

3rd Grade Math 9-week Pacing Guide

June 2016

1ST 9 WEEKS
<u>Week 1</u> 3.NBT.1: PLACE VALUE Use place value understanding to round whole numbers to the nearest 10 or 100. **Addition and subtraction fluency twice a week.
<u>Week 2</u> 3.NBT.2: ROUNDING 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. **Addition and subtraction fluency twice a week.
<u>Week 3</u> 3.NBT.2: Addition 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.OA.7-Addition and subtraction fluency twice a week. Multiplication and division sprints 3x week.
<u>Week 4</u> 3.NBT.2: SUBTRACTION WITH REGROUPING 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.OA.7-Addition and subtraction fluency twice a week. Multiplication and division sprints 3x week.
<u>Week 5</u> 3.OA.8 : WORD PROBLEMS 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.7-Multiplication fluency: 0. Cannot move on without mastering 80% or higher.
<u>Week 6</u> 3.NBT.3: MUTLIPLYING WITH 10s Multiply one-digit whole numbers by multiples of 10 in the range of 10-90 (e.g., 9 x 80, 5 x 60) using strategies based on place value and properties of operations. **3.OA.7-Multiplication fluency: 1. Cannot move on without mastering 80% or higher.
<u>Week 7</u> 3.G.1 SHAPES/POLYGONS 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.OA.7-Multiplication fluency: 2. Cannot move on without mastering 80% or higher.
<u>Week 8</u> Spiral review and practice
**3.OA.7-Multiplication fluency: 10. Cannot move on without mastering 80% or higher.
<u>Week 9</u> BMA 1

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2 ND 9 WEEKS
Week 10 3.OA.1, 3.OA.3, 3.OA.5: MODEL MULT. (TEACH/DISCUSS PROPERTIES) Interpret products of whole numbers, e.g., interpret 5×7 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 5×7.</i> <i>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</i> <i>Problem.</i> <i>Apply properties of operations as strategies to multiply and divide.2</i> <i>Examples: If $6 \times 4 = 24$ is known, then $4 \times 6 = 24$ is also known. (Commutative property of multiplication.) $3 \times 5 \times 2$ can be found by $3 \times 5 = 15$, then $15 \times 2 = 30$, or by $5 \times 2 = 10$, then $3 \times 10 = 30$. (Associative property of multiplication.) Knowing that $8 \times 5 = 40$ and $8 \times 2 = 16$, one can find 8×7 as $8 \times (5 + 2) = (8 \times 5) + (8 \times 2) = 40 + 16 = 56$. (Distributive property.)</i> **3.OA.7-Multiplication fluency: 3. Cannot move on without mastering 80% or higher
Week 11 3.OA.9: PATTERNS (few days) 3.OA.2, 3.OA.3, 3.OA.4: MODEL DIV. Identify arithmetic patterns (including patterns in the addition table or multiplication table), and explain them using properties of operations. For 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.7-Multiplication fluency: 4. Cannot move on without mastering 80% or higher
Week 12 3.OA.2, 3.OA.3, 3.OA.4: MODEL DIV. (CONT.) 3.OA.6 UNKNOWN FACTOR **3.OA.7-Multiplication fluency: 9. Cannot move on without mastering 80% or higher
Week 13 3.OA.6 UNKNOWN FACTOR (CONT.) 3.OA.8: MULTI-STEP WORD PROBLEMS Understand division as an unknown-factor problem. For example, find $32 \div 8$ by finding the number that makes 32 when multiplied by 8. 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.7-Multiplication fluency: 6. Cannot move on without mastering 80% or higher
Week 14 3.OA.8: MULTI-STEP WORD PROBLEMS (CONT.) **Tie in all OA skills through this week** **3.OA.7-Multiplication fluency: 7. Cannot move on without mastering 80% or higher.
Week 15 3.NF.1, 3.G.2: FRACTION AS A WHOLE/PARTITION SHAPES Understand a fraction $1/b$ as the quantity formed by 1 part when a whole is partitioned into b equal parts; understand a fraction a/b as the quantity formed by a parts of size $1/b$. 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. **3.OA.7-Multiplication fluency: 8. Cannot move on without mastering 80% or higher.
Week 16 3.NF.2A, 3.NF.2B: FRACTIONS ON THE # LINE. Understand a fraction as a number on the number line; represent fractions on a number line diagram. Represent a fraction $1/b$ on a number line diagram by defining the interval from 0 to 1 as the whole and partitioning it into b equal parts. Recognize that each part has size $1/b$ and that the endpoint of the part based at 0 locates the number $1/b$ on the number line. Understand a fraction as a number on the number line; represent fractions on a number line diagram.

Represent a fraction a/b on a number line diagram by marking off a lengths $1/b$ from 1. Recognize that the resulting interval has size a/b and that its endpoint locates the number a/b on the number line. **3.OA.7-Multiplication fluency: 2. Cannot move on without mastering 80% or higher.
Week 17 3.NF.2A, 3.NF.2B: FRACTIONS ON THE # LINE. (CONT.) Spiral review and practice **3.OA.7-Multiplication fluency: all. Cannot move on without mastering 80% or higher.
Week 18 BMA 2

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Week 19 3.NF.3A, B, C: EQUIVALENT FRACTIONS (OA.3-6 SKILLS/STRATEGIES WILL BE INCLUDED) Explain equivalence of fractions in special cases, and compare fractions by reasoning about their size. Understand two fractions as equivalent (equal) if they are the same size, or the same point on a number line. Explain equivalence of fractions in special cases, and compare fractions by reasoning about their size. Recognize and generate simple equivalent fractions, e.g., $\frac{1}{2} = \frac{2}{4}$, $\frac{4}{6} = \frac{2}{3}$. Explain why the fractions are equivalent, e.g., by using a visual fraction model. Explain equivalence of fractions in special cases, and compare fractions by reasoning about their size. Express whole numbers as fractions, and recognize fractions that are equivalent to whole numbers. **3.OA.7-Multiplication and division fluency.
Week 20 3.NF.3A, B, C, D: EQUIVALENT/COMPARING FRACTIONS (OA.3-6 SKILLS/STRATEGIES WILL BE INCLUDED) Explain equivalence of fractions in special cases, and compare fractions by reasoning about their size. Understand two fractions as equivalent (equal) if they are the same size, or the same point on a number line. Explain equivalence of fractions in special cases, and compare fractions by reasoning about their size. Recognize and generate simple equivalent fractions, e.g., $\frac{1}{2} = \frac{2}{4}$, $\frac{4}{6} = \frac{2}{3}$. Explain why the fractions are equivalent, e.g., by using a visual fraction model. Explain equivalence of fractions in special cases, and compare fractions by reasoning about their size. Express whole numbers as fractions, and recognize fractions that are equivalent to whole numbers. <i>Examples: Express 3 in the form $3 = \frac{3}{1}$; recognize that $\frac{6}{1} = 6$; locate $\frac{4}{4}$ and 1 at the same point of a number line diagram.</i> Explain equivalence of fractions in special cases, and compare fractions by reasoning about their size. Compare two fractions with the same numerator or the same denominator by reasoning about their size. Recognize that comparisons are valid only when the two fractions refer to the same whole. Record the results of comparisons with the symbols $>$, $=$, or $<$, and justify the conclusions, e.g. by using a visual fraction model. **3.OA.7-Multiplication and division fluency.
Week 21 3.MD.3, 3.MD.4: GRAPHS, LINE PLOTS, GRAPHING MEASUREMENTS ***CROSS CURRICULUM***

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> 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.OA.7-Multiplication and division fluency.
Week 22 3.MD.5a.b/ 3.MD.6: AREA WITH SQUARE UNITS Recognize area as an attribute of plane figures and understand concepts of area measurement. 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. <u>3.MD.5b</u> Recognize area as an attribute of plane figures and understand concepts of area measurement. A plane figure which can be covered without gaps or overlaps by n unit squares is said to have an area of n square units. **3.OA.7-Multiplication and division fluency.
Week 23 3.MD.7A, B, C, D: AREA WITH MULTIPLICATION AND DIVISION (3.OA.8: WORD PROBLEMS WILL BE INCLUDED, ALONG WITH OTHER OA SKILLS/STRATEGIES) <u>3.MD.7a</u> Relate area to the operations of multiplication and addition. 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. discover that the area is the length times the width. <u>3.MD.7b</u> Relate area to the operations of multiplication and addition. 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. <u>3.MD.7c</u> Relate area to the operations of multiplication and addition. Use tiling to show in a concrete case that the area of a rectangle with

whole- number side lengths a and $b + c$ is the sum of $a \times b$ and $a \times c$. Use area models to represent the distributive property in mathematical reasoning. <u>3.MD.7d</u> Relate area to the operations of multiplication and addition. 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. **3.OA.7-Multiplication and division fluency.
Week 24 3.MD.8: Perimeter (3.OA.8: WORD PROBLEMS WILL BE INLCUED, ALONG WITH OTHER OA SKILLS/STRATEGIES) <u>3.MD.D.8</u> 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.OA.7-Multiplication and division fluency.
Week 25 3.MD.2: WEIGHT/VOLUME (3.OA.8: WORD PROBLEMS WILL BE INCLUDED, ALONG WITH OTHER OA SKILLS/STRATEGIES) <u>3.MD.2</u> Measure and estimate liquid volumes and masses of objects using standard units of grams (g), kilograms (kg), and liters (l).1 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.OA.7-Multiplication and division fluency.
Week 26 3.MD.1: ELAPSED TIME (3.OA.8: WORD PROBLEMS WILL BE INCLUDED, ALONG WITH OTHER OA SKILLS/STRATEGIES) <u>3.MD.1</u> 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. Spiral review and practice **3.OA.7-Multiplication and division fluency.
Week 27 BMA 3

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4th 9 WEEKS
Week 28 3.MD.5, 3.MD.6, 3.MD.7, 3.MD.8: AREA AND PERIMETER REVIEW **3.OA.7- multiplication and division fluency.
Week 29 3.NF.1, 3.NF.2: FRACTIONS REVIEW **3.OA.7- multiplication and division fluency.
Week 30 3.NF.3: EQUIVALENT FRACTIONS **3.OA.7- multiplication and division fluency.
Week 31 3.OA.1-9: MULTIPLICATION AND DIVISION REVIEW **3.OA.7- multiplication and division fluency.
Week 32 3.OA.1-9: MULTIPLICATION AND DIVISION REVIEW **3.OA.7- multiplication and division fluency.
Week 33 3.NBT.1-3: ADDITION AND SUBTRACTION REVIEW/ MULTIPLYING TENS REVIEW **3.OA.7- multiplication and division fluency.
Week 34 INTRODUCTION OF 4TH GRADE SKILLS-DEPENDENT UPON DATA **3.OA.7- multiplication and division fluency.
Week 35 INTRODUCTION OF 4TH GRADE SKILLS-DEPENDENT UPON DATA **3.OA.7- multiplication and division fluency.
Week 36 BMA 4

Standards and Evidences
***** FOURTH 9 WEEKS REVIEW OF SKILLS IS SUBJECT TO CHANGE DEPENDENT UPON STAR AND OTHER TESTING DATA***** ***See evidences from previous 9 weeks

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