



<b>Course Title:</b> Third Grade Math		
<b>Description:</b> Third grade content focuses on procedures, concepts, and applications in four critical areas: <ul style="list-style-type: none"> <li>• Understanding of multiplication and division and strategies for multiplication and division within 100.</li> <li>• Understanding of fractions, especially unit fractions</li> <li>• Understanding of the structure of rectangular arrays and of area</li> <li>• Describing and analyzing two dimensional shapes</li> </ul>		
<i>Number and Quantity</i>		
<b>Reporting Topic</b>	<b>Grade Level Standards</b>	<b>Standard Summary</b>
<b>Place Value</b>	<ul style="list-style-type: none"> <li>• Use place value understanding to round whole numbers to the nearest 10 or 100. (3.NBT.A.1)</li> </ul>	Students will: <ul style="list-style-type: none"> <li>• Round numbers to the nearest 10 and 100.</li> <li>• Apply place value concepts to addition and subtraction.</li> </ul>
<b>Foundations of Fractions</b>	<ul style="list-style-type: none"> <li>• Understand a fraction <math>1/b</math> as the quantity formed by 1 part when a whole is partitioned into <math>b</math> equal parts; understand a fraction <math>a/b</math> as the quantity formed by <math>a</math> parts of size <math>1/b</math>. (3.NF.A.1)</li> <li>• Understand a fraction as a number on the number line; represent fractions on a number line diagram. (3.NF.A.2)</li> </ul>	Students will: <ul style="list-style-type: none"> <li>• Write a fraction to represent one or more equal parts.</li> <li>• Write fractions to represent locations on a number line.</li> </ul>
<b>Comparing Fractions</b>	<ul style="list-style-type: none"> <li>• Explain equivalence of fractions in special cases, and compare fractions by reasoning about their size. (3.NF.A.3)</li> </ul>	Students will: <ul style="list-style-type: none"> <li>• Explain equivalent fractions.</li> <li>• Show understanding of equivalent fractions on a number line.</li> <li>• Compare Fractions with the same denominator or numerator.</li> </ul>
<i>Operations and Algebra</i>		
<b>Reporting Topic</b>	<b>Grade Level Standards</b>	<b>Parent Friendly Language</b>



<p><b>Addition and Subtraction</b></p>	<ul style="list-style-type: none"> <li>Fluently add and subtract within 1000 using strategies and algorithms based on place value, properties of operations, and/or the relationship between addition and subtraction. (3.NBT.A.2)</li> </ul>	<p>Students will:</p> <ul style="list-style-type: none"> <li>Add and subtract numbers up to 3 digits.</li> </ul>
<p><b>Multiplication and Division</b></p>	<ul style="list-style-type: none"> <li>Multiply one digit whole numbers by multiples of 10 in the range 10-90 (e.g., <math>9 \times 80</math>, <math>5 \times 60</math>) using strategies based on place value and properties of operations (3.NBT.A.3)</li> <li>Interpret products of whole numbers, e.g., interpret <math>5 \times 7</math> as the total number of objects in 5 groups of 7 objects each. <i>For example, describe a context in which a total number of objects can be expressed as <math>5 \times 7</math>.</i> (3.OA.A.1)</li> <li>Interpret whole-number quotients of whole numbers, e.g., interpret <math>56 \div 8</math> as the number of objects in each share when 56 objects are partitioned equally into 8 shares, or as a number of shares when 56 objects are partitioned into equal shares of 8 objects each. <i>For example, describe a context in which a number of shares or a number of groups can be expressed as <math>56 \div 8</math>.</i> (3.OA.A.2)</li> <li>Use multiplication and division within 100 to solve word problems in situations involving equal groups, arrays, and measurement quantities, e.g., by using drawings and equations with a symbol for the unknown number to represent the problem. (3.OA.A.3)</li> <li>Determine the unknown whole number in a multiplication or division equation relating three whole numbers. <i>For example, determine the unknown number that makes the equation true in each of the equations <math>8 \times ? = 48</math>, <math>5 = \_ \div 3</math>, <math>6 \times 6 = ?</math></i> (3.OA.A.4)</li> <li>Understand division as an unknown-factor problem. <i>For example, find <math>32 \div 8</math> by finding the number that makes 32 when multiplied by 8.</i> (3.OA.B.6)</li> <li>Fluently multiply and divide within 100, using strategies such as the relationship between multiplication and division (e.g., knowing that <math>8 \times 5 = 40</math>, one knows <math>40 \div 5 = 8</math>) or properties of operations. Know from memory all products of two one-digit numbers. (3.OA.C.7)</li> </ul>	<p>Students will:</p> <ul style="list-style-type: none"> <li>Multiply single digit numbers by multiples of ten.</li> <li>Use multiplication facts to solve division problems.</li> <li>Multiply and divide facts within 100.</li> <li>Find the unknown number in a multiplication or division problem.</li> </ul>
<p><b>Properties of Operations</b></p>	<ul style="list-style-type: none"> <li>Apply properties of operations as strategies to multiply and divide. <i>Examples: If <math>6 \times 4 = 24</math> is known, then <math>4 \times 6 = 24</math> is also known. (Commutative property of multiplication.) <math>3 \times 5 \times 2</math> can be found by <math>3 \times 5 = 15</math>, then <math>15 \times 2 = 30</math>, or by <math>5 \times 2 = 10</math>, then <math>3 \times 10 = 30</math>. (Associative property of multiplication.) Knowing that <math>8 \times 5 = 40</math> and <math>8 \times 2 = 16</math>, one can find <math>8 \times 7</math> as <math>8 \times (5 + 2) = (8 \times 5) + (8 \times 2) = 40 + 16 = 56</math>. (Distributive property.)</i> (3.OA.B.5)</li> <li>Identify arithmetic patterns (including patterns in the addition table or multiplication table), and explain them using properties of operations. <i>For</i></li> </ul>	<p>Students will:</p> <ul style="list-style-type: none"> <li>Show understanding of the Associative Property and Distributive Property.</li> <li>Use basic facts to solve more complex problems.</li> </ul>



	<p><i>example, observe that 4 times a number is always even, and explain why 4 times a number can be decomposed into two equal addends. (3.OA.D.9)</i></p>	
<b>Expressions and Equations</b>	<ul style="list-style-type: none"> <li>Solve two-step word problems using the four operations. Represent these problems using equations with a letter standing for the unknown quantity. Assess the reasonableness of answers using mental computation and estimation strategies including rounding. (3.OA.D.8)</li> </ul>	<p>Students will:</p> <ul style="list-style-type: none"> <li>Solve introductory two step word problems.</li> <li>Check my answer using estimation.</li> </ul>
<h2 style="color: blue;">Geometry</h2>		
<b>Reporting Topic</b>	<b>Grade Level Standards</b>	<b>Parent Friendly Language</b>
<b>Geometric Shapes</b>	<ul style="list-style-type: none"> <li>Understand that shapes in different categories (e.g., rhombuses, rectangles, and others) may share attributes (e.g., having four sides), and that the shared attributes can define a larger category (e.g., quadrilaterals). Recognize rhombuses, rectangles, and squares as examples of quadrilaterals, and draw examples of quadrilaterals that do not belong to any of these subcategories. (3.G.A.1)</li> </ul>	<p>Students will:</p> <ul style="list-style-type: none"> <li>Sort shapes/polygons by similar attributes.</li> <li>Name the category to which a group of polygons belong.</li> </ul>
<b>Compose and Decompose Shapes</b>	<ul style="list-style-type: none"> <li>Partition shapes into parts with equal areas. Express the area of each part as a unit fraction of the whole. <i>For example, partition a shape into 4 parts with equal area, and describe the area of each part as 1/4 of the area of the shape.</i> (3.G.A.2)</li> </ul>	<p>Students will:</p> <ul style="list-style-type: none"> <li>Express area of each part as a unit fraction of the whole.</li> <li>Decompose figures into smaller rectangles.</li> </ul>
<b>Area</b>	<ul style="list-style-type: none"> <li>Recognize area as an attribute of plane figures and understand concepts of area measurement. (3.MD.C.5)</li> <li>Measure areas by counting unit squares (square cm, square m, square in, square ft, and improvised units). (3.MD.C.6)</li> <li>Relate area to the operations of multiplication and addition. (3.MD.C.7)</li> </ul>	<p>Students will:</p> <ul style="list-style-type: none"> <li>Use multiplication to find the area of a rectangle</li> <li>Add areas of two rectangles to find the total area.</li> </ul>
<b>Perimeter</b>	<ul style="list-style-type: none"> <li>Solve real world and mathematical problems involving perimeters of polygons, including finding the perimeter given the side lengths, finding an unknown side length, and exhibiting rectangles with the same perimeter and different areas or with the same area and different perimeters. (3.MD.D.8)</li> </ul>	<p>Students will:</p> <ul style="list-style-type: none"> <li>Find the missing side length given the perimeter.</li> <li>Demonstrate how rectangles can have the same area but different perimeter and vice versa.</li> </ul>



## *Measurement, Data, Statistics, and Probability*

<b>Reporting Topics</b>	<b>Grade Level Standards</b>	<b>Parent Friendly Language</b>
<b>Measurement</b>	<ul style="list-style-type: none"><li>• Measure and estimate liquid volumes and masses of objects using standard units of grams (g), kilograms (kg), and liters (l). Add, subtract, multiply, or divide to solve one–step word problems involving masses or volumes that are given in the same units, e.g., by using drawings (such as a beaker with a measurement scale) to represent the problem. (3.MD.A.2)</li></ul>	Students will: <ul style="list-style-type: none"><li>• Measure and estimate liquid volumes and mass.</li><li>• Solve word problems about volume and mass.</li></ul>
<b>Represent and Interpret Data</b>	<ul style="list-style-type: none"><li>• Draw a scaled picture graph and a scaled bar graph to represent a data set with several categories. Solve one– and two–step "how many more" and "how many less" problems using information presented in scaled bar graphs. <i>For example, draw a bar graph in which each square in the bar graph might represent 5 pets.</i> (3.MD.B.3)</li><li>• Generate measurement data by measuring lengths using rulers marked with halves and fourths of an inch. Show the data by making a line plot, where the horizontal scale is marked off in appropriate units—whole numbers, halves, or quarters. (3.MD.B.4)</li></ul>	Students will: <ul style="list-style-type: none"><li>• Solve one step “how many more/less” problems based on a bar graph.</li><li>• Represent data with a line plot.</li></ul>
<b>Time</b>	<ul style="list-style-type: none"><li>• Tell and write time to the nearest minute and measure time intervals in minutes. Solve word problems involving addition and subtraction of time intervals in minutes, e.g., by representing the problem on a number line diagram. (3.MD.A.1)</li></ul>	Students will: <ul style="list-style-type: none"><li>• Tell and write time to the nearest minute.</li><li>• Draw time on a clock.</li><li>• Solve word problems about time intervals.</li></ul>