2017-18 Math SOL CROSSWALK Pacing Guide
Fourth Grade - Quarterly Overview Sheet

1st Quarter (2009 SOL)	1st3 Quarter (2016 SOL)	2nd Quarter (2009 SOL)	2nd Quarter (2016 SOL)
Strand: Number and Number Sense *Focus: Place Value, Fractions, and Decimals* **4.1** The student will a) identify orally and in writing the place value for each digit in a whole number expressed through millions b) compare two whole numbers expressed through millions, using symbols (>, <, or =); and c) round whole numbers expressed through millions to the nearest thousand, ten thousand, and hundred thousand. **Strand: Computation and Estimation** *Focus: Factors and Multiples, and Fractions and Decimal Operations* **4.4** The student will a) estimate sums, differences, products, and quotients of whole numbers; b) add, subtract, and multiply whole numbers; c) divide whole numbers, finding quotients with and without remainders; and d) solve single-step and multistep addition, subtraction, and multiplication problems with whole numbers. **Strand: Patterns, Functions, and Algebra** *Focus: Geometric Patterns, Equality, and Properties* **4.15** The student will recognize, create, and extend numerical and geometric patterns.	**Strand: Number and Number Sense** **4.1** The student will a) read, write, and identify the place and value of each digit in a nine-digit whole number; b) compare and order whole numbers expressed through millions; and c) round whole numbers expressed through millions to the nearest thousand, ten thousand, and hundred thousand. **Strand: Computation and Estimation** **4.4** The student will a) demonstrate fluency with multiplication facts through 12 x 12, and the corresponding division facts (Moved from 3.5); b) estimate and determine sums, differences, and products of whole numbers; c) estimate and determine quotients of whole numbers, with and without remainders; and d) create and solve single-step and multistep practical problems involving addition, subtraction, and multiplication, and single-step practical problems involving division with whole numbers. **Strand: Patterns, Functions, and Algebra** **4.15** The student will identify, describe, create, and extend patterns found in objects, pictures, numbers, and tables.	**Strand: Number and Number Sense** *Focus: Place Value, Fractions, and Decimals* **4.2** The student will a) compare and order fractions and mixed numbers; b) represent equivalent fractions; and c) identify the division statement that represents a fraction. **Strand: Computation and Estimation** *Focus: Factors and Multiples, and Fractions and Decimal Operations* **4.5** The student will a) determine common multiples and factors, including least common multiple and greatest common factor; b) add and subtract fractions having like and unlike denominators that are limited to 2, 3, 4, 5, 6, 8, 10, and 12, and simplify the resulting fractions, using common multiples and factors; **Strand: Measurement** **4.9** The student will determine elapsed time in hours and minutes within a 12-hour period	**Strand: Number and Number Sense** **4.2** The student will a) compare and order fractions and mixed numbers, with and without models; b) represent equivalent fractions; and c) identify the division statement that represents a fraction, with models and in context. **Strand: Computation and Estimation** **4.5** The student will a) determine common multiples and factors, including least common multiple and greatest common factor; b) add and subtract fractions and mixed numbers having like and unlike denominators; and c) solve single-step practical problems involving addition and subtraction with fractions and mixed numbers. **Strand: Measurement and Geometry** **4.9** The student will solve practical problems related to elapsed time in hours and minutes within a 12-hour period. .

3rd Quarter (2009 SOL)	3rd Quarter (2016 SOL)	4th Quarter (2009 SOL)	4th Quarter (2016 SOL)
Strand: Number and Number Sense *Focus: Place Value, Fractions, and Decimals* **4.3** The student will a) read, write, represent, and identify decimals expressed through thousandths; b) round decimals to the nearest whole number, tenth, and hundredth; c) compare and order decimals d) given a model, write the decimal and fraction equivalents. **Strand: Computation and Estimation** *Focus: Factors and Multiples, and Fractions and Decimal Operations* **4.5** The student will c) add and subtract with decimals d) solve single-step and multistep practical problems involving addition and subtraction with fractions and with decimals. **Strand: Measurement** *Focus: Equivalence within US Customary and Metric Systems* **4.6** The student will a) estimate and measure weight/mass and describe the results in U.S. Customary and metric units as appropriate b) identify equivalent measurements between units within the U.S. Customary system (ounces, pounds, and tons) and between units within the metric system (grams and kilograms).	**Strand: Number and Number Sense** **4.3** The student will a) read, write, represent, and identify decimals expressed through thousandths; b) round decimals to the nearest whole number; [Round to tenth and hundredth included in 5.1] c) compare and order decimals; and d) given a model, write the decimal and fraction equivalents. **Strand: Computation and Estimation** **4.5** The student will a) determine common multiples and factors, including least common multiple and greatest common factor; b) add and subtract fractions and mixed numbers having like and unlike denominators;* and c) solve single-step practical problems involving addition and subtraction with fractions and mixed numbers. **Strand: Measurement and Geometry** **4.6** The student will a) add and subtract decimals; and b) solve single-step and multistep practical problems involving addition and subtraction with decimals **4.8** The student will a) estimate and measure length and describe the result in U.S. Customary and metric units; b) estimate and measure weight/mass and describe the results in U.S. Customary and	**Strand: Geometry** *Focus: Representations and Polygons* **4.7** The student will a) estimate and measure length, and describe the result in both metric and U.S. Customary units; and b) identify equivalent measurements between units within the U.S. Customary system (inches and feet; feet and yards; inches and yards; yards and miles) and between units within the metric system (millimeters and centimeters; centimeters and meters; and millimeters and meters). **4.10** The student will a) identify and describe representations of points, lines, line segments, rays, and angles, including endpoints and vertices; b) identify representations of lines that illustrate intersection, parallelism, and perpendicularity. **4.11** The student will a) investigate congruence of plane figures after geometric transformations, such as reflection, translation, and rotation, using mirrors, paper folding, and tracing; b) recognize the images of figures resulting from geometric transformations, such as translation, reflection, and rotation. (Moved to 5.14) **4.12** The student will a) define polygon; b) identify polygons with 10 or fewer sides. **Strand: Probability and Statistics** *Focus: Outcomes and Data*	**Strand: Measurement and Geometry** **4.7** The student will solve practical problems that involve determining perimeter and area in U.S. Customary and metric units (Moved from 5.8) **4.10** The student will a) identify and describe points, lines, line segments, rays, and angles, including endpoints and vertices; and b) identify and describe intersecting, parallel, and perpendicular lines. **4.11** The student will identify, describe, compare, and contrast plane and solid figures according to their characteristics (number of angles, vertices, edges, and the number and shape of faces), using concrete models and pictorial representations. (Moved from 3.14) **4.12** The student will classify quadrilaterals as parallelograms, rectangles, squares, rhombi, and/or trapezoids. **Strand: Probability and Statistics** **4.13** The student will a) determine the likelihood of an outcome of a simple event; b) represent probability as a number between 0 and 1, inclusive; and c) create a model or practical problem to represent a given probability **4.14** The student will a) collect, organize, and represent data in bar graphs and line graphs; b) interpret data represented in bar graphs and line graphs; and

4.8 The student will a) estimate and measure liquid volume and describe the results in U.S. Customary units; b) identify equivalent measurements between units within the U.S. Customary system (cups, pints, quarts, and gallons). **Strand: Patterns, Functions, and Algebra** *Focus: Geometric Patterns, Equality, and Properties* **4.16** The student will a) recognize and demonstrate the meaning of equality in an equation; and b) investigate and describe the associative property for addition and multiplication.	metric units; c) given the equivalent measure of one unit, identify equivalent measures of length, weight/mass, and liquid volume between units within the U.S. Customary system; and d) solve practical problems that involve length, weight/mass, and liquid volume in U.S. Customary units. **Strand: Patterns, Functions, and Algebra** 4.**16** The student will recognize and demonstrate the meaning of equality in an equation.	**4.13** The student will a) predict the likelihood of an outcome of a simple event; and b) represent probability as a number between 0 and 1, inclusive **4.14** The student will collect, organize, display, and interpret data from a variety of graphs.	c) compare two different representations of the same data (e.g., a set of data displayed on a chart and a bar graph, a chart and a line graph, or a pictograph and a bar graph).