

## 1<sup>st</sup> 9-Weeks 3rd Grade Math

\*\* Clusters with asterisks indicate major content of the grade.

**Highlighted Standards are recognized as Power Standards**

Cluster	Standards		Student Text	Dates Taught
3.NBT.A- Use place value understanding and properties of operations to perform multi-digit arithmetic .	3.NBT.A.1	Round whole numbers to the nearest 10 or 100 using understanding of place value.	Chapter 1 pg. 29-40	
	3.NBT.A.2	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.	Chapter 2 and 3	
	3.NBT.A.3	Multiply one-digit whole numbers by multiples of 10 in the range 10 –90 (e.g., $9 \times 80$ , $5 \times 60$ ) using strategies based on place value and properties of operations.	Chapter 4	
3.OA.D- Solve problems involving the four operations, and identify and explain patterns in arithmetic.	3.OA.D.9	Identify arithmetic patterns (including patterns in the addition and multiplication tables) and explain them using properties of operations. For example, analyze patterns in the multiplication table and observe that 4 times a number is always even (because $4 \times 6 = (2 \times 2) \times 6 = 2 \times (2 \times 6)$ , which uses the associative property of multiplication) (See Table 3 - Properties of Operations).	Chapter 2 pg. 67-86 (addition patterns)  Chapter 6	
** 3.OA.B- Understand properties of multiplication and the relationship between multiplication and division. (see Table 3 – Properties of Operations)	<b>3.OA.B.5</b>	<b>Apply properties of operations as strategies to multiply and divide. (Students need not use formal terms for these properties.) 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 solved by <math>(3 \times 5) \times 2</math> or <math>3 \times (5 \times 2)</math></b>	Chapter 4	

	3.0A.B.6	<p>(Associative property of multiplication). One way to find <math>8 \times 7</math> is by using <math>8 \times (5 + 2) = (8 \times 5) + (8 \times 2)</math>. By knowing that <math>8 \times 5 = 40</math> and <math>8 \times 2 = 16</math>, then <math>8 \times 7 = 40 + 16 = 56</math> (Distributive property of multiplication over addition).</p> <p>Understand division as an unknown-factor problem. For example, find <math>32 \div 8</math> by finding the number that makes 32 when multiplied by 8.</p>	Chapter 5	
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	3.0A.A.4	Determine the unknown whole number in a multiplication or division equation relating three whole numbers within 100. For example, determine the unknown number that makes the equation true in each of the equations: $8 \times ? = 48$ , $5 = ? \div 3$ , $6 \times 6 = ?$		
** 3.0A.C- Multiply and divide within 100.	3.0A.C.7	Fluently multiply and divide within 100, using strategies such as the relationship between multiplication and division (e.g., knowing that $8 \times 5 = 40$ , one knows $40 \div 5 = 8$ ) or properties of operations. By the end of 3rd grade, know from memory all products of two one-digit numbers and related division facts.	Chapter 7	
** 3.MD.A Solve problems involving measurement and estimation of intervals of time, liquid volumes, and masses of objects	3.MD.A.1  3.MD.A.2	Tell and write time to the nearest minute and measure time intervals in minutes. Solve contextual problems involving addition and subtraction of time intervals in minutes. For example, students may use a number line to determine the difference between the start time and the end time of lunch.  Measure the mass of objects and liquid volume using standard units of grams (g), kilograms (kg), milliliters (ml), and liters (l). Estimate the mass of objects and liquid volume using benchmarks. For example, a large paper clip is about one gram, so a box of about 100 large clips is about 100 grams. Therefore, ten boxes would be about 1 kilogram.	Chapter 11 Lessons 5, 6, 7  Pull additional resources for time  Chapter 11 Lessons 1, 2, 3, 4	

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<p>3.MD. B – Represent and interpret data</p>	<p>3.MD.B.3</p> <p>3.MD.B.4</p>	<p>Draw a scaled pictograph 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 graphs.</p> <p>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.</p>	<p>Chapter 12</p> <p>Chapter 12 Lesson 6 Pull additional resources</p>	
<p>3.MD.D- Geometric measure: recognize perimeter as an attribute of plane figures and distinguish between linear and area</p>	<p>3.MD.D.8</p>	<p>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.</p>	<p>Chapter 13 Lessons 1, 2 Pull additional resources</p>	
<p>** 3.NF.A Develop understanding of fractions as numbers.</p>	<p><b>3.NF.A.1</b></p>	<p><b>Understand a fraction, <math>\frac{1}{b}</math>, as the quantity formed by 1 part when a whole is partitioned into b equal parts (unit fraction); understand a fraction <math>\frac{a}{b}</math> as the quantity formed by a parts of size <math>\frac{1}{b}</math>. For example, <math>\frac{3}{4}</math> represents a quantity formed by 3 parts of size <math>\frac{1}{4}</math>.</b></p> <p><b>Understand a fraction as a number on the number</b></p>	<p>Chapter 10 Pull additional resources</p>	



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<p><b>** 3.MD.C</b> Geometric measurement: understand concepts of area and relate area to multiplication and to addition</p>	3.MD.C.5	<p>Recognize that plane figures have an area and understand concepts of area measurement.</p> <p>a. Understand that a square with side length 1 unit, called "a unit square," is said to have "one square unit" of area and can be used to measure area.</p> <p>b. Understand that a plane figure which can be covered without gaps or overlaps by <math>n</math> unit squares is said to have an area of <math>n</math> square units.</p>	Chapter 13 Lessons 3, 4, 6, 9	
	3.MD.C.6	Measure areas by counting unit squares (square centimeters, square meters, square inches, square feet, and improvised units)	Chapter 13 Lessons 5	
	<b>3.MD.C.7</b>	<p>Relate area of rectangles to the operations of multiplication and addition.</p> <p>a. 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.</p> <p>b. 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.</p> <p>c. 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>. Use area models to represent the distributive property in mathematical reasoning. For example, in a rectangle with dimensions 4 by 6, students can decompose the rectangle into <math>4 \times 3</math> and <math>4 \times 3</math> to find</p>	Chapter 13 Lesson 7	

		<p>the total area of 4 x 6. (See Table 3 - Properties of Operations)</p> <p>d. Recognize area as additive. Find areas of rectilinear figures by decomposing them into non-overlapping rectangles and adding the areas of the non-overlapping parts, applying this technique to solve real-world problems.</p>	Chapter 13 Lessons 8	
3.G.A- Reason with shapes and their attributes.	3.G.A.1	Understand that shapes in different categories may share attributes and that the shared attributes can define a larger category. Recognize rhombuses, rectangles, and squares as examples of quadrilaterals and draw examples of quadrilaterals that do not belong to any of these subcategories.	Chapter 14 Lessons 1, 2, 3, 4, 5	
	3.G.A.2	Partition shapes into parts with equal areas. Express the area of each part as a unit fraction of the whole. 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.	Chapter 14 Lesson 7	
	3.G.A.3	Determine if a figure is a polygon.	Chapter 14 Lesson 2	

Ongoing Skills

These standards are repeated from 2<sup>nd</sup> Nine weeks skills that will be taught throughout the year.

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<p>** 3.0A.D- Solve problems involving the four operations, and identify and explain patterns in arithmetic.</p>	<p>3.0A.D.8</p>	<p>Solve two-step contextual 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 (See Table 1 - Addition and Subtraction Situations and Table 2 Multiplication and Division Situations).</p>	<p>Located at end of each chapter (green pages)</p>	
<p>**3.0A.C- Multiply and divide within 100.</p>	<p>3.0A.C.7</p>	<p>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. By the end of Grade 3, know from memory all products of two one-digit numbers.</p>		