2018-2019 Curriculum Map for *Fifth Grade* Math   4th Nine Weeks

	Go Math Chapters
M.5.3 *Operations and Algebraic Thinking- Analyze patterns and relationships.* Generate two numerical patterns using two given rules. Identify apparent relationships between corresponding terms. Form ordered pairs consisting of corresponding terms from the two patterns, and graph the ordered pairs on a coordinate plane. (e.g., Given the rule "Add 3" and the starting number 0 and given the rule "Add 6" and the starting number 0, generate terms in the resulting sequences and observe that the terms in one sequence are twice the corresponding terms in the other sequence. Explain informally why this is so.)	9
M.5.13 *Number and Operations-Fractions- Apply and extend previous understandings of multiplication and division to multiply and divide fractions.* Interpret a fraction as division of the numerator by the denominator (a/b = a ÷ b). Solve word problems involving division of whole numbers leading to answers in the form of fractions or mixed numbers by using visual fraction models or equations to represent the problem. (e.g., Interpret 3/4 as the result of dividing 3 by 4, noting that 3/4 multiplied by 4 equals 3 and that when 3 wholes are shared equally among 4 people each person has a share of size 3/4. If 9 people want to share a 50-pound sack of rice equally by weight, how many pounds of rice should each person get? Between what two whole numbers does your answer lie?)	8
M.5.17 *Number and Operations-Fractions- Apply and extend previous understandings of multiplication and division to multiply and divide fractions.* Apply and extend previous understandings of division to divide unit fractions by whole numbers and whole numbers by unit fractions. Interpret division of a unit fraction by a non-zero whole number and compute such quotients. (e.g., Create a story context for (1/3) ÷ 4 and use a visual fraction model to show the quotient. Use the relationship between multiplication and division to explain that (1/3) ÷ 4 = 1/12 because (1/12) × 4 = 1/3.) Interpret division of a whole number by a unit fraction and compute such quotients. (e.g., Create a story context for 4 ÷ (1/5) and use a visual fraction model to show the quotient. Use the relationship between multiplication and division to explain that 4 ÷ (1/5) = 20 because 20 × (1/5) = 4.) Solve real-world problems involving division of unit fractions by non-zero whole numbers and division of whole numbers by unit fractions by using visual fraction models and equations to represent the problem. (e.g., How much chocolate will each person get if 3 people share 1/2 lb. of chocolate equally? How many 1/3-cup servings are in 2 cups of raisins?)	8
M.5.18 *Measurement and Data- Convert like measurement units within a given measurement system.* Convert among different-sized standard measurement units within a given measurement system (e.g., convert 5 cm to 0.05 m) and use these conversions in solving multi-step, real-world problems.	10
M.5.19 *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). Use operations on fractions for this grade to solve problems involving information presented in line plots. (e.g., Given different measurements of liquid in identical beakers, find the amount of liquid each beaker would contain if the total amount in all the beakers were redistributed equally).	9
M.5.20 *Measurement and Data- Geometric Measurement: Understand concepts of volume and relate volume to multiplication and to addition.* Recognize volume as an attribute of solid figures and understand concepts of volume measurement. A cube with side length 1 unit, called a "unit cube," is said to have "one cubic unit" of volume and can be used to measure volume. A solid figure which can be packed without gaps or overlaps using b unit cubes is said to have a volume of b cubic units.	11
M.5.21 *Measurement and Data- Geometric Measurement: Understand concepts of volume and relate volume to multiplication and to addition.* Measure volumes by counting unit cubes, using cubic cm, cubic in, cubic ft, and improvised units.	11
M.5.22 *Measurement and Data- Geometric Measurement: Understand concepts of volume and relate volume to multiplication and to addition.* Relate volume to the operations of multiplication and addition and solve real-world and mathematical problems involving volume. Find the volume of a right rectangular prism with whole-number side lengths by packing it with unit cubes and show that the volume is the same as would be found by multiplying the edge lengths, equivalently by multiplying the height by the area of the base. Represent threefold whole-number products as volumes (e.g., to represent the associative property of multiplication). Apply the formulas $V = l \times w \times h$ and $V = b \times h$ for rectangular prisms to find volumes of right rectangular prisms with whole number edge lengths in the context of solving real-world and mathematical problems. Recognize volume as additive and find volumes of solid figures composed of two non-overlapping right rectangular prisms by adding the volumes of the non-overlapping parts, applying this technique to solve real-world problems.	11
M.5.23 *Geometry- Graph points on coordinate plane to solve real-world and mathematical problems.* Use a pair of perpendicular number lines, called axes, to define a coordinate system, with the intersection of the lines, the origin, arranged to coincide with the 0 on each line and a given point in the plane located by using an ordered pair of numbers, called its coordinates. Understand that the first number indicates how far to travel from the origin in the direction of one axis and the second number indicates how far to travel in the direction of the second axis, with the convention that the names of the two axes and the coordinates correspond (e.g., x-axis and x-coordinate, y-axis and y-coordinate).	9
M.5.24 *Geometry- Graph points on coordinate plane to solve real-world and mathematical problems.* Represent real-world mathematical problems by graphing points in the first quadrant of the coordinate plane and interpret coordinate values of points in the context of the situation.	9
M.5.25 *Geometry- Classify two-dimensional figures into categories based on their properties.* Understand that attributes belonging to a category of two dimensional figures also belong to all subcategories of that category (e.g., all rectangles have four right angles and squares are rectangles, so all squares have four right angles).	11
M.5.26 *Geometry- Classify two-dimensional figures into categories based on their properties.* Classify two-dimensional figures in a hierarchy based on properties.	11
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.	