6th Grade Math Timeline

Macon County 2017-2018

1st 9 Weeks

Standard	Learning Target	Resources
6.NS.B.2 Fluently divide multi-digit numbers using a standard algorithm.	I can divide multi-digit numbers fluently. (R,S)	
6.NS.B.3 Fluently add, subtract, multiply, and divide multi-digit decimals using a standard algorithm for each operation.	I can solve decimal problems using addition, subtraction, multiplication and division fluently (R,S)	
6.NS.B.4 Find the greatest common factor of two whole numbers less than or equal to 100 and the least common multiple of two whole numbers less than or equal to 12. Use the distributive property to express a sum of two whole numbers 1–100 with a common factor as a multiple of a sum of two whole numbers with no common factor. For example, express 36 + 8 as 4 (9 + 2).	I can list the factors of numbers and identify the GCF of two whole numbers. (K)	
6.NS.B.4	I can list multiples of numbers and identify the LCM of two whole numbers. (K)	
6.EE.A.1 Write and evaluate numerical expressions involving whole-number exponents.	I can use the order of operations to simplify expressions. (S)	
6.RP.A.1 Understand the concept of a ratio and use ratio language to describe a ratio relationship between two quantities.	I can recognize a ratio and the forms of ratio language. (K)	

For example, the ratio of wings to beaks in a bird house at the zoo was 2:1, because for every 2 wings there was 1 beak. Another example could be for every vote candidate A received, candidate C received nearly three votes		
6.RP.A.2 Understand the concept of a unit rate a/b associated with a ratio a:b with b ≠ 0. Use rate language in the context of a ratio relationship. For example, this recipe has a ratio of 3 cups of flour to 4 cups of sugar, so there is 3/4 cup of flour for each cup of sugar. Also, we paid $75 for 15 hamburgers, which is a rate of $5 per hamburger.	I can interpret ratio language and identify the two quantities. (K,R)	
6.RP.A.2	I can summarize a unit rate is per one quantity. (K)	
6.RP.A.3a. Make tables of equivalent ratios relating quantities with whole number measurements, find missing values in the tables, and plot the pairs of values on the coordinate plane. Use tables to compare ratios.	I can translate a ratio into a unit rate by dividing. (R)	
6.RP.A.3a	I can organize tables of equivalent ratios. (S)	
6.RP.A.3a	I can solve for a missing value in a ratio table. (S)	
6.RP.A.3b. Solve unit rate problems including those involving unit pricing and constant speed. For example, if a runner ran 10 miles in 90 minutes, running at that speed, how long will it take him to run 6 miles? How fast	I can solve a real world problem involving unit pricing. (S)	

is he running in miles per hour?		
6.RP.A.3c. Find a percent of a quantity as a rate per 100 (e.g., 30% of a quantity means 30/100 times the quantity); solve problems involving finding the whole, given a part and the percent.	I can state that a percent is a quantity out of 100. (K)	
6.RP.A.3c.	I can solve for a percent of a quantity. (S)	
6.RP.A.3c.	I can use percent and part to solve for the whole. (S)	
6.RP.A.3d. Use ratio reasoning to convert customary and metric measurement units (within the same system); manipulate and transform units appropriately when multiplying or dividing quantities.	I can organize a table to convert measurement units. (S)	
6.RP.A.3d.	I can distinguish when to multiply or divide units appropriately in converting customary and metric measurements. (R)	
6.NS.A.1 Interpret and compute quotients of fractions, and solve contextual problems involving division of fractions by fractions (e.g., using visual fraction models and equations to represent the problem is suggested). For example, create a story context for (2/3) ÷ (3/4) and use a visual fraction model to show the quotient; use the relationship between multiplication and division to explain that (2/3) ÷ (3/4) = 8/9 because 3/4 times 8/9 is 2/3 ((a/b) ÷ (c/d) = ad/bc.) Further example: How	I can list the steps in dividing fractions. (K)	

much chocolate will each person get if 3 people share 1/2 lb of chocolate equally? How wide is a rectangular strip of land with length 3/4 mi and area 1/2 square mi?		
6.NS.A.1	I can sketch a model to represent a division problem with fractions. (S)	
6.NS.A.1	I can solve real world problems involving division of fractions. (S)	
6.NS.A.1	I can create a story context given a division problem involving fractions. (P)	

2nd 9 Weeks

Standard	Learning Target	Resources
6.NS.B.4 Find the greatest common factor of two whole numbers less than or equal to 100 and the least common multiple of two whole numbers less than or equal to 12. Use the distributive property to express a sum of two whole numbers 1–100 with a common factor as a multiple of a sum of two whole numbers with no common factor. For example, express 36 + 8 as 4 (9 + 2).	I can recognize distributive property. (K)	
6.NS.B.4	I can apply the distributive property to find a common factor between two whole numbers. (S)	
6.NS.C.5 Understand that positive and negative numbers are used together to describe quantities having opposite directions or values (e.g., temperature above/below zero, elevation above/below sea level, credits/debits, positive/negative electric charge); use positive and negative numbers to represent quantities in realworld contexts, explaining the meaning of 0 in each situation.	I can recognize a positive or negative integer. (K)	
6.NS.C.5	I can choose a positive or negative integer to represent given quantities. (S)	
6.NS.C.6 Understand a rational number as a point on the number line. Extend number line diagrams and coordinate axes familiar from previous grades to represent points on the line	I can state what a rational number is and plot on a number line. (K, S)	

and in the plane with negative number coordinates.		
6.NS.C.6a. Recognize opposite signs of numbers as indicating locations on opposite sides of 0 on the number line; recognize that the opposite of the opposite of a number is the number itself. For example, – (–3) = 3, and that 0 is its own opposite.	I can recognize opposite numbers on a number line. (K)	
6.NS.C.6a.	I can represent the opposite of the opposite of a number. (R)	
6.NS.C.6b. Understand signs of numbers in ordered pairs as indicating locations in quadrants of the coordinate plane; recognize that when two ordered pairs differ only by signs, the locations of the points are related by reflections across one or both axes.	I can indicate which quadrant and ordered pair is located (R)	
6.NS.C.6b.	I can recognize that only when the signs change in an ordered pair the points are reflections. (K).	
6.NS.C.6c. Find and position integers and other rational numbers on a horizontal or vertical number line diagram; find and position pairs of integers and other rational numbers on a coordinate plane.	I can find and plot the position of integers and rational numbers on a number line and coordinate plane. (K, S)	
6.NS.C.7 Understand ordering and absolute value of rational numbers.	I can order rational numbers and their absolute values on a number line. (R,S)	
6.NS.C.7a. Interpret statements of inequality as statements about the relative position of two numbers on a number line diagram. For example,	I can interpret and describe that an equality does represent the position of two numbers on a number line. (R)	

interpret –3 > –7 as a statement that –3 is located to the right of –7 on a number line oriented from left to right.		
6.NS.C.7b. Write, interpret, and explain statements of order for rational numbers in real-world contexts. For example, write –3 oC > –7 oC to express the fact that –3 oC is warmer than –7 oC.	I can write, interpret, and explain inequalities of rational numbers real world situations. (R,S)	
6.NS.C.7c. Understand the absolute value of a rational number as its distance from 0 on the number line and distinguish comparisons of absolute value from statements about order in a real-world context. For example, an account balance of -24 dollars represents a greater debt than an account balance - 14 dollars because -24 is located to the left of -14 on the number line	I can relate that the absolute value of a number is its distance from zero on a number line. (R)	
6.NS.C.7c.	I can distinguish comparisons of absolute value about order. (R)	
6.NS.C.8 Solve real-world and mathematical problems by graphing points in all four quadrants of the coordinate plane. Include use of coordinates and absolute value to find distances between points with the same first coordinate or the same second coordinate.	I can use and graph in all four quadrants of the coordinate plane, and apply that in solving real world problems. (S)	
6.NS.C.8	I can calculate either a vertical or horizontal distance between points on the coordinate plane. (S)	

3rd 9 Weeks

Standard	Learning Target	Resources
6.EE.A.2 Write, read, and evaluate expressions in which variables stand for numbers.	I can translate verbal expressions into algebraic expressions and solve for specific values. (R,S)	
6.EE.A.2a. Write expressions that record operations with numbers and with variables. For example, express the calculation "Subtract y from 5" as 5 - y.	I can rewrite a verbal expression into an algebraic expression using numbers and variables. (K)	
6.EE.A.2b. Identify parts of an expression using mathematical terms (sum, term, product, factor, quotient, coefficient); view one or more parts of an expression as a single entity. For example, describe the expression 2 (8 + 7) as a product of two factors; view (8 + 7) as both a single entity and a sum of two terms.	I can label all parts of an expression using word wall vocabulary. (K)	
6.EE.A.2c. Evaluate expressions at specific values of their variables. Include expressions that arise from formulas used in real-world problems. Perform arithmetic operations, including those involving whole number exponents, in the conventional order when there are no parentheses to specify a particular order (Order of Operations).	I can substitute and solve for given values of a variable and in a formula. (K,S)	
6.EE.A.3 Apply the properties of operations (including, but not limited	I can apply the number properties to find equivalent expressions. (S)	

to, commutative, associative, and distributive properties) to generate equivalent expressions. The distributive property is prominent here. For example, apply the distributive property to the expression 3 (2 + x) to produce the equivalent expression 6 + 3x; apply the distributive property to the expression 24x + 18y to produce the equivalent expression 6 (4x + 3y); apply properties of operations to y + y + y to produce the equivalent expression 3y.		
6.EE.A.4 Identify when expressions are equivalent (i.e., when the expressions name the same number regardless of which value is substituted into them). For example, the expression 5b + 3b is equivalent to (5 +3) b, which is equivalent to 8b.	I can simplify expressions by combining like terms to show equivalency. (R)	
6.EE.B.5 Understand solving an equation or inequality is carried out by determining if any of the values from a given set make the equation or inequality true. Use substitution to determine whether a given number in a specified set makes an equation or inequality true.	I can determine which values make an equation or inequality true, by using substitution. (R)	
6.EE.B.6 Use variables to represent numbers and	I can write algebraic expressions to represent real world situations and solve them for a value. (S)	

write expressions when solving a real-world or mathematical problem; understand that a variable can represent an unknown number, or, depending on the purpose at hand, any number in a specified set.		
6.EE.B.7 Solve real-world and mathematical problems by writing and solving onestep equations of the form x + p = q and px = q for cases in which p, q, and x are all nonnegative rational numbers.	I can write and solve a one-step mathematical equation that models a situation. (S)	
6.EE.B.8 Interpret and write an inequality of the form x > c or x < c which represents a condition or constraint in a real-world or mathematical problem. Recognize that inequalities have infinitely many solutions; represent solutions of inequalities on number line diagrams.	I can interpret and graph an inequality and substitute to determine if a number makes the inequality a true statement. (S)	
6.EE.C.9 Use variables to represent two quantities in a real-world problem that change in relationship to one another. For example, Susan is putting money in her savings account by depositing a set amount each week (50). Represent her savings account balance with respect to the number of weekly deposits (s = 50w, illustrating the relationship between	I can represent quantities using inputs and outputs in real world problems. (R)	

balance amount s and number of weeks w).		
6.EE.C.9a. Write an equation to express one quantity, thought of as the dependent variable, in terms of the other quantity, thought of as the independent variable.	I can label the dependent and independent variables in terms of quantities. (k)	
6.EE.C.9b. Analyze the relationship between the dependent and independent variables using graphs and tables, and relate these to the equation.	I can construct graphs and/or tables to compare dependent and independent variables. (P,R)	

4th 9 Weeks

Standard	Learning Target	Resources
6.G.A.1 Find the area of right triangles, other triangles, special quadrilaterals, and polygons by composing into rectangles or decomposing into triangles and other shapes; know and apply these techniques in the context of solving real-world and mathematical problems.	I can solve for the area of shapes by relating the area of rectangles and triangles. (S)	
6.G.A.1	I can use different strategies to solve for area of polygons in real world problems. (S)	
6.G.A.2 Find the volume of a right rectangular prism with fractional edge lengths by packing it with unit cubes of the appropriate unit fraction edge lengths, and show that the volume is the same as would be found	I can model the volume of a prism using unit cubes. (R)	

by multiplying the edge lengths of the prism. Know and apply the formulas V = lwh and V = Bh where B is the area of the base to find volumes of right rectangular prisms with fractional edge lengths in the context of solving real-world and mathematical problems.		
6.G.A.2	I can apply the volume formulas to find volume of a prism in real world problems. (S)	
6.G.A.3 Draw polygons in the coordinate plane given coordinates for the vertices; use coordinates to find the length of a side that joins two vertices (vertical or horizontal segments only). Know and apply these techniques in the context of solving real-world and mathematical problems.	I can draw polygons on a coordinate plane when given ordered pairs. (S)	
6.G.A.3	I can solve for side lengths of polygons using vertices on the coordinate plane. (S)	
6.G.A.4 Represent three-dimensional figures using nets made up of rectangles and triangles, and use the nets to find the surface area of these figures. Apply these techniques in the context of solving real-world and mathematical problems.	I can represent 3D figures using nets. (R)	
6.G.A.4	I can solve for surface area of 3D figures using nets. (S)	
6.G.A.4	I can use nets to solve real world problems with surface area. (S)	
6.SP.A.1 Recognize a statistical question as one that anticipates variability in the data related to the	I can develop a statistical question and I can interpret the variability of data collected. (P,R)	

question and accounts for it in the answers. For example, “How old am I?” is not a statistical question, but “How old are the students in my school?” is a statistical question because one anticipates variability in students’ ages.		
6.SP.A.2 Understand that a set of data collected to answer a statistical question has a distribution which can be described by its center (mean, median, mode), spread (range), and overall shape.	I can describe a set of data by using its center (mean, median, and mode), spread (range), and overall shape. (K)	
6.SP.A.3 Recognize that a measure of center for a numerical data set summarizes all of its values with a single number, while a measure of variation describes how its values vary with a single number.	I can recognize and explain the similarities and differences of how the mean and the median both represent the center. (K,R)	
6.SP.B.4 Display a single set of numerical data using dot plots (line plots), box plots, pie charts and stem plots.	I can display data in plots on number lines, including dot plots (line plots), pie charts, stem plots, and box plots. (S)	
6. SP.B.5 Summarize numerical data sets in relation to their context. **a**. Report the number of observations. **b**. Describe the nature of the attribute under investigation, including how it was measured and its units of measurement. **c**. Give quantitative measures of center (median and/or mean) and	I can summarize data sets using the measures of center (median/mode) and variability (range). (K,R)	

variability (range) as well as describing any overall pattern with reference to the context in which the data were gathered. **d**. Relate the choice of measures of center to the shape of the data distribution and the context in which the data were gathered.		
6. SP.B.5	I can describe the shape of the distribution using symmetric, cluster, gap, and peaks. (K,R)	