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Standards Based Map

3rd Grade Math

Timeline	NxG Standard(s)	Student I Can Statement / Learning Target(s)	Essential Questions	Academic Vocabulary	Strategies / Activities	Resources / Materials	Assessment	Notes / Self - Reflection
1st Month	M.2.NBT.1 use place value understanding to round whole numbers to the nearest 10 or 100. M.2.NBT.2 fluently add and subtract within 1000 using strategies and algorithms based on	I can round numbers to the nearest ten or 100. I can add and subtract numbers within 1000. I can multiply any one digit number by 10.	How do I use the property of operations? How do I round whole numbers to the nearest ten or one hundred? How are addition and subtraction related?	Place value • Rounding • Nearest • Multiples Fluently add subtract • Algorithms Property of-operations • Multiply • strategies	Skip counting Chants Nine tricks Fact family Triangle cards Pictures Round	Number line Hundreds chart Textbook Counters Calculators Anchor charts Manipulatives Base 10 blocks	Oral Timed tests Pencil/paper tests Flash card Around the world	

	place value, properties of operations and/or the relationship between addition and subtraction. M.2.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 .		Why is understanding place value important?					
2nd Month-End of 1st Semester	M.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. M.3.OA.2 interpret whole-number	I can use multiplication and division to solve word problems. I can find the missing number in a multiplication or division equation.	How are multiplication and division related? How do I use multiplication and division to solve problems?	• Products • Whole numbers • Multiplication • Array • Equal groups • Digit • Factor • Division • Dividend • Quotient • Divisor • Grouping • partitioning • Commutative	Modeling Skip counting Groups of manipulatives Touch points Drawing pictures for word problems Word problems	Flash cards Manipulatives Base 10 blocks Multiplication chart Multiplication games	Timed tests Open ended questions Math journal Data notebooks Fluency charts Teacher observation	

	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. M.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	I can use the commutative, associative, and distributive properties of multiplication . I can find the answer to a division problem by thinking of the missing factor in a multiplication problem. I can multiply and divide within 100.		• Associative • Distributive • Fact family • Equation • -Symbol- for the unknown • Operation • Interpret • conventional order	Look for patterns Visual model Mnemonic activities Multi-step word problems -		Student goal setting Pencil/paper test	

	represent the problem. M.3.OA.4 determine the unknown whole number in a multiplication or division equation relating three whole numbers. M.3.OA.5 apply properties of operations as strategies to multiply and divide M.3.OA.6 understand division as an unknown-factor problem. M.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 and by the end of Grade 3, know from memory all products of two one-digit numbers. M.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 and assess the reasonableness of answers using mental computation and estimation strategies including rounding.							

	M.3.OA.9 identify arithmetic patterns (including patterns in the addition table or multiplication table) and explain them using properties of operations .							
Feb-March	M.3.NF.1 understand a fraction 1/*b* as the quantity formed by 1 part when a whole is partitioned into *b* equal parts and understand a fraction a/b as the quantity formed by a parts of size 1/*b*. M.3.NF.2 understand a fraction as a number on the number line and represent	I can label fractions on a number line. I can explain in words and pictures how two fractions are equal. I can compare fractions. I can show whole numbers as fractions. I can recognize fractions that are equal to	How can numbers be represented as fractions?	• Fraction • Whole • Numerator • Denominator • Equal parts • Partitioning • Number line • Interval • End point • Equivalent • Models • Comparison • Symbols	Making models Creating charts Comparing fraction cards Fraction games Investigation Money correlations Time correlations Magnetic fractions Rrulers Arrays	Counters Math journals Pie charts Clocks Fraction parts Number line Rulers	Observations PBL Paper/pencil test	

	fractions on a number line diagram a. 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 and 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. b. represent a fraction *a/b* on a number line diagram by marking off a lengths 1/*b* from 0 and recognize that the resulting interval has size *a/b* and that its endpoint locates the number *a/b*	one whole.			Number line			

	on the number line. M.3.NF.3 explain equivalence of fractions in special cases and compare fractions by reasoning about their size a. understand two fractions as equivalent (equal) if they are the same size or the same point on a number line, b. recognize and generate simple equivalent fractions, e.g., 1/2 = 2/4, 4/6 = 2/3) and explain why the fractions are equivalent, e.g., by using a visual fraction model, c. express whole numbers as fractions, and							

	recognize fractions that are equivalent to whole numbers d. 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.							

March or April	M.3.MD.1 tell and write time to the nearest minute, measure time intervals in minutes and solve word problems involving addition and subtraction of time intervals in minutes, e.g., by representing the problem on a number line diagram. M.3.MD.2 measure and estimate liquid volumes and masses of objects using standard units of grams (g), kilograms (kg) and liters (l) and subtract, multiply or divide to solve one-step word problems involving masses or volumes that are given in	I can tell and write time to the nearest minute. I can measure time in minutes. I can solve telling time word problems by adding and subtracting minutes. I can measure liquids and solids with liters, grams, kilograms. I can use addition, subtraction, multiplication and division to solve word problems involving mass and volume.	How do we choose the appropriate unit of measurement?	• Digital clock Analog clock • Minute • Hour • Second Elapsed time • Interval • Am • Pm • Volume • Mass • Liquid • Solid • Grams • Kilograms • Liters	Clock Practice Investigation Real world problems Websites Volume Mass	Clocks Textbooks Graduated cylinders Manipulatives cm cubes Balance scales Spring scales Science experiments	Performance assessments Real world problems Paper/pencil tests Science experiments and investigations	

	the same units, e.g., by using drawings (such as a beaker with a measurement scale) to represent the problem.							
Embed in all curricular areas all year long	M.3.MD.3 draw a scaled picture graph and a scaled bar graph to represent a data set with several categories and solve one- and two-step “how many more” and “how many less” problems using information presented in scaled bar graphs. M.3.MD.4 generate measurement data by measuring lengths using rulers marked with halves	I can create a picture or bar graph to show data and solve problems. I can create a line plot from measure-ment data, where the measured objects have been measured to the nearest whole number, half, or quarter.	How do we represent information into a picture or bar graph?	• Picture graphs • Bar graphs • Scale • Key • More • Less • Plot • Legend • Map • Halves • Fourths • Quarters • Inches • length	Science experiments Measure-ment scavenger hunt Using tape measures Finding reference measure-ments Classroom polls TECH steps	Rulers Graph paper Crayons Markers Tape measures Yard sticks Meter sticks	Performance tasks Experiments	

	and fourths of an inch and show the data by making a line plot, where the horizontal scale is marked off in appropriate units—whole numbers, halves or quarters.							
April-May	M.3.MD.5 recognize area as an attribute of plane figures and understand concepts of area measurement a. 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, b. a plane figure which can be covered	I can measure the area of plane shapes in square units. I can solve real world math problems using perimeter.	How do I measure area and perimeter of geometric shapes?	• Square unit • Square • Area • Plane • Figure • Cm • Meter • Inch • Feet (units) • Improvised unit • Customary unit • Tiling • Rectangle • Multiply • Distributive property • Area • Overlapping units • Perimeter • Polygons	Arrays relating to multiplication Tiling shapes Diagrams Designing diagrams with specific areas and perimeters Using cheese-its Finding perimeter of school—rooms, etc.	Geoboards Graph paper Cheese-its Shape tiles Tesselations Rulers Ticker tape	Performance tasks Paper/pencil tests Observations	

	without gaps or overlaps by *n* unit squares is said to have an area of *n* square units. M.3.MD.6 measure areas by counting unit squares (square cm, square m, square in, square ft and improvised units). M.3.MD.7 relate area to the operations of multiplication and addition a. 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,							

	b. 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, c. 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 $a \times c$ and use area models to represent the distributive property in mathematical reasoning, d. recognize area as additive and							

	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. M.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.							
April-May	M.3.G.1 understand that shapes in different categories (e.g., rhombuses, rectangles and others) may share attributes (e.g., having four sides), 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	I can place shapes into categories depending upon their attributes. Recognize and draw a quadrilateral such as rhombuses, rectangles, and squares. Divide shapes into parts with equal areas and show those areas as fractions.	How do we classify geometric shapes?	• Perimeter • Area • Polygon • Rectangle • Quadrilateral • Rhombus • Square • Parallelogram • Trapezoid • Rectangle • Angles • Vertices • Sides • Compare • Contrast • Opposite • Parallel • Polygon • Attributes • partition	Sorting quadrilaterals Anchor charts Flash cards with shapes Hand-drawn investigations Tiling Building 3D models	3D shapes Toothpicks and marshmallow Graph paper Geometry blocks Shape templates	Performance tasks Real-world problems Scavenger hunts of shapes Pencil/paper sorts	

	of these subcategories . M.3.G.2 partition shapes into parts with equal areas and 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 ¼ or the area of the shape.							