

<b>Grade, Subject/Course:</b> 3rd Grade, Mathematics	
<b>Unit:</b> Module 1: Properties of Multiplication and Division and Solving Problems with Units of 2-5 and 10	<u>  X  </u> <b>Essential</b> <u>      </u> <b>Important</b> <u>      </u> <b>Compact</b>
<b>Big Idea:</b> The same number sentence (e.g. $12-4=8$ ) can be associated with different concrete or real-world situations and different number sentences can be associated with the same concrete or real world situations. Basic facts and algorithms for operations with rational numbers use notions of equivalence to transform calculations into simpler ones.	<b>Standards of Mathematical Practice:</b> MP1: Make sense of problems and persevere in solving them. MP2: Reason abstractly and quantitatively. MP3: Construct viable arguments and critique the reasoning of others. MP 4: Model with mathematics. MP 7: Look for and make use of structure.
<b>PA Core Content Standards/Anchors (or National Standards):</b> CC.2.2.3.A.1 Represent and solve problems involving multiplication and division. CC.2.2.3.A.2 Understand properties of multiplication and the relationship between multiplication and division. CC.2.2.3.A.3 Demonstrate multiplication and division fluency. CC.2.2.3.A.4 Solve problems involving the four operations, and identify and explain patterns in arithmetic. CC.2.1.3.B.1 Apply place-value understanding and properties of operations to perform multi-digit arithmetic.	
<b>Essential Questions:</b> How does composing and decomposing numbers allow us to make sense of and use the world of numbers? How does the relationship between place value and properties of operations help us to solve mathematical problems? How do patterns make sense of the values of numbers?	<b>Understandings:</b> Students will know that... <ul style="list-style-type: none"> <li>• Properties of operations using whole numbers apply to certain operations, but not others. (ex – The commutative property applies to addition and multiplication, but not subtraction and division.)</li> <li>• There is a relationship between multiplication and division.</li> <li>• Problems require the use of different operations in order to be solved.</li> </ul>
<b>Knowledge:</b> Multiply Divide Regroup Round Estimate Distribute Array Parentheses Equal Groups	<b>Do/Skills:</b> Students will be able to... <ul style="list-style-type: none"> <li>• <b>M03.A-T.1.1.3</b> Multiply one-digit whole numbers by two-digit multiples of 10 (from 10 through 90).</li> <li>• <b>M03.B-O.1.1.1</b> Interpret and/or describe products of whole numbers (up to and including <math>10 \times 10</math>).</li> <li>• <b>M03.B-O.1.1.2</b> Interpret and/or describe whole-number quotients of whole numbers (limit dividends through 50, and limit divisors and quotients through 10).</li> <li>• <b>M03.B-O.1.2.1</b> Use multiplication (up to and including <math>10 \times 10</math>) and/or division (limit dividends through 50, and limit divisors and quotients</li> </ul>

through 10) to solve word problems in situations involving equal groups, arrays, and/or measurement quantities).

- **M03.B-O.1.2.2** Determine the unknown whole number in a multiplication (up to and including  $10 \times 10$ ) and/or division (limit dividends through 50, and limit divisors and quotients through 10) equation relating three whole numbers.
- **M03.B-O.2.1.1 & M03.B-O.2.1.2** Apply the commutative and associative properties of multiplication (not identification or definition of the property).
- **M03.B-O.2.2.1** Interpret and/or model division as a multiplication equation with an unknown factor. (e.g. – Find  $32 \div 8$  by solving  $8 \times ? = 32$ )
- **M03.B-O.3.1.1 & M03.B-O.3.1.2** Represent and solve two-step word problems using the four operations using equations with a symbol standing for the unknown quantity. Limit to problems with whole numbers and having whole number answers.
- **M03.B-O.3.1.3** Assess the reasonableness of answers. Limit problems posed with whole numbers and having whole number answers.
- **M03.B-O.3.1.4** Solve 2-step equations using order of operations (equation is explicitly stated with no grouping symbols).
- **M03.B-O.3.1.5** Identify arithmetic patterns (including patterns in the addition table or multiplication table) and/or explain them using properties of operations.
- **M03.B-O.3.1.6** Create or match a story to a given combination of symbols (+, -, X,  $\div$ , <, >, =) and numbers.
- **M03.B-O.3.1.7** Identify the missing symbol (+, -, X,  $\div$ , <, >, =) that makes a number sentence true.

**Vocabulary:**

Commutative Property	ones
Associative Property	tens
Identity Property	hundreds
Product	thousands
Factor	place
Quotient	value
Divisor	array
Dividend	
Equation	

**Core Resources:**

Eureka Math (Great Minds)

<p><b><u>Common Assessment(s):</u></b>  G3M1 Topic A/B Quiz  G3M1 Topic C Quiz  G3M1 Topic D/E Quiz  G3M1 Mid-Module Assessment  G3M1 End-of-Module Assessment</p>	<p><b><u>Supplemental Resources:</u></b>   <b>Zearn</b> (site that reinforces Eureka Math)</p>
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<p><b><u>Grade, Subject/Course:</u></b> 3rd Grade, Mathematics</p>	
<p><b><u>Unit:</u></b> Module 2: Place Value and Problem Solving with Units of Measure</p>	<p><u>  X  </u> Essential      <u>      </u> Important      <u>      </u> Compact</p>
<p><b><u>Big Idea:</u></b>  Some attributes of objects are measurable and can be quantified using unit amounts.  Measurement attributes can be quantified and estimated using customary and non-customary units of measure.</p>	<p><b><u>Standards of Mathematical Practice:</u></b>  MP2: Reason abstractly or quantitatively.  MP4: Model with mathematics.  MP6: Attend to precision.  MP7: Look for and make use of structure.</p>
<p><b><u>PA Core Content Standards/Anchors (or National Standards):</u></b>  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.1 Solve problems involving measurement and estimation of liquid volume and mass.  CC.2.1.3.B.1 Apply place value understanding and properties of operations to perform multi-digit arithmetic.</p>	
<p><b><u>Essential Questions:</u></b>  What is the purpose of measuring time?  How does understanding the meaning of time help us to make sense of measuring time?  How are units of measurement used to describe attributes of objects?  How does what we measure influence how we measure?  How does the relationship between place value and properties of operations help us to solve mathematical problems?</p>	<p><b><u>Understandings:</u></b>  Students will know that...</p> <ul style="list-style-type: none"> <li>● A given time of day can be represented in more than one way.</li> <li>● Time duration for events can be compared using ideas such as longer, shorter, and equal.</li> <li>● Time in hours and minutes can be added and subtracted where 1 hour is regrouped as 60 minutes.</li> <li>● Measurement involves a selected attribute of an object (mass, capacity) and a comparison of the object being measured against a unit of the same attribute.</li> <li>● Rounding and estimation are useful skills to determine reasonableness of answers.</li> <li>● The digits of a number have specific values depending on their place in a number.</li> <li>● Properties of operations using whole numbers apply to certain operations, but not others.</li> <li>● Place value and properties of whole numbers help us to add, subtract, and multiply multi-digit numbers.</li> </ul>

<p><b><u>Knowledge:</u></b>  Elapsed time  Skip counting  Round  Compose  Measure  Rename  Simplifying strategy</p>	<p><b><u>Do/Skills:</u></b>  Students will be able to...</p> <ul style="list-style-type: none"> <li>● <b>M03.D-M.1.1.1</b> Tell, show, and/or write time (analog) to the nearest minute.</li> <li>● <b>M03.D-M.1.1.2</b> Calculate elapsed time to the minute in a given situation (total elapsed time limited to 60 minutes or less).</li> <li>● <b>M03.A-T.1.1.2</b> Add/Subtract 2- and 3-digit whole numbers (sums up to 1,000)</li> <li>● <b>M03.A-T.1.1.1</b> Round 2- and 3-digit numbers to the nearest ten or hundred respectively.</li> </ul>																								
<p><b><u>Vocabulary:</u></b></p> <table border="0"> <tr> <td>About</td> <td>Kilogram</td> <td>Second</td> </tr> <tr> <td>Addend</td> <td>Liquid Volume</td> <td>Minute</td> </tr> <tr> <td>Capacity</td> <td>Liter</td> <td>Hour</td> </tr> <tr> <td>Continuous</td> <td>Milliliter</td> <td></td> </tr> <tr> <td>Endpoint</td> <td>Plot</td> <td></td> </tr> <tr> <td>Gram</td> <td>Point</td> <td></td> </tr> <tr> <td>Interval</td> <td>Reasonable</td> <td></td> </tr> <tr> <td>Halfway</td> <td>Analog Clock</td> <td></td> </tr> </table>	About	Kilogram	Second	Addend	Liquid Volume	Minute	Capacity	Liter	Hour	Continuous	Milliliter		Endpoint	Plot		Gram	Point		Interval	Reasonable		Halfway	Analog Clock		<p><b><u>Core Resources:</u></b>  Eureka Math (Great Minds)</p>
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<p><b><u>Common Assessment(s):</u></b>  G3M2 Topic A/B Quiz  G3M2 MOMA  G3M2 Topic C Quiz  G3M2 Topic D Quiz  G3M2 EOMA</p>	<p><b><u>Supplemental Resources:</u></b>    <b>Zearn</b> (site that reinforces Eureka Math)</p>																								

<p><b><u>Grade, Subject/Course:</u></b> 3rd Grade, Mathematics</p>	
<p><b><u>Unit:</u></b> Module 3: Multiplication and Division with Units of 0, 1, 6-9, and Multiples of 10</p>	<p><u>  X  </u> <b>Essential</b>      <u>      </u> <b>Important</b>      <u>      </u> <b>Compact</b></p>
<p><b><u>Big Idea:</u></b>  The same number sentence (e.g. <math>12-4=8</math>) can be associated with different concrete or real-world situations and different number sentences can be associated with the same concrete or real world situations.  Basic facts and algorithms for operations with rational numbers use notions of equivalence to transform calculations into simpler ones.</p>	<p><b><u>Standards of Mathematical Practice:</u></b></p> <p><b>MP.1</b> - Make sense of problems and persevere in solving them.</p> <p><b>MP.3</b> - Construct viable arguments and critique the reasoning of others.</p> <p><b>MP.4</b> - Model with mathematics.</p> <p><b>MP.5</b> - Use appropriate tools strategically.</p>

	<p><b>MP.7</b> - Look for and make use of structure.</p>						
<p><b><u>PA Core Content Standards/Anchors (or National Standards):</u></b>          CC.2.2.3.A.1 Represent and solve problems involving multiplication and division.          CC.2.2.3.A.2 Understand properties of multiplication and the relationship between multiplication and division.          CC.2.2.3.A.3 Demonstrate multiplication and division fluency.          CC.2.2.3.A.4 Solve problems involving the four operations, and identify and explain patterns in arithmetic.</p>	<p><b><u>Interdisciplinary Standards (if applicable):</u></b></p>						
<p><b><u>Essential Questions:</u></b>          How does composing and decomposing numbers allow us to make sense of and use the world of numbers?</p>	<p><b><u>Understandings:</u></b>          Students will know that...</p> <ul style="list-style-type: none"> <li>● Properties of operations using whole numbers apply to certain operations, but not others. (ex. – the commutative property applies to addition and multiplication, but not subtraction and division.)</li> <li>● There is a relationship between multiplication and division.</li> <li>● Problems require the use of different operations in order to be solved.</li> </ul>						
<p><b><u>Knowledge:</u></b></p> <table border="0" style="width: 100%;"> <tr> <td style="width: 50%;">Commutative Property</td> <td style="width: 50%;">Associative Property</td> </tr> <tr> <td>Identity Property</td> <td>Multiplication</td> </tr> <tr> <td>Division</td> <td></td> </tr> </table>	Commutative Property	Associative Property	Identity Property	Multiplication	Division		<p><b><u>Do/Skills:</u></b>          Students will be able to...</p> <ul style="list-style-type: none"> <li>● <b>M03.B-O.1.1.1.</b> Interpret and/or describe products of whole numbers (up to and including <math>10 \times 10</math>)</li> <li>● <b>M03.B-O.1.1.2</b> Interpret and /or describe whole-number quotients of whole numbers (limit dividends through 50, and limit divisors and quotients through 10).</li> <li>● <b>M03.B-O.1.2.1</b> Use multiplication (up to and including <math>10 \times 10</math>) and/or division (limit dividends through 50, and limit divisors and quotients through 10) to solve word problems in situations involving equal groups, arrays, and/or measurement quantities).</li> <li>● <b>M03.B-O.2.1.1 &amp; M03.B-O.2.1.2</b> Apply the commutative and associative properties of multiplication (not identification or definition of the property).</li> <li>● <b>M03.B-O.2.2.1</b> Interpret and/or model division as a multiplication equation with an unknown factor. (e.g. – Find <math>32/8</math> by solving <math>8x=32</math>)</li> <li>● <b>M03.B-O.3.1.1 &amp; M03.B-O.3.1.1 &amp; M03.B-O.3.1.2</b> Represent and solve two-step word problems using the four operations using equations with a symbol standing for the unknown quantity. Limit to problems with whole numbers and having whole number answers.</li> <li>● <b>M03.B-O.3.1.3</b> Assess the reasonableness of answers. Limit problems posed with whole numbers and having whole number answers.</li> <li>● <b>M03.B-O.3.1.4</b> Solve 2-step equations using order of operations (equation is explicitly stated with no grouping symbols).</li> <li>● <b>M03.B-O.3.1.5</b> Identify arithmetic patterns (including patterns in the addition table or multiplication table) and/or explain them using properties of</li> </ul>
Commutative Property	Associative Property						
Identity Property	Multiplication						
Division							

	<p>operations.</p> <ul style="list-style-type: none"> <li>● <b>M03.B-O.3.1.6</b> Create or match a story to a given combination of symbols (+,-,x/,&lt;,&gt;,=) and numbers.</li> <li>● <b>M03.B-O.3.1.7</b> Identify the missing symbol (+,-,x/,&lt;,&gt;,=) that makes a number sentence true.</li> </ul>
<p><b><u>Vocabulary:</u></b></p> <p>Multiply                      Divide  Product                        Factor  Quotient                        Divisor  Dividend                        Array  Equation</p>	<p><b><u>Core Resources:</u></b></p> <p>Eureka Math (Great Minds)</p>
<p><b><u>Common Assessment(s):</u></b></p> <p>G3M3 Topic A/B Quiz  G3M3 Topic C/D Quiz  G3M3 EOMA</p>	<p><b><u>Supplemental Resources:</u></b></p> <p><b>Zearn</b> (site that reinforces Eureka Math)</p>

<b><u>Grade, Subject/Course:</u></b> 3rd Grade, Mathematics	
<b><u>Unit:</u></b> Module 4: Multiplication and Area	<u>  X  </u> Essential <u>      </u> Important <u>      </u> Compact
<p><b><u>Big Idea:</u></b></p> <ul style="list-style-type: none"> <li>● Basic facts and algorithms for operations with rational numbers use notions of equivalence to transform calculations into simpler ones.</li> <li>● Some attributes of objects are measurable and can be quantified using unit amounts.</li> </ul>	<p><b><u>Standards of Mathematical Practice:</u></b></p> <p><b>MP.2</b> - Reason abstractly and quantitatively.</p> <p><b>MP.3</b> - Construct viable arguments and critique the reasoning of others.</p> <p><b>MP.6</b> - Attend to precision.</p> <p><b>MP.7</b> - Look for and make use of structure.</p> <p><b>MP.8</b> - Look for and express regularity in repeated reasoning.</p>
<p><b><u>PA Core Content Standards/Anchors (or National Standards):</u></b></p> <p><b>CC.2.4.3.A.5</b> Determine the area of a rectangle and apply the concept to multiplication and to addition.</p>	<p><b><u>Interdisciplinary Standards (if applicable):</u></b></p>
<b><u>Essential Questions:</u></b>	<p><b><u>Understandings:</u></b></p> <p>Students will know that...</p>

<ul style="list-style-type: none"> <li>• How does understanding addition and multiplication help to determine the area of objects around us?</li> <li>• How does what we measure influence how we measure?</li> </ul>	<ul style="list-style-type: none"> <li>• There is a relationship between area and the operations of multiplication and addition.</li> <li>• Area is an attribute of two-dimensional figures.</li> <li>• Using like units to tile a two-dimensional figure translates into the area of that figure.</li> <li>• A multiplication array gives the area of a figure.</li> </ul>
<p><b><u>Knowledge:</u></b> Area and area model Commutative property Distribute</p>	<p><b><u>Do/Skills:</u></b> Students will be able to...</p> <ul style="list-style-type: none"> <li>• Find the area of a rectangle with whole-number side lengths by tiling it, and show that the area is the same as would be found by multiplying the side lengths.</li> <li>• Multiply side lengths to find areas of rectangles with whole-number side lengths in the context of solving real world and mathematical problems.</li> <li>• Represent whole-number products as rectangular areas in mathematical reasoning.</li> <li>• Use tiling to show in a concrete case that the area of a rectangle with whole-number side lengths <math>a</math> and <math>b + c</math> is the sum of <math>a \times b</math> and <math>a \times c</math>.</li> <li>• Use area models to represent the distributive property in mathematical reasoning.</li> </ul>
<p><b><u>Vocabulary:</u></b> Square unit Tile Unit square Whole number Array length</p>	<p><b><u>Core Resources:</u></b>  Eureka Math (Great Minds)</p>
<p><b><u>Common Assessment(s):</u></b> G3M4 Topic A/B Quiz G3M4 EOMA</p>	<p><b><u>Supplemental Resources:</u></b>  Zearn (site that reinforces Eureka Math)</p>

<p><b><u>Grade, Subject/Course:</u></b> 3rd Grade, Mathematics</p>	
<p><b><u>Unit:</u></b> Module 5: Fractions as Numbers on the Number Line</p>	<p><u>  X  </u> <b>Essential</b>      <u>      </u> <b>Important</b>      <u>      </u> <b>Compact</b></p>
<p><b><u>Big Idea:</u></b> The set of real numbers is infinite, and each real number can be associated with a unique point on the number line.</p>	<p><b><u>Standards of Mathematical Practice:</u></b>  MP2 - Reason abstractly and quantitatively.</p>

	<p>MP3 - Construct viable arguments and critique the reasoning of others.</p> <p>MP6 - Attend to precision.</p> <p>MP7 - Look for and make use of structure.</p>
<p><b><u>PA Core Content Standards/Anchors (or National Standards):</u></b>  <b>CC.2.1.3.C.1</b> Explore and develop an understanding of fractions as numbers.  <b>CC.2.3.3.A.2</b> 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><b><u>Interdisciplinary Standards (if applicable):</u></b></p>
<p><b><u>Essential Questions:</u></b>  How do patterns make sense of the values of numbers?   How does understanding the meaning of parts of a whole or fractions help me make sense of the values of all numbers?</p>	<p><b><u>Understandings:</u></b>  Students will know that...</p> <ul style="list-style-type: none"> <li>● A fraction describes the division of a whole (region, set, segment) into parts.</li> <li>● Equivalent fractions show the same part of a whole. Different representations can be used for the same value or quantity.</li> <li>● Quantities can be compared using mathematical symbols.</li> </ul>
<p><b><u>Knowledge:</u></b>  Equivalent Fractions  Fractional Unit  Unit Form  Unit Fraction  Unit Interval  Number line  Comparing</p>	<p><b><u>Do/Skills:</u></b>  Students will be able to...</p> <ul style="list-style-type: none"> <li>● <b>M03.A-F.1.1.1</b> Demonstrate that when a whole or a set is partitioned into <math>y</math> equal parts, the fraction <math>1/y</math> represents one part of the whole and/or the fraction <math>x/y</math> represents <math>x</math> equal parts of the whole (limit denominators to 2,3,4,6,8 and numerators less than the denominators).</li> <li>● <b>M03.A-F.1.1.2</b> Represent fractions on a number line (limit denominators to 2,3,4,6,8 and numerators less than the denominators).</li> <li>● <b>M03.A-F.1.1.3</b> Recognize and generate simple equivalent fractions (limit denominators to 2,3,4,6,8 and numerators less than the denominators).</li> <li>● <b>M03.A-F.1.1.4</b> Express whole numbers as fractions, and/or generate fractions that are equivalent to whole numbers (limit the denominators to 1,2,3,4,6, and 8).</li> </ul>

<p><b><u>Vocabulary:</u></b></p> <table> <tr><td>Equal</td><td>Thirds</td></tr> <tr><td>Less than</td><td>Fourths</td></tr> <tr><td>Greater than</td><td>Sixths</td></tr> <tr><td>Array</td><td>Eighths</td></tr> <tr><td>Equal parts</td><td>Partition</td></tr> <tr><td>Equal shares</td><td>Whole</td></tr> <tr><td>Halves</td><td>Numerator</td></tr> <tr><td>Denominator</td><td></td></tr> </table>	Equal	Thirds	Less than	Fourths	Greater than	Sixths	Array	Eighths	Equal parts	Partition	Equal shares	Whole	Halves	Numerator	Denominator		<p><b><u>Core Resources:</u></b></p> <p>Eureka Math (Great Minds)</p>
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<p><b><u>Common Assessment(s):</u></b></p> <p>G3M5 Topic A/B Quiz G3M5 Topic C Quiz G3M5 Topic D/E Quiz</p>	<p><b><u>Supplemental Resources:</u></b></p> <p><b>Zearn</b> (site that reinforces Eureka Math)</p>																

<p><b><u>Grade, Subject/Course:</u></b> 3rd Grade, Module 6</p>	
<p><b><u>Unit:</u></b> Module 6: Collecting and Displaying Data</p>	<p><u>  X  </u> Essential      <u>      </u> Important      <u>      </u> Compact</p>
<p><b><u>Big Idea:</u></b></p> <ul style="list-style-type: none"> <li>• Data can be represented visually.</li> <li>• The type of data determines the best choice of visual representation.</li> </ul>	<p><b><u>Standards of Mathematical Practice:</u></b></p> <p>MP.2 Reason abstractly and quantitatively.</p> <p>MP.5 Use appropriate tools strategically.</p> <p>MP.6 Attend to precision.</p> <p>MP.7 Look for and make use of structure.</p>
<p><b><u>PA Core Content Standards/Anchors (or National Standards):</u></b> CC.2.4.3.A.4 Represent and interpret data using tally charts, tables, pictographs, line plots, and bar graphs.</p>	<p><b><u>Interdisciplinary Standards (if applicable):</u></b></p>
<p><b><u>Essential Questions:</u></b></p> <ul style="list-style-type: none"> <li>• How can data be organized and represented to provide insight into the relationship between quantities?</li> <li>• How does the type of data influence the choice of display?</li> </ul>	<p><b><u>Understandings:</u></b> Students will know that...</p> <ul style="list-style-type: none"> <li>• Graphs can be used to display data. Each type of graph is most appropriate for certain types of data.</li> <li>• Scale influences the patterns that can be observed in data.</li> </ul>

<p><b><u>Knowledge:</u></b> Tape diagrams Line Plots Picture Graphs Bar Graphs</p>	<p><b><u>Do/Skills:</u></b> Students will be able to...</p> <ul style="list-style-type: none"> <li>● <b>M03.D-M.2.1.1</b> Complete a scaled pictograph and a scaled bar graph to represent a data set with several categories.</li> <li>● <b>M03.D-M.2.1.2</b> Solve one- and two-step problems using information to interpret data presented in scaled pictographs and scaled bar graphs.</li> <li>● <b>M03.D-M.2.1.3</b> Generate measurement data by measuring lengths using rulers marked with halves and fourths of an inch.</li> <li>● Display data by making a line plot where the horizontal scale is marked in appropriate units – whole numbers, halves, or quarters.</li> <li>● Analyze data to problem solve.</li> </ul>
<p><b><u>Vocabulary:</u></b> Data Graph Tally chart Key Scale Axis Title unit</p>	<p><b><u>Core Resources:</u></b>  Eureka Math (Great Minds)</p>
<p><b><u>Common Assessment(s):</u></b> G3M6 Topic A Quiz G3M6 Topic B Quiz</p>	<p><b><u>Supplemental Resources:</u></b>  <b>Zearn</b> (site that reinforces Eureka Math)</p>

<p><b><u>Grade, Subject/Course:</u></b> 3rd Grade, Mathematics</p>	
<p><b><u>Unit:</u></b> Module 7: Geometry and Measurement Word Problems</p>	<p><u>  X  </u> <b>Essential</b>      <u>      </u> <b>Important</b>      <u>      </u> <b>Compact</b></p>
<p><b><u>Big Idea(s):</u></b></p> <ul style="list-style-type: none"> <li>● Two- and three-dimensional objects with or without curved surfaces can be described, classified, and analyzed by their attributes.</li> <li>● Some attributes of objects are measurable and can be quantified using unit amounts.</li> <li>● Measurement attributes can be quantified and estimated using customary and non-customary units of measure.</li> </ul>	<p><b><u>Standards of Mathematical Practice:</u></b></p> <p>MP.1 - Make sense of problems and persevere in solving them.</p> <p>MP.3 - Construct viable arguments and critique the reasoning of others.</p> <p>MP.5 - Use appropriate tools strategically.</p> <p>MP.6 - Attend to precision.</p>

<ul style="list-style-type: none"> <li>Data can be represented visually. The type of data determines the best choice of visual representation.</li> </ul>	
<p><b><u>PA Core Content Standards/Anchors (or National Standards):</u></b>  CC.2.4.3.A.6 Solve problems involving perimeters of polygons and distinguish between linear and area measures.  CC.2.3.3.A.1 Identify, compare, and classify shapes and their attributes.  CC.2.4.3.A.4 Represent and interpret data using tally charts, tables, pictographs, line plots, and bar graphs.  CC.2.2.3.A.4 Solve problems involving the four operations, and identify and explain patterns in arithmetic.</p>	<p><b><u>Interdisciplinary Standards (if applicable):</u></b></p>
<p><b><u>Essential Questions:</u></b></p> <ul style="list-style-type: none"> <li>How are the values of variables determined using the four operations?</li> <li>How are units of measurement used to describe attributes of objects?</li> <li>How does what we measure influence how we measure?</li> <li>How do attributes of shapes define the relationships between and among them?</li> <li>How can applying the attributes of shapes solve real life situations?</li> <li>How can data be organized and represented to provide insight into the relationship between quantities?</li> </ul>	<p><b><u>Understandings:</u></b>  Students will know that...</p> <ul style="list-style-type: none"> <li>Measurement involves a selected attribute of an object and a comparison of the object being measured against a unit of the same attribute.</li> <li>Quantities of measurement can be compared.</li> <li>Length and area can be estimated using appropriate known values.</li> <li>The longer the unit of measure, the fewer units it takes to measure the object.</li> <li>There is more than one way to classify most shapes.</li> <li>Polygons can be described uniquely by their sides and angles.</li> <li>Polygons can be constructed from or separated into other polygons.</li> <li>Scale influences the patterns that can be observed in data.</li> <li>Mental computation and estimation strategies can be used to assess the reasonableness of an answer.</li> </ul>
<p><b><u>Knowledge:</u></b>  Perimeter  Area  Polygons  Two-dimensional  Data  Graphing  Square Units  Plane figure  Symmetry  Congruence  Line plot</p>	<p><b><u>Do/Skills:</u></b>  Students will be able to...</p> <ul style="list-style-type: none"> <li>Add, subtract, multiply, and divide to solve two-step word problems involving unknown assessing the reasonableness of an answer.</li> <li>Compare and contrast polygons.</li> <li>Describe and/or classify polygons based on their attributes.</li> <li><b>M03.C-G.1.1.1</b> Explain that shapes in different categories may share attributes, and that the shared attributes can define a larger category.</li> <li>Explore perimeter as an attribute of plane figures and solve problems.</li> <li>Use a line plot to record the number of rectangles constructed from a given number of unit squares.</li> <li>Solve a variety of word problems involving area and perimeter using all four operations.</li> </ul>

<p><b><u>Vocabulary:</u></b></p> <p>Compare square  Longer pentagon  Shorter trapezoid  Equal parallelogram  Triangles hexagon  Quadrilateral octagon  Rhombus variable  rectangle</p>	<p><b><u>Core Resources:</u></b></p> <p>Eureka Math (Great Minds)</p>
<p><b><u>Common Assessment(s):</u></b></p> <p>G3M7 Topic A/B Quiz  G3M7 Topic C Quiz</p>	<p><b><u>Supplemental Resources:</u></b></p> <p><b>Zearn</b> (site that reinforces Eureka Math)</p>

<p><b><u>Grade, Subject/Course:</u></b> 3rd Grade, Mathematics</p>	
<p><b><u>Unit:</u></b> Money</p>	<p><u>  X  </u> Essential      <u>      </u> Important      <u>      </u> Compact</p>
<p><b><u>Big Idea:</u></b> Some attributes of objects are measurable and can be quantified using unit amounts.  Measurement attributes can be quantified and estimated using customary and non-customary units of measure.</p>	<p><b><u>Standards of Mathematical Practice:</u></b></p> <p>MP.1 - Make sense of problems and persevere in solving them.  MP.2 - Reason abstractly and quantitatively.  MP.6 - Attend to precision.  MP.8 - Look for and express regularity in repeated reasoning.</p>
<p><b><u>PA Core Content Standards/Anchors (or National Standards):</u></b>  CC.2.4.3.A.3 Solve problems and make change involving money using combinations of coins and bills.</p>	<p><b><u>Interdisciplinary Standards (if applicable):</u></b></p>
<p><b><u>Essential Questions:</u></b></p> <ul style="list-style-type: none"> <li>• How does the relationship between numbers and money influence the way we count money?</li> <li>• How does understanding the meaning of money help me make sense of the value of money?</li> </ul>	<p><b><u>Understandings:</u></b>  Students will know that...</p> <ul style="list-style-type: none"> <li>• For most money amounts, there are different, but finite combinations of currency that show the same amount.</li> <li>• The number of coins in two sets does not necessarily indicate which of two sets has the greater value.</li> </ul>

	<ul style="list-style-type: none"> <li>• Money amounts represented as decimals can be added and subtracted using the same algorithms as with whole numbers.</li> <li>• When you have a set quantity and it's more than the necessary amount, there will always be something left over. (If the set quantity is the same as the necessary amount, there will never be anything left over.)</li> </ul>
<p><b><u>Knowledge:</u></b> Value of a: penny, nickel, dime, quarter, dollar</p>	<p><b><u>Do/Skills:</u></b> Students will be able to...</p> <ul style="list-style-type: none"> <li>• <b>M03.D-M.1.3.1</b> Compare total values of combinations of coins (penny, nickel, dime, quarter) and/or dollar bills less than \$5.00.</li> <li>• <b>M03.D-M.1.3.2</b> Make change for an amount up to \$5.00 with no more than \$2.00 change given (penny, nickel, dime, quarter, and dollar).</li> <li>• <b>M03.D-M.1.3.3</b> Round amounts of money to the nearest dollar.</li> </ul>
<p><b><u>Vocabulary:</u></b> Currency Coins Bills Change Decimals</p>	<p><b><u>Core Resources:</u></b>  District developed resources</p>
<p><b><u>Common Assessment(s):</u></b> G3 Money A - Counting Coins Assessment G3 Money B - Making Change Assessment</p>	<p><b><u>Supplemental Resources:</u></b></p>