**2015-2016 Standards Pacing Guide – Third Grade**

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| **Standards** | | **Struggling** | **Progressing** | **Meets** | **Advanced** |
| 3.OA.1 | Interpret products of whole numbers, e.g., interpret 5 × 7 as the total number of objects in 5 groups of 7 objects each. |  |  | Interprets products of whole numbers |  |
| 3.OA.2 | Interpret whole-number quotients of whole numbers, e.g., interpret 56 ÷ 8 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. |  |  | Interprets whole-number quotients |  |
| 3.OA.3 | 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. |  |  | Multiplies and divides within 100 to solve word problems using multiple strategies |  |
| 3.OA.4 | Determine the unknown whole number in a multiplication or division equation relating three whole numbers. |  |  | Determines the unknown value in multiplication and division problems |  |
| 3.OA.5 | Apply properties of operations as strategies to multiply and divide. (Students need not use formal terms for these properties.) |  |  |  |  |
| 3.OA.6 | Understand division as an unknown-factor problem. |  |  |  |  |
| 3.OA.7 | Fluently multiply and divide within 100, using strategies such as the relationship between multiplication and division (e.g., knowing that 8 × 5 = 40, one knows 40 ÷ 5 = 8) or properties of operations. By the end of Grade 3, know from memory all products of two one-digit numbers. |  |  | Multiplies and divides within 100 |  |
| 3.OA.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. (This standard is limited to problems posed with whole numbers and having whole number answers; students should know how to perform operations in the conventional order when there are no parentheses to specify a particular order [Order of Operations].) |  |  | Solves two-step word problems with an unknown quantity using the 4 operations and is able to determine reasonableness of mental computation and estimations |  |
| 3.OA.9 | Identify arithmetic patterns (including patterns in the addition table or multiplication table), and explain them using properties of operations. |  |  | Identify and explain arithmetic patterns using properties of operations |  |
| 3.NBT.1 | Use place value understanding to round whole numbers to the nearest 10 or 100. |  |  | Rounds whole numbers to the nearent 10 or 100 |  |
| 3.NBT.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. |  |  | Adds and subtracts within 1000 using multiple strategies |  |
| 3.NBT.3 | Multiply one-digit whole numbers by multiples of 10 in the range 10–90 (e.g., 9 × 80, 5 × 60) using strategies based on place value and properties of operations. |  |  | Multiplies one-digit whole numbers by multiples of 10 |  |
| 3.NF.1 | 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. |  |  |  |  |
| 3.NF.2 | Understand a fraction as a number on the number line; represent fractions on a number line diagram. |  |  | Understands and represents fractions on a number line |  |
| 3.NF.2a | 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. |  |  |  |  |
| 3.NF.2b | Represent a fraction a/b on a number line diagram by marking off a lengths 1/b from 0. Recognize that the resulting interval has size a/b and that its endpoint locates the number a/b on the number line. |  |  | Represents a fraction on a created number line using correct fractional intervals |  |
| 3.NF.3 | Explain equivalence of fractions in special cases, and compare fractions by reasoning about their size. |  |  | Explains equivalence of fractions and compares fractions by reasoning about their size |  |
| 3.NF.3a | Understand two fractions as equivalent (equal) if they are the same size, or the same point on a number line. |  |  | Understands two fractions are equal if they are the same size or on the same point of a number line |  |
| 3.NF.3b | Recognize and generate simple equivalent fractions, e.g., 1/2 = 2/4, 4/6 = 2/3. Explain why the fractions are equivalent, e.g., by using a visual fraction model. |  |  | Recognizes, creates and explains equivalent fractions |  |
| 3.NF.3c | Express whole numbers as fractions, and recognize fractions that are equivalent to whole numbers. |  |  | Expresses whole numbers as fractions, and recognizes equivalent fractions to whole numbers |  |
| 3.NF.3d | 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 |  |  | Compares two fractions with the same numerator and denominator and records results using <, > or = |  |
| 3.MD.1 | 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. |  |  | Tells, writes and measures time to nearest minute and solves word problems with addition and subtraction of time |  |
| 3.MD.2 | Measure and estimate liquid volumes and masses of objects using standard units of grams (g), kilograms (kg), and liters (l). (Excludes compound units such as cm3 and finding the geometric volume of a container.) 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. (Excludes multiplicative comparison problems [problems involving notions of “times as much”; see Glossary, Table 2]) |  |  | Measures and estimates volumes and masses of objects in different units and is able to solve one-step word problems using multiple strategies |  |
| 3.MD.3 | 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. |  |  | Draws a scaled picture or bar graph to represent data and solves one- and two-step problems using the information |  |
| 3.MD.4 | 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. |  |  | Measures items and generates data using rulers and creating a line plot with appropriate units |  |
| 3.MD.5 | Recognize area as an attribute of plane figures and understand concepts of area measurement. |  |  |  |  |
| 3.MD.5a | 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. |  |  |  |  |
| 3.MD.5b | 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.MD.6 | Measure areas by counting unit squares (square cm, square m, square in, square ft, and improvised units). |  |  | Measures areas by counting unit squares in multiple units |  |
| 3.MD.7 | Relate area to the operations of multiplication and addition. |  |  | Relates area to the operations of multiplication and addition |  |
| 3.MD.7a | 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. |  |  | Finds the area of a rectangle with whole-number side lengths using manipulatives and formulas |  |
| 3.MD.7b | 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. |  |  | Multiplies side lengths of a rectangle to solve the area in real world and mathematical problems, and represent products in mathematical reasoning |  |
| 3.MD.7c | 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 × b and a × c. Use area models to represent the distributive property in mathematical reasoning. |  |  |  |  |
| 3.MD.7d | 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.MD.8 | 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. |  |  | Solves real world and mathematical problems involving perimeters of polygons and unknown lengths and |  |
| 3.G.1 | 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. |  |  | Recognizes and describes attributes of multiple different shapes and be able to draw them |  |
| 3.G.2 | Partition shapes into parts with equal areas. Express the area of each part as a unit fraction of the whole. |  |  | Partitions shapes into equal parts and expresses the unit fraction of a whole |  |