2018-2019 Curriculum Map for *Fourth Grade* Math 4th Nine Weeks	Go Math Chapters
M.4.5 *Operations and Algebraic Thinking- Generate and analyze patterns.* Generate a number or shape pattern that follows a given rule. Identify apparent features of the pattern that were not explicit in the rule itself. (e.g., Given the rule "Add 3" and the starting number 1, generate terms in the resulting sequence and observe that the terms appear to alternate between odd and even numbers. Explain informally why the numbers will continue to alternate in this way.)	10
M.4.19 *Measurement and Data- Solving problems involving measurement and conversion of measurements from a larger unit to a smaller unit.* Know relative sizes of measurement units within a system of units, including the metric system (km, m, cm; kg, g; l, ml), the standard system (lb, oz), and time (hr, min, sec.). Within a single system of measurement, express measurements in a larger unit in terms of a smaller unit. Record measurement equivalents in a two-column table.(e.g., Know that 1 ft is 12 times as long as 1 in. Express the length of a 4 ft snake as 48 in. Generate a conversion table for feet and inches listing the number pairs (1, 12), (2, 24), (3, 36), …)	12
M.4.20 *Measurement and Data- Solving problems involving measurement and conversion of measurements from a larger unit to a smaller unit.* Use the four operations to solve word problems involving distances, intervals of time, liquid volumes, masses of objects, and money, including problems involving simple fractions or decimals and problems that require expressing measurements given in a larger unit in terms of a smaller unit. Represent measurement quantities using diagrams such as number line diagrams that feature a measurement scale.	12
M.4.21 *Measurement and Data- Solving problems involving measurement and conversion of measurements from a larger unit to a smaller unit.* Apply the area and perimeter formulas for rectangles in real world and mathematical problems by viewing the area formula as a multiplication equation with an unknown factor. (e.g., find the width of a rectangular room given the area of the flooring and the length.)	13
M.4.22 *Measurement and Data- Represent and interpret data.* Make a line plot to display a data set of measurements in fractions of a unit (1/2, 1/4, 1/8). Solve problems involving addition and subtraction of fractions by using information presented in line plots (e.g., from a line plot find and interpret the difference in length between the longest and shortest specimens in an insect collection).	12
M.4.23 *Measurement and Data- Geometric Measurement: Understand concepts of angle and measure angles.* Recognize angles as geometric shapes that are formed wherever two rays share a common endpoint, and understand concepts of angle measurement: An angle is measured with reference to a circle with its center at the common endpoint of the rays, by considering the fraction of the circular arc between the points where the two rays intersect the circle. An angle that turns through 1/360 of a circle is called a "one-degree angle," and can be used to measure angles. An angle that turns through b one-degree angles is said to have an angle measure of b degrees.	11
M.4.24 *Measurement and Data- Geometric Measurement: Understand concepts of angle and measure angles.* Measure angles in whole-number degrees using a protractor and sketch angles of specified measure.	11
M.4.25 *Measurement and Data- Geometric Measurement: Understand concepts of angle and measure angles.* Recognize angle measure as additive. When an angle is decomposed into non-overlapping parts, the angle measure of the whole is the sum of the angle measures of the parts. Solve addition and subtraction problems to find unknown angles on a diagram in real world and mathematical problems (e.g., by using an equation with a symbol for the unknown angle measure).	11
M.4.28 *Geometry- Draw and identify lines and angles and classify shapes by properties of lines and angles.* Recognize a line of symmetry for a two-dimensional figure as a line across the figure such that the figure can be folded along the line into matching parts. Identify line-symmetric figures and draw lines of symmetry.	10
Include **Number Talks** and integrate the **Mathematical Habits of Mind**. 1. Make sense of problems and persevere in solving them. 2. Reason Abstractly and Quantitatively. 3. Construct viable arguments and critique the reasoning of others. 4. Model with mathematics. 5. Use appropriate tools strategically. 6. Attend to precision. 7. Look for and make use of structure. 8. Look for and express regularity in repeated reasoning.	