www.achieve.org/files/NYCDOEG3MathCookieDough\\_Final.SW\\_.pdf](https://www.achieve.org/files/NYCDOEG3MathCookieDough_Final.SW_.pdf)
- <http://www.insidemathematics.org/assets/common-core-math-tasks/time%20to%20get%20clean.pdf>
- [https://www.youtube.com/watch?v=E4UC\\_StFhAk](https://www.youtube.com/watch?v=E4UC_StFhAk) (liquid capacity little story)
- <https://www.youtube.com/watch?v=PT7qaOyEjAA> (Gallon Land)

<b>Grade:</b> 3	<b>Unit 4</b> Multiplication and Division with Factors 6, 7, 8, and 9.	<b>Duration:</b> 2 weeks
<b>Essential Questions:</b> <ul style="list-style-type: none"> <li>• What strategies can be used to learn multiplication and division facts?</li> <li>• Why is it important to know the higher factors in multiplication/division?</li> <li>• How can I use an array model to explain multiplication and divisions?</li> </ul>		<b>Real World Problems/Applications:</b> <ul style="list-style-type: none"> <li>• Party planning, purchasing multiplies, skip counting</li> <li>• Construction, farming, traveling, chef, nurse,</li> </ul>
<b>Standards/Eligible Content (Skills):</b> <ul style="list-style-type: none"> <li>• CC.2.2.3.A.1 Represent and solve problems involving multiplication and division.</li> <li>• CC.2.2.3.A.2 Understand properties of multiplication and the relationship between multiplication and division.</li> <li>• CC.2.2.3.A.3 Demonstrate multiplication and division fluency.</li> </ul>		<b>Standards Reinforced:</b> CC.2.2.2.A.3 Work with equal groups of objects to gain foundations for multiplication.
<b>Critical Thinking/Reasoning Skills:</b> <ul style="list-style-type: none"> <li>• Explain the meaning of the problem and different ways to show the product &amp; quotient.</li> <li>• Construct arguments using concrete referents, such as objects, pictures, and drawings.</li> </ul>		
<b>Reading/Writing/Listening/Speaking Skills:</b> <ul style="list-style-type: none"> <li>• Math journal</li> <li>• Oral explanation</li> <li>• Explain how to use a strategy to solve a multiplication/division problem.</li> <li>• Create (word) problems for classmates to solve.</li> <li>• Explain how multiplication/division is related and show an example.</li> </ul>		
<b>Fluency:</b> <ul style="list-style-type: none"> <li>• Multiply/divide within 100.</li> </ul>		
<b>Vocabulary:</b> <ul style="list-style-type: none"> <li>• Multiply/multiplication/times</li> </ul>		

- Divide/division/divisor/dividend
- Repeated addition
- Equal groups/number of groups/size of groups
- Equations/expression
- Skip counting
- Array/row/column
- Product/factor/quotient

Technology/Manipulatives/Resources:

- Websites: Go Math, First in Math, Numberock, Math Playground, Prodigy, Math Nook, Timez Attack, Shepard Software, Khan Academy, SAS Portal, insidemathematics.org, school house rock multiplication
- White board, markers, counters, cubes, dice, number cards, flash cards, number line, clay, multiplication chart

Authentic Performance Assessments:

- SAS Portal: assessment creator
- Poster: give students a multiplication/division problem and have them show it in multiple ways.
- Create arrays on Christmas presents and then place the present under the correct tree (has the correct equation) (put on a large piece of paper, bulletin board etc...).
- <http://ccsmathactivities.com/wp-content/uploads/2015/10/G3-Baking-Cookies.pdf>

<b>Grade:</b> 3	<b>Unit 5</b> Multiplication with Area/Perimeter	<b>Duration:</b> 3 weeks
<b>Essential Questions:</b> <ul style="list-style-type: none"> <li>• How do you find the perimeter of an object?</li> <li>• How are perimeter and area related?</li> <li>• How do you use multiplication to determine area?</li> <li>• How do you use division to find an unknown side when given the area?</li> <li>• How does an array correlate with the concept area?</li> </ul>		<b>Real World Problems/Applications:</b> <ul style="list-style-type: none"> <li>• Gardening, carpet, fence, swimming pool, flooring, paint, wall paper, farming, decorating, art, military</li> </ul>
<b>Standards/Eligible Content (Skills):</b> CC.2.4.3.A.5 Determine the area of a rectangle and apply the concepts to multiplication and to addition. CC.2.4.3.A.6 Solve problems involving perimeters of polygons and distinguish between linear and area measures. M03.D-M.3.1.1 Measure areas by counting unit squares (square cm, square m, square in., square ft., and non-standard square units). M03.D-M.3.1.2 Multiply side lengths to find areas of rectangles with whole-number side lengths in the context of solving real-world and mathematical problems, and represent whole-number products as rectangular areas in mathematical reasoning.		<b>Standards Reinforced:</b> <ul style="list-style-type: none"> <li>• This is being introduced in third grade.</li> </ul>
<b>Critical Thinking/Reasoning Skills:</b> <ul style="list-style-type: none"> <li>• Being able to explain the process of determining the perimeter and area.</li> <li>• Being able to find an unknown given area or perimeter.</li> <li>• Connect algebraic expression when solving for an unknown area or perimeter</li> </ul>		
<b>Reading/Writing/Listening/Speaking Skills:</b>		

- Math Journal
- Orally explain the processes using specific vocabulary
- Draw and design shapes for specific areas and perimeters (i.e. design a swimming pool...)

Fluency:

- Know the formulas for area and perimeter
- Multiplication strategies
- Apply knowledge of the array model to the concept of area and perimeter

Vocabulary:

- Perimeter and Area
- Array
- Square units (inches, centimeters)
- Measure
- Formula
- Algebraic expression
- Surface Space
- Outside Perimeter
- Length
- Width

Technology/Manipulatives/Resources:

- Websites: Go Math, First in Math, Numberock, Math Playground, Prodigy, Math Nook, Timez Attack, Shepard Software, Khan Academy, SAS Portal, insidemathematics.org, school house rock multiplication
- White board, markers, graph paper, rulers, cubes, pattern blocks, counters, yard stick, misc. real -world classroom objects, geo-boards, popsicle sticks
- DOTS Game

Authentic Performance Assessments:

- SAS Portal Assessment Creator
- [http://schools.nyc.gov/NR/rdonlyres/CD824F33-84DA-4D5F-8D4A-B450EA8C8000/0/NYCDOE\\_G3\\_Math\\_CityFarmers\\_Final.pdf](http://schools.nyc.gov/NR/rdonlyres/CD824F33-84DA-4D5F-8D4A-B450EA8C8000/0/NYCDOE_G3_Math_CityFarmers_Final.pdf)
- Design a classroom garden for the school or within a box for someone (students have roles and etc...)
- <https://www.weteachnyc.org/resources/resource/grade-3-math-peters-garden/>

<b>Grade:</b> 3	<b>Unit 6</b> Fractions and Numbers on the Number Line	<b>Duration:</b> 5 weeks
<p>Essential Questions:</p> <ul style="list-style-type: none"> <li>• How can fractions be used to represent numbers and their parts both on and off a number line.</li> <li>• How are fractions used within our daily lives?</li> <li>• What is a fraction?</li> <li>• What is a fraction compared to a whole number?</li> </ul>	<p>Real World Problems/Applications:</p> <ul style="list-style-type: none"> <li>• Sewing, construction, banking, telling time/schedule, shopping, couponing, cooking, music, art, sports, social skills such as sharing, traveling, fire fighter</li> </ul>	
<p>Standards/Eligible Content (Skills):</p> <p>CC.2.1.3.C.1 Explore and develop an understanding of fractions as numbers.</p> <p>CC.2.3.3.A.2 Use the understanding of fractions to partition shapes into parts with equal areas and express the area of each part as a unit fraction of the whole</p> <p>M03.A-F.1.1.2 Represent fractions on a number line (limit denominators to 2, 3, 4, 5, and 8; limit numerators to whole numbers less than the denominator; no simplification necessary)</p> <p><b>Intro:</b> M04.A-F.1.1.1 Recognize and generate equivalent fractions. (Is on the PSSA however, on progressions it is only introduced in third.)</p>	<p>Standards Reinforced:</p> <p>M03.A-F.1.1.2 Represent fractions on a number line (limit denominators to 2, 3, 4, 5, and 8; limit numerators to whole numbers less than the denominator; no simplification necessary)</p>	
<p>Critical Thinking/Reasoning Skills:</p> <ul style="list-style-type: none"> <li>• Apply knowledge of division to better understand the concept of fractions.</li> <li>• Apply fractions to real-life situations such as sharing a cake at a party.</li> <li>• Being able connect equal parts and that the equal parts do not have to be on the same shape but can be the same amount.</li> <li>• Create models of given fractions.</li> </ul>		
<p>Reading/Writing/Listening/Speaking Skills:</p> <ul style="list-style-type: none"> <li>• Math Journal (Example: draw and label a number line with fractions from 0 to the whole 1, and be able to locate a given fraction on the number line. Be able to compare two given fractions on a number line and explain.)</li> </ul>		
<p>Fluency:</p>		

- Identify a whole, halves, thirds, fourths, sixths and eighths
- Writing a fraction
- Compare fractions with less than, greater than and equal too

Vocabulary:

- Fraction
- Equal parts
- Unit fraction
- Numerator
- Denominator
- Equivalent fractions
- Parts of a whole
- Number line
- Greater than
- Less than
- Equal too
- Halves
- Fourths
- Thirds
- Sixths
- Eighths

Technology/Manipulatives/Resources:

- Websites: Go Math, First in Math, Numberock, Math Playground, Prodigy, Math Nook, Timez Attack, Shepard Software, Khan Academy, SAS Portal, insidemathematics.org
- Fraction strips, graph paper, number lines, string and clothes pins, Go Math Fraction Kits, magnetic fraction parts, real-world objects teacher decision, various fraction games, domino fractions, candy and other foods

Authentic Performance Assessments:

- SAS Portal Assessment Creator
- Pixel People Fraction Activity (rubric saved separately)

Grade: 3	Unit 7 Collecting and Displaying Data	Duration: 3 weeks
<p>Essential Questions:</p> <ul style="list-style-type: none"> <li>• How does collecting data help us solve problems or make decisions in our world?</li> <li>• How do we obtain useful information from a set of data?</li> <li>• Why is graphing and understanding data useful within everyday living?</li> </ul>	<p>Real World Problems/Applications:</p> <ul style="list-style-type: none"> <li>• Meteorologist/Weather, Business Inventories, Sports, Engineers, Computers, Voting System, Libraries, School/College, Medical (Human/Pets)</li> </ul>	
<p>Standards/Eligible Content (Skills):</p> <p>CC.2.4.3.A.4 Represent and interpret data using tally charts, tables, pictographs, line plots and bar graphs.</p> <p>M03.D-M.2.1 Organize, display and answer questions based on data</p> <p>M03.D-M.2.1.1 Complete a scaled pictograph and a scaled bar graph to represent a data set with several categories (scales limited to 1, 2, 5, and 10).</p> <p>M03.D-M.2.1.2 Solve one and two step problems using information to interpret data presented in scaled pictographs and scaled bar graphs (scales limited to 1, 2, 5, and 10).</p> <p>M03.D-M.2.1.3 Generate measurement data by measuring lengths using rulers marked with <math>\frac{1}{2}</math>, <math>\frac{1}{4}</math> of an inch. Display the data by making a line plot where the horizontal scale is marked in appropriate units- whole number, halves or quarters.</p> <p>M03-D-M.2.1.4 Translate information one from type of display to another. Limit to pictograph, tally chart, bar graph and tables.</p> <p>M03.D-M.2.1.1 Make a line plot to display a data set of measurements in fractions of a unit (e.g. intervals of half, one-fourth or one-eighth).</p> <p>M04.D-M.2.1.3 Translate information from one type of display to another (a table, chart, bar graph or pictograph).</p>	<p>Standards Reinforced:</p> <p>CC.2..4.2.A.4 Represent and interpret data using line plots, pictographs and bar graphs.</p>	
<p>Critical Thinking/Reasoning Skills:</p> <ul style="list-style-type: none"> <li>• What predictions can be made by looking at a set of data?</li> </ul>		

- Compare and contrast information
- Infer reasonable conclusions based upon patterns seen within types of graphs

Reading/Writing/Listening/Speaking Skills:

- Math Journals
- Oral/Written discussion and interpretation of the data
- Being able to correctly choose the given data to a graph
- Make connections utilizing children's literature
- Create bar graphs using students such as a birthday graph etc...

Fluency:

- Creating a pictograph, bar graph, and line plot
- Applying knowledge of scale to correctly identify a given data
- Creating and understanding tally marks

Vocabulary:

- Tallies
- Survey
- Compare/contrast
- Data
- Frequency
- Table
- Scale
- Label
- Key
- Title
- Line plot
- Bar graph
- Pictograph
- Predict
- Conclusion
- Altogether
- Difference
- Total of survey

- Bars
- Lines
- Spacing
- Question

Technology/Manipulatives/Resources:

- Websites: Go Math, First in Math, Numberock, Math Playground, Prodigy, Math Nook, Timez Attack, Shepard Software, Khan Academy, SAS Portal, insidemathematics.org, school house rock multiplication, nces.ed.gov/nceskids/creategraph, [www.rapidtables.com](http://www.rapidtables.com)
- White board, markers, graph paper, rulers, post-it-notes, chart paper, construction paper, various materials from the real world (i.e. plant a seed and graph its growth)

Authentic Performance Assessments:

- SAS Portal Assessment Creator
- Create a survey, collect the data and generate each type of graph using their data, compare and contrast their graphs, write conclusions, recommend the best graph for the data they collected and etc...
- Parking Lot Performance task from <http://www.insidemathematics.org/assets/common-core-math-tasks/parking%20cars.pdf>

<b>Grade:</b> 3	<b>Unit 8</b> Word Problems with Geometry and Measurement	<b>Duration:</b> 5 weeks
<b>Essential Questions:</b> <ul style="list-style-type: none"> <li>• Why do we measure?</li> <li>• How can geometric shapes help solve real world problems?</li> <li>• How can I use measurement tools to solve real world problems?</li> <li>• How is money and time related to measurement?</li> </ul>	<b>Real World Problems/Applications:</b> <ul style="list-style-type: none"> <li>• Construction, Architecture, Medicine, Engineer</li> </ul>	
<b>Standards/Eligible Content (Skills):</b> CC.2.2.4.3.A.1 Solve problems involving measurement and estimation of temperature, liquid volume, mass, and length. CC.2.4.3.A.2 Tell and write time to the nearest minute and solve problems by calculating time intervals. CC.2.4.3.A.3 Solve problems and make change involving money using a combination of coins and bills. CC.2.4.3.A.5 Determine the area of a rectangle and apply the concept to multiplication and addition. CC.2.4.3.A.6 Solve problems involving perimeter of polygons and distinguish between linear and area measures.	<b>Standards Reinforced:</b> CC.2.4.2.A.2 Tell and write time to the nearest five minutes using analog/digital clocks. CC.2.4.2.A.1 Measure and estimate lengths in standard units using appropriate tools. CC.2.4.2.A.3 Solve problems and make change using coins and paper currency with appropriate symbols.	
<b>Critical Thinking/Reasoning Skills:</b> <ul style="list-style-type: none"> <li>• Explain the meaning of problems and ways to solve it.</li> <li>• Check their thinking by asking themselves does this make sense?</li> </ul>		
<b>Reading/Writing/Listening/Speaking Skills:</b> <ul style="list-style-type: none"> <li>• Picking out key vocabulary words to determine operations.</li> <li>• Picking out and applying the appropriate labels within a problem.</li> <li>• Writing/speaking an explanation on how to solve the problem.</li> </ul>		
<b>Fluency:</b> <ul style="list-style-type: none"> <li>• Explain what a quadrilateral is and how to classify them.</li> </ul>		
<b>Vocabulary:</b> <ul style="list-style-type: none"> <li>• Geometry</li> </ul>		

- Polygons/quadrilateral/rhombus/trapezoid/square/rectangle
- Lines/parallel/perpendicular/intersecting
- Angles/acute/obtuse/right
- Attribute
- Classify

Technology/Manipulatives/Resources:

- clocks, money, rulers, scales, weights, measuring cups, liquid volume examples, money/clock games, number line, string, clothes pin, math lit books, advertisements, menus
- Websites: Go Math, First in Math, Numberock, Math Playground, Prodigy, Math Nook, Timez Attack, Shepard Software, Khan Academy, SAS Portal, Iwl.com,

Authentic Performance Assessments:

- Create a drawing using different quadrilaterals (label them).
- <http://www.insidemathematics.org/assets/common-core-math-tasks/which%20shape.pdf>

<b>Grade:</b> 3	<b>Unit 9</b> Getting Ready for 4th Grade	<b>Duration:</b> 4-5 weeks
<b>Essential Questions:</b> <ul style="list-style-type: none"> <li>• How does having a foundation of place value help us determine place value of larger numbers?</li> <li>• How does memorizing multiplication facts help me solve real world problems?</li> <li>• How will being able to simple division with remainders help prepare me for long division?</li> <li>• How does having a solid understanding of parts and wholes helps determine equivalent and mixed fractions?</li> </ul>	<b>Real World Problems/Applications:</b> <ul style="list-style-type: none"> <li>• Preparing for 4<sup>th</sup> grade math.</li> </ul>	
<b>Standards/Eligible Content (Skills):</b> <ul style="list-style-type: none"> <li>• CC.2.1.4.B.1 Apply place value concepts to show an understanding of multi-digit whole numbers.</li> <li>• CC.2.2.4.A.1 Represent and solve problems involving the four operations.</li> <li>• CC.2.1.4.C.1 Extend the understanding of fractions to show equivalence and ordering.</li> </ul>	<b>Standards Reinforced:</b> <ul style="list-style-type: none"> <li>• CC.2.1.3.B.1 Apply place value understanding and properties of operations to perform multi-digit arithmetic.</li> <li>• CC.2.2.3.A.2 Understand properties of multiplication and the relationship between multiplication and division.</li> <li>• CC.2.3.3.A.2 Use the understanding of fractions to partition shapes into parts with equal areas and express the area of each part as a unit fraction of the whole.</li> </ul>	
<b>Critical Thinking/Reasoning Skills:</b> <ul style="list-style-type: none"> <li>• Recognize that a number represents a specific quantity.</li> <li>• Extend your understanding from whole numbers to their work with fractions.</li> <li>• Use properties of operations to explain calculations.</li> </ul>		
<b>Reading/Writing/Listening/Speaking Skills:</b> <ul style="list-style-type: none"> <li>• Use clear and precise language in their discussions with others and in their own reasoning. "Can I solve the problem in a different way?"</li> </ul>		
<b>Fluency:</b> <ul style="list-style-type: none"> <li>• Place value up to ten thousand.</li> <li>• Multiple and divide within 100.</li> </ul>		
<b>Vocabulary:</b>		

- Place value/ten thousand/hundred thousand/million
- Multiple
- Mixed number
- Remainder
- Radical symbol/long division symbol/the house
- Equivalent
- Quotient
- Dividend
- Divisor
- Factor
- Product
- Equation
- Number sentence
- Expression
- Unit

Technology/Manipulatives/Resources:

- Websites: Go Math, First in Math, Numberock, Math Playground, Prodigy, Math Nook, Timez Attack, Shepard Software, Khan Academy, SAS Portal
- Counters, number lines, base ten blocks, place value charts, pattern blocks, fraction strips/circles, graph papers, deck of cards, dice, clothes line/pin for number lines, white board, markers, counters, cubes, dice, number cards, flash cards, clay multiplication chart, fraction strips, graph paper, number lines, string and clothes pins, Go Math Fraction Kits, magnetic fraction parts, real-world objects teacher decision, various fraction games, domino fractions, candy and other foods

Authentic Performance Assessments:

- Create a diorama with a house, barn, and build a garden with the array  $6 \times 10$ -  $\frac{1}{2}$  corn,  $\frac{1}{4}$  wheat,  $\frac{1}{4}$  beans (label the arrays for the corn, wheat, and beans). Explain/ write how you created your diorama.
- Create a calendar with a list of daily chores the students must complete. Parents will sign off that they did it. For every chore completed the students will get a certain amount of money. Students will add the money they receive and subtract expenses.