6th Grade Math Power Standards

1st Nine Weeks	Standards
6.NS.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).
6.NS.3	Fluently add, subtract, multiply, and divide multi-digit decimals using a standard algorithm for each operation.
6.NS.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.
6.NS.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 and in the plane with negative number coordinates.
2nd Nine Weeks	**Standards**
6.NS.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.
6.RP.2	Understand the concept of a unit rate a/b associated with a ratio a:b with $b \neq 0$. Use rate language in the context of a ratio relationship.
6.RP.3	Use ratio and rate reasoning to solve real-world and mathematical problems, e.g., by reasoning about tables of equivalent ratios, tape diagrams, double number line diagrams, or equations.
3rd Nine Weeks	**Standards**
6.EE.2	Write, read, and evaluate expressions in which variables stand for numbers.
6.EE.4	Identify when expressions are equivalent (i.e., when the expressions name the same number regardless of which value is substituted into them).
6.EE.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.
6.EE.9	Use variables to represent two quantities in a real-world problem that change in relationship to one another.
4th Nine Weeks	**Standards**
6.G.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.
6.SP.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.
6.SP.5	Summarize numerical data sets in relation to their context.

6th Grade Math Instructional Map

August 1-September 14		**First Nine Weeks Math Mapping**
Domain	Cluster	Standards and I Cans
Number System 14-19 Test Items 31-38% of Test	Compute fluently with multi-digit numbers and find common factors and multiples.	**6.NS.2** Fluently divide multi-digit numbers using the standard algorithm. *ACT ➢ I can add, subtract, multiply, and divide multi-digit whole numbers. **6.NS.3** Fluently add, subtract, multiply, and divide multi-digit decimals using the standard algorithm for each operation. *ACT ➢ I can add, subtract, multiply, and divide multi-digit numbers without a calculator. ➢ I can solve word problems using all operations with decimals. ➢ I can solve multi-step word problems using decimals.
Number System 14-19 Test Items 31-38% of Test	Apply and extend previous understandings of multiplication and division to divide fractions by fractions.	**6.NS.1** Interpret and compute quotients of fractions, and solve word problems involving division of fractions by fractions, e.g., by using visual fraction models and equations to represent the problem. *ACT ➢ I can solve word problems using multiplication and division of fractions. ➢ Solve word problems using multiplication and division of mixed numbers. ➢ Solve multi-step word problems using fractions and mixed numbers. 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) ÷ ¾ =8/9 because ¾ times 8/9 is 2/3 (a/b) / (c/d) = ad/bc. Further example: How much chocolate will each person get if 3 people share ½ lb. of chocolate equally? How wide is a rectangular strip of land with length ¾ mile and area 1/2 square mile?

August 1-September 14

First Nine Weeks Math Mapping

Skills (Concepts Learned in Unit)	Vocab	Tentative Calendar
• Add/Subtract Whole Numbers • Multiply/Divide Whole Numbers (Mastery) • Add/Subtract Decimals • Multiply/Divide Decimals (Mastery) • Convert remainder to fraction • Divide Fractions (Mastery) • Multiply fractions will be through **KCF** (Keep, Change, Flip) Through Board Work- • Decimal to Percent (Intro/ongoing) • Fraction to Percent (Intro/ongoing) • Percent to Fraction (Intro/ongoing) • Percent to Decimal (Intro/ongoing) • Decimal to Fraction (Intro/ongoing)	• Divisor • Dividend • Quotient • Remainder • Multiplicative Inverse • Percent • Denominator • Numerator • Divisibility Rules	**All of these standards should include both fluency practice and contextual practice. Fluency needs to be checked at least bi-weekly. Utilize last pages of practice and problem solving book for extra fluency practice.** Week 1: Welcome/Daily Decimal (F/D/P) ➢ 6.NS.2 Week 2: Division of Whole Numbers ➢ 6.NS.2 ➢ Lesson 8 Week 3: Add/Subtract/Multiply/Divide Decimals ➢ 6.NS.3 ➢ Lesson 9 ➢ Lesson 10 Week 4: Divide Decimals/Divide Fractions ➢ 6.NS.3 ➢ Lesson 10 ➢ Lesson 6 Week 5: Divide Fractions ➢ 6.NS.1 ➢ Lesson 6 ➢ Lesson 7

Instructional Resources

Instructional Tasks and Task Arcs:	**Websites and Other Resources:**
6.NS.1 Tasks 6.NS.2 Tasks 6.NS.3 Tasks Task Completion involves use of Mathematical Practices 1 through 8	**6.NS.1 Worksheets** **6.NS.2 Worksheets** **6.NS.2 Worksheets** **6.NS.3 Worksheets**

September 17-October 5	**First Nine Weeks Math Mapping Continued**	
Domain	Cluster	Standards and I Cans
Number System 14-19 Test Items 31-38% of Test	Compute fluently with multi-digit numbers and find common factors and multiples.	**6.NS.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). *ACT ➢ I can find the GCF of two numbers less than or equal to 100. ➢ I can find the LCM of two numbers less than or equal to 100. ➢ Use the distributive property to find the greatest common factor.
Number System 14-19 Test Items 31-38% of Test	Apply and extend previous understanding of numbers to the system of rational numbers.	**6.NS.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 real-world contexts, explaining the meaning of 0 in each situation. ➢ I can understand and use positive and negative numbers to represent quantities in real-world situations. **6.NS.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 and in the plane with negative number coordinates. *ACT ➢ I can determine a rational number. ➢ I can plot a rational number on a number line. ➢ I can find different types of rational numbers on a number line. ➢ I can order rational numbers. **6.NS.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, e.g., –(–3) = 3, and that 0 is its own opposite. *ACT ➢ I can name the opposites of numbers.

		6.NS.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. *ACT ➢ I can plot pairs of positive and negative numbers on a coordinate plane. ➢ I can plot points in the correct quadrant. ➢ I can find and plot reflections of points on the coordinate plane. **6.NS.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. *ACT ➢ I can find different types of rational numbers on a coordinate plane. ➢ I can plot different types of rational numbers on a coordinate plane. **6.NS.7** Understand ordering and absolute value of rational numbers. *ACT ➢ I can identify the absolute value of a rational number. ➢ I can order rational numbers. **6.NS.7a** Interpret statements of inequality as statements about the relative position of two numbers on a number line diagram. For example, interpret –3 > –7 as a statement that –3 is located to the right of –7 on a number line oriented from left to right. ➢ I can find the position of numbers or variables on a number line when given an inequality. ➢ I can interpret an inequality using integers.

September 17-October 5	**First Nine Weeks Math Mapping Continued**	
Skills (Concepts Learned in Unit)	Vocab	Tentative Calendar
• Find GCF (Use slide strategy) • Find LCM (Use slide strategy) • Distributive Property (use slide strategy) • Find sum using distributive property • Positive/Negative numbers in the real world • Plotting a rational number • Opposites of a number • Opposite of the opposite • Find absolute value of a number • Find distance • Plotting reflections of a point	• Factors • Multiples • Distributive Property • Greatest Common Factor • Least Common Multiple • Integers • Rational Numbers • Opposite numbers • Absolute Value • Distance • Positive Numbers • Negative Numbers • Signed Numbers • Integers • Quadrants • x/y axis • Origin • Ordered pair	**All of these standards should include both fluency practice and contextual practice. Fluency needs to be checked at least bi-weekly. Utilize last pages of practice and problem solving book for extra fluency practice.** Week 6: GCF and LCM ➢ 6.NS.4 ➢ Use slide strategy-it will aide in distributive property & fractions. ➢ Lesson 11 Week 7: Positive/negative numbers in real world & Plotting on number line ➢ 6.NS.5/6.NS.6 ➢ Find, Plot, and order rational numbers on number line. ➢ Find opposite of numbers. ➢ Lesson 12 Week 8: Coordinate Plane ➢ 6.NS.6 ➢ Plot rational numbers in all 4 quadrants ➢ Find and plot reflections of points ➢ Lesson 14 Week 9: Inequality Introduction ➢ 6.NS.7 ➢ Interpret inequality statements ➢ Write, interpret, and explain statements of order for rational numbers ➢ Lesson 13
Instructional Resources		
Instructional Tasks and Task Arcs: 6.NS.5 Tasks 6.NS.5 Tasks 6.NS.4 Tasks 6.NS.6 Tasks 6.NS.7 Tasks	**Websites and Other Resources:** **6.NS.4 Worksheets** **6.NS.6 Worksheets** **6.NS.6 Worksheets** **6.NS.6 Worksheets** **6.NS.7 Worksheets** **6.NS.7 Worksheets**	

Task Completion involves use of Mathematical Practices 1 through 8	

6th Grade Math Instructional Map		
October 8-26	**Second Nine Weeks Math Mapping**	
Domain	Cluster	Standards and I Cans
Number System 14-19 Test Items 31-38% of Test	Apply and extend previous understanding of numbers to the system of rational numbers.	**6.NS.7b** Write, interpret, and explain statements of order for rational numbers in real-world contexts. For example, write –3 °C > –7°C to express the fact that –3 °C is warmer than –7°C. *ACT ➢ I can order rational numbers. ➢ I can write an inequality using integers in a real world situation. (with and without a number line) ➢ I can explain an inequality using integers in a real-world situation (with and without a number line) **6.NS.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, for an account balance of -24 dollars represent a greater debt than an account balance of -14 dollars because -24 is located to the left of -14 on the number line. *ACT ➢ I can identify the absolute value of a number. ➢ I can compare the absolute values of positive and negative numbers and their distance from zero. **6.NS.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. *ACT ➢ I can solve real world and mathematical problems by graphing coordinate pairs on a four quadrant coordinate plane. ➢ I can use absolute value to find the distance between two points on the same axis.

October 8-26

Second Nine Weeks Math Mapping

Skills (Concepts Learned in Unit)	Vocab	Tentative Calendar
• Find absolute value of a number • Compare absolute values of positive and negative numbers • Find distance between points (using absolute value, counting) • Graph ordered pairs on a four quadrant coordinate plane • Plotting reflections of a point	• Positive Numbers • Negative Numbers • Signed Numbers • Opposite Numbers • Integers • Absolute Value • Quadrants • Distance • Integers • Rational Numbers	**All of these standards should include both fluency practice and contextual practice. Fluency needs to be checked at least bi-weekly. Utilize last pages of practice and problem solving book for extra fluency practice.** Week 10: Absolute Value/Coordinate Plane ➢ 6.NS.7 ➢ 6.NS.8 ➢ Lesson 13 ➢ Lesson 14 ➢ Identify the absolute value ➢ Compare absolute values of positive and negative numbers ➢ Real-World problems on coordinate plane ➢ Find distances between points Week 11: Review all Number Systems skills (if on schedule with pacing) ➢ Domain Assessment Week 12: Reteach skills if needed from Number Systems Assessment

Instructional Tasks and Task Arcs:	**Websites and Other Resources:**
6.NS.7 Tasks (same as previous pg.) 6.NS.8 Tasks Task Completion involves use of Mathematical Practices 1 through 8	6.NS.8 Worksheets Number Systems Mini Assessment

Ratios and Proportions **4-6 Test Items** **7-15% of Test**	Understand ratio concepts and use ratio reasoning to solve problems.	**(2nd Nine Weeks- Continued)** **6.RP.1** Understand the concept of a ratio and use ratio language to describe a ratio relationship between two quantities. For example, the ratio of wings to beaks in the 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. ➢ I can describe a ratio between two quantities. ➢ I can use ratios to compare data. **6.RP.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 ¾ cup of flour for each cup of sugar. Also, we paid $75 for 15 hamburgers, which is a rate of $5 per hamburger. (Expectations for unit rates in 6th grade is limited to non-complex fractions) *ACT ➢ I can identify a unit rate ➢ I can solve unit rate problems. (WKU) **6RP.3** Use ratio and rate reasoning to solve real-world and mathematical problems, e.g., by reasoning about tables of equivalent ratios, tape diagrams, double number line diagrams, or equations. ➢ I can use tables to reason with unit rate and ratios. ➢ I can use tape diagrams to reason with unit rate and ratios. ➢ I can use a double number line to reason with unit rate and ratios. ➢ I can use an equation to reason with unit rate and ratios. **6RP.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 create a table of equivalent ratios. (Reinforce coordinate plane) ➢ I can find missing values within a table. ➢ I can plot ratios on in quadrant one on a coordinate plane. **6.RP.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 is he running in miles per hour? *ACT ➢ I can find the unit price of different quantities.

		➢ I can find the constant speed of different quantities **6.RP.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 I can understand percent as a rate per 100. *ACT ➢ I can understand percent as a rate per 100. ➢ I can solve problems finding the whole, part, and percent. (Is/of=%/100) **6.RP.3d** Use ratio reasoning to convert customary and metric measurement units (within the same units); manipulate and transform units appropriately when multiplying or dividing quantities. *ACT ➢ I can apply ratios to converting customary and metric units.
Expressions and Equations 12-16 Test Items 25-33% of Test	Apply and extend previous understanding of arithmetic to algebraic expressions.	**6.EE.1** Write and evaluate numerical expressions involving whole-number exponents. *ACT ➢ I can write exponents in exponential and expanded form. ➢ I can evaluate exponents. ➢ I can use order of operations to solve an expression. **6EE.2** Write, read, and evaluate expressions in which letters stand for numbers. *ACT ➢ I can write expressions containing variables. ➢ I can read expressions containing variables. ➢ I can evaluate expressions containing variable. **6EE.2a** Write expressions that record operations with numbers and with letters standing for numbers. For example, express the calculation "Subtract y from 5" as 5 – y. ➢ I can translate expressions from numerical to word form. **6EE.2b** Identify parts of an expression using mathematical terms (sum, term, product, factor, quotient, and 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 parts of an expression. ➢ I can determine the coefficient, constant, terms, and variables of an expression. ➢ I can determine how many terms are in the expression.

October 29 – December 7	**Second Nine Weeks Math Mapping**	
Skills (Concepts Learned in Unit)	Vocab	Tentative Calendar
• Describe Ratios • Write Ratios • Find unit rate • Solve and reason with ratios and unit rate using tape diagrams • Solve and reason with ratios and unit rate using tables • Solve and reason with ratios and unit rate using double number lines • Create a table of equivalent ratios • Find missing values in a table • Plot ratios in Q1 on coordinate plane • Find the unit price • Find constant speed • Solve percent problems • Convert customary and metric units (conversions given)	• Ratio • Rate • Unit Rate • Equivalent Ratios • Unit Price • Percent • Part to Whole • Whole to Part • Part to Part • Ratio Table • Tape Diagrams • Double Number Line • Equation • Proportion	**All of these standards should include both fluency practice and contextual practice. Fluency needs to be checked at least bi-weekly. Utilize last pages of practice and problem solving book for extra fluency practice.** Week 13: Ratios/Unit Rate ➢ 6.RP.1 ➢ 6.RP.2 ➢ Ratio Language ➢ Lesson 1 ➢ Lesson 2 – Intro to unit rate Week 14-15: Unit Rate/Ratio and Rate Reasoning ➢ 6.RP.2 ➢ 6.RP.3 ➢ Solve for unit rate/price/constant speed ➢ Reason with rates/ratios using a table ➢ Create equivalent ratios using a table ➢ Find missing values within a tale ➢ Reason with rates/ratios using a tape diagram ➢ Reason with rates/ratios using a double number line ➢ Reason with rates/ratios using an equation ➢ Lesson 3 ➢ Lesson 4 Week 16: Percent of a Quantity/Conversions ➢ 6.RP.3 ➢ Is/of = %/100 ➢ Use ratios to convert customary/metric units (conversions given) Week 17: Review/Assessment (if on schedule with pacing) ➢ Reteach all skills in Ratios and Proportions ➢ Domain Assessment Week 18: Reteach skills from Ratios and Proportions domain if needed

Instructional Resources

Instructional Tasks and Task Arcs:	**Websites and Other Resources:**
6.RP.1 Tasks 6.RP.2 Tasks 6.RP.3 Tasks Task Completion involves use of Mathematical Practices 1 through 8	Ratios and Rates Mini Assessment

December 10 – December 19 **Second Nine Weeks Math Mapping**

Skills (Concepts Learned in Unit)	Vocab	Tentative Calendar
• Solve exponents • PEMDAS • Solve problems using order of operations • Translate expressions in standard form to word form • Translate expressions in word form to standard form	• Base • Exponent • Exponential expression • Algebraic expression • Evaluate • Coefficient • Variable • Constant • Order of Operations • Factor • Term	**All of these standards should include both fluency practice and contextual practice. Fluency needs to be checked at least bi-weekly. Utilize last pages of practice and problem solving book for extra fluency practice.** Week 19: Solve exponents/Order of Operations ➢ 6.EE.1 ➢ Solve exponents ➢ Lesson 15 ➢ Solve problems using order of operations (pre-req. to translating expressions) Week 20: Read and Write Expressions (only read and write) ➢ 6.EE.2 ➢ Identify key words ➢ Identify parts of an expression ➢ Determine how many terms are in an expression ➢ Translate expressions in word form to standard form ➢ Translate expressions in standard form to word form

Key Math Words to help with translating expressions:

Addition	Subtraction	Multiplication	Division
Plus More (than) Altogether In all Add Sum Added to Increase Increased by Combined	Less (than) Decreased by Difference Take away Minus Subtracted Deducted (from) Fewer (than)	Multiplied by Product Times Groups of Doubled Triple Of Twice	Quotient Divided by Per Share Half Split Divided into
Equals to	**Parenthesis**	**Exponents**	**Switch Words**
Is Are Was Equal To Total Same as Gives Will be	The quantity of Twice (the sum of) Times (the sum of) Times (the difference of) Plus (the difference of)	Power Squared Cubed	Than Added to From

Instructional ResourcesTerm

Instructional Tasks and Task Arcs:	**Websites and Other Resources:**
6.EE.1 Tasks 6.EE.2 Tasks Task Completion involves use of Mathematical Practices 1 through 8	6.EE.1 Worksheets 6.EE.2 Worksheets 6.EE.2 Worksheets

6th Grade Math Instructional Map		
January 7 - March 7	**Third Nine Weeks Math Mapping**	
Domain	Cluster	Standards and I Cans
Expressions and Equations 12-16 Test Items 25-33% of Test	Apply and extend previous understanding of arithmetic to algebraic expressions.	**6EE.2** Write, read, and evaluate expressions in which letters stand for numbers. *ACT ➢ I can write expressions containing variables. ➢ I can read expressions containing variables. ➢ I can evaluate expressions containing variable. **6EE.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). *ACT ➢ I can solve expressions with variables using Order of Operations. **6EE.3** Apply the properties of operations to generate equivalent expressions. 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. ➢ I can use the properties to create equivalent expressions. ➢ I can use the distributive property to generate and decompose equivalent expressions. **6EE.4** Identify when two expressions are equivalent (i.e., when the two 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 determine if two expressions are equivalent using the distributive property. ➢ I can combine like terms to find equivalent expressions. ➢ I can determine if two expressions are equivalent using factoring or substitution. · ➢ I can write expressions and solve real-world problems when the variable is a positive rational number. **6EE.6** Use variables to represent numbers and 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. ➢ I can understand the different uses of variables.

Expressions and Equations **12-16 Test Items** **25-33% of Test**	Reason about and solve one variable equations and inequalities.	**6EE.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 write one step equations. ➢ I can solve real-world one step equations when the variable is a positive rational number. ➢ I can substitute a value when making an equation true. ➢ I can write an inequality. ➢ I can solve an inequality about a real-world situation. ➢ I can graph the inequality. ➢ I can determine if an inequality has infinite solutions. ➢ I can substitute a value into an inequality to make it true. **6EE.7** Solve real-world and mathematical problems by writing and solving equations of the form x + p = q and px = q for cases in which p, q and x are all nonnegative rational numbers. *ACT ➢ I can write equations and solve real-world problems when the variable is a positive rational number. **6EE.8** Write an inequality of the form x > c or x < c to represent a constraint or condition in a real-world or mathematical problem. Recognize that inequalities of the form x > c or x < c has infinitely many solutions; represent solutions of such inequalities on number line diagrams. *ACT ➢ I can write an inequality about a real-world situation and recognize that it has infinite solutions and graph the inequality. **6.EE.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 balance amount s and number of weeks w). *ACT ➢ I can use variables to represent the relationship between two quantities. **6.EE.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 determine the independent variable. ➢ I can determine the dependent variable. **6.EE.9b**: Analyze the relationship between the dependent and independent variables using graphs and tables, and relate these to the equation. *ACT ➢ I can compare the relationship between variables in equations, graphs, and tables. (Use prior knowledge of ratios with the X and Y table.)

Geometry **5-9 Test Items (combined with SP)** **13-20% of Test**	Solve real world and mathematical problems involving area, surface area, and volume.	**6.G.1** Find the area of right triangles, other triangles, special quadrilaterals, and polygons by composing into rectangles or decomposing into triangles and other shapes; apply these techniques in the context of solving real-world and mathematical problems. *ACT ➢ I can decompose a rectangle into two congruent triangles. ➢ I can find the area of a triangle knowing that it is ½ the area of a rectangle. ➢ I can find the sum of the areas by decomposing a two-dimensional composite shape. ➢ I can find area using the standard formula. **6.G.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. *ACT ➢ I can use coordinate geometry to determine the distance between two points. ➢ I can draw a polygon using a coordinate plane.

January 7 – February 22 **Third Nine Weeks Math Mapping**

Skills (Concepts Learned in Unit)	Vocab	Tentative Calendar
• Read expressions • Write expressions • Solve expressions • Create equivalent expressions using properties of operations • Create equations • Solve equations • Identify equivalent equations • Create inequalities • Solve inequalities • Graph inequalities • Identify solutions for inequalities • Determine relationships between quantities (independent/dependent variable)	• Base • Exponent • Exponential expression • Algebraic expression • Evaluate • Coefficient • Variable • Constant • Order of Operations • Factor • Term	**All of these standards should include both fluency practice and contextual practice. Fluency needs to be checked at least bi-weekly. Utilize last pages of practice and problem solving book for extra fluency practice.** Week 21: Solve expressions ➢ 6.EE.2 ➢ 6.EE.6 ➢ Read, write, and solve expressions ➢ Lesson 16 Week 22-23: Equivalent Expressions ➢ 6.EE.3 ➢ 6.EE.4 ➢ Lesson 17 Week 24: Equations ➢ 6.EE.5 ➢ 6.EE.7 ➢ Lesson 19 Week 25: Inequalities ➢ 6.EE.5 ➢ 6.EE.8 ➢ Lesson 20 Week 26: ➢ 6.EE.9 ➢ Lesson 21 Week 27: Review/Assess/Reteach Expressions and Equations skills (if on schedule with pacing) ➢ Domain Assessment

Instructional Resources

Instructional Tasks and Task Arcs:	**Websites and Other Resources:**
6.EE.2 Tasks 6.EE.3 Task 6.EE.4 Tasks 6.EE.5 Tasks 6.EE.6 Tasks 6.EE.7 Tasks 6.EE.8 Tasks 6.EE.9 Tasks Task Completion involves use of Mathematical Practices 1 through 8	6.EE.3 Worksheets 6.EE.4 Worksheets 6.EE.5 Worksheets 6.EE.6 Worksheets 6.EE.8 Worksheets Expressions and Equations Mini Assessment

February 25 – March 7	**Third Nine Weeks Math Mapping**	
Skills (Concepts Learned in Unit)	Vocab	Tentative Calendar
• Finding the area of triangles (right and other) by composing or decomposing • Find the area of quadrilaterals by composing or decomposing • Find the area of polygons by composing or decomposing • Use a formula to find area • Find the distance between two points • Draw a polygon using a coordinate plane Shapes to include but not limited to: trapezoid, rhombus, square, rectangle, quadrilaterals, kite, right triangle, isosceles, scalene	• Ordered Pair • Coordinate Plane • Vertices • Quadrant • Polygon • Edges • Faces • Formula • Area • Volume • Surface Area • Compose • Decompose • Nets	**All of these standards should include both fluency practice and contextual practice. Fluency needs to be checked at least bi-weekly. Utilize last pages of practice and problem solving book for extra fluency practice.** Week 28: Area/Polygons on Coordinate Plane ➢ 6.G.1 ➢ Area of triangles, quadrilaterals, and polygons (decompose/compose shapes) ➢ Lesson 22 ➢ Draw polygons on coordinate plane/determine distance ➢ 6.G.3 ➢ Lesson 23 Week 29: Surface Area ➢ 6.G.4 ➢ Lesson 24
Instructional Resources		
Instructional Tasks and Task Arcs: 6.G.1 Tasks 6.G.3 Tasks 6.G.4 Task Task Completion involves use of Mathematical Practices 1 through 8	**Websites and Other Resources:** 6.G.1 Worksheets 6.G.4 Worksheets	

6th Grade Math Instructional Map		
March 11- April 12	**Fourth Nine Weeks Math Mapping**	
Domain	Cluster	Standards and I Can
Geometry 5-9 Test Items (combined with SP) 13-20% of Test	Solve real world and mathematical problems involving area, surface area, and volume.	**6.G.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. *ACT ➢ I can find the faces, edges, and vertices of a two-dimensional figure represented as a net. ➢ I can find the surface area of a three dimensional figure using nets. (Decomposed shape) ➢ I can find the surface area of a three dimensional figure. (Not decomposed) ➢ I can find the surface area of a rectangular and triangular prism. **6.G.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 by multiplying the edge lengths of the prism. Know and apply the formulas V=lwh and V=Bh and 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. *ACT ➢ I can find the volume using unit cubes packed into a 3D shape. ➢ I can find the volume of a right rectangular prism by finding the area of the base and multiplying by the layers of unit cubes or height.
Statistics and Probability 5-9 Test Items (combined with G) 13-20% of Test	Develop Understanding of Statistical Variability	**6.SP.1** Recognize a statistical question as one that anticipates variability in the data related to the 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. ➢ I can determine a statistical or non-statistical question. **6.SP.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. *ACT ➢ I can determine the distribution of a set of data. ➢ I can determine the distribution, spread and overall shape of the data. ➢ I can determine the measure of the center of data. (mean) **6.SP.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. *ACT ➢ I can find the mean or measure of center of the data. ➢ I can find the mode, median, and range of the data.

Statistics and Probability 5-9 Test Items (combined with G) 13-20% of Test	Summarize and Describe Distributions	**6.SP.4** Display a single set of numerical data using dot plots (line plots), box plots, pie charts and stem plots. *ACT ➢ I can create a box plot. ➢ I can analyze a box and whisker plot. ➢ I can create and analyze stem plot, pie chart, and dot plots. **6.SP.5** Summarize numerical data sets in relation to their context, such as by: a. Reporting the number of observations. b. Describing 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 variability (range) as well as describing any overall pattern with reference to the context in which the data were gathered. *ACT ➢ I can summarize the data by finding the median, inter quartile range, 25, 50, and 75 percent of the data. d. Relate the choice of measures of center to the shape of the data distribution and the context in which the data were gathered. *ACT ➢ I can determine the overall shape, distribution, and center of the data.
May 6 - 21	**Fourth Nine Weeks Math Mapping- End of the Year**	
Domain	Cluster	Standards and I Can
7th Grade Skills	Pre-requisite to 7th grade standards and skills.	7.EE.B.4. Use variables to represent quantities in a real-world or mathematical problem, and construct simple equations and inequalities to solve problems by reasoning about the quantities. a. Solve contextual problems leading to equations of the form px + q = rand p(x + q) = r, where p, q, and rare specific rational numbers. Solve equations of these forms fluently. Compare an algebraic solution to an arithmetic solution, identifying the sequence of the operations used in each approach. ➢ I can solve a two-step equation using rational numbers. 7.NS.A.1. Apply and extend previous understandings of addition and subtraction to add and subtract rational numbers; represent addition and subtraction on a horizontal or vertical number line diagram. ➢ I can fluently add and subtract rational numbers (integers). 7.NS.A.1. c. Apply properties of operations as strategies to multiply and divide rational numbers. ➢ I can fluently add, subtract, multiply, and divide rational numbers (integers).

March 11 - 15 **Fourth Nine Weeks Math Mapping**

Skills (Concepts Learned in Unit)	Vocab	Tentative Calendar
• Find volume of right rectangular prism	• Ordered Pair • Coordinate Plane • Vertices • Quadrant • Polygon • Edges • Faces • Formula • Area • Volume • Surface Area • Compose • Decompose • Nets	**All of these standards should include both fluency practice and contextual practice. Fluency needs to be checked at least bi-weekly. Utilize last pages of practice and problem solving book for extra fluency practice.** Week 30: Volume ➢ 6.G.2 ➢ Lesson 25 Week 31: Review/Assessment/Reteach Geometry skills (if on schedule with pacing) SPRING BREAK

Instructional Resources

Instructional Tasks and Task Arcs:	**Websites and Other Resources:**
6.G.2 Tasks Task Completion involves use of Mathematical Practices 1 through 8	6.G.2 Worksheets

March 18 – April 12 **Fourth Nine Weeks Math Mapping**

Skills (Concepts Learned in Unit)	Vocab	Tentative Calendar
• Determine statistical question • Determine distribution of data • Measure of center = mean • See overall shape of data (spread) • Find mean, median, mode, range • Find interquartile of data • Create box and whisker plot • Analyze box and whisker plot • Create pie chart, stem and dot plot • Analyze pie chart, stem and dot plot • Summarize data	• Mean • Median • Mode • Range • Outlier • Measure of Center Variation • Spread • Statistical Data • Box and Whisker Plot • Histogram • Dot Plot • Quartile • Interquartile Range Mean • Minimum • Maximum	**All of these standards should include both fluency practice and contextual practice. Fluency needs to be checked at least bi-weekly. Utilize last pages of practice and problem solving book for extra fluency practice.** Week 32: Recognize statistical question/Distribution of set of data ➢ 6.SP.1 ➢ 6.SP.2 ➢ 6.SP.3 ➢ Lesson 26 Week 33: Mean, Median, Mode, Range/Box and Whisker Plots ➢ 6.SP.4 ➢ Lesson 27 ➢ Lesson 28 Week 34: Summarizing Data (Incorporate through Week 31 and 32) ➢ 6.SP.5 ➢ Lesson 29 Week 35: Review, Assessment, Reteach Statistics and Probability skills (if on schedule with pacing) April 15 – May 3 review/teach skills as needed to prepare students for testing.

Instructional Resources

Instructional Tasks and Task Arcs:	**Websites and Other Resources:**
6.SP.1 Tasks 6.SP.2 Tasks 6.SP.3 Task 6.SP.4 Tasks 6.SP.5 Tasks Task Completion involves use of Mathematical Practices 1 through 8	6.SP.1 Worksheets 6.SP.4 Worksheets 6.SP.5 Worksheets

<table>
<tr><td colspan="3">April 15 – May 23 Fourth Nine Weeks Math Mapping</td></tr>
<tr><td>Skills (Concepts Learned in Unit)</td><td>Vocab</td><td>Tentative Calendar</td></tr>
<tr><td>Review all skills taught in the following domains:
• Number Systems
• Expressions and Equations
• Ratios and Proportions
• Geometry
• Statistics and Probability

Practice to prepare students for 7th grade:
• Add, subtract, multiply, and divide integers without a calculator
• Solve one and two-step equations with fractions, decimals, and integers with a calculator</td><td></td><td>All of these standards should include both fluency practice and contextual practice. Fluency needs to be checked at least bi-weekly. Utilize last pages of practice and problem solving book for extra fluency practice.

Week 36: 6th Grade Skill Review
➢ Number Systems
➢ Expressions and Equations
Week 37: 6th Grade Skill Review
➢ Ratios and Proportions, Geometry, Statistics
Week 38: 7th Grade Introduction
➢ Add and Subtract Integers without a calculator
➢ Multiply and Divide Integers without a calculator
Week 39: 7th Grade Introduction
➢ Solve one-step equations with fractions, decimals, and integers with a calculator
➢ Solve two-step equations with fractions, decimals, and integers with a calculator</td></tr>
<tr><td colspan="3">Instructional Resources</td></tr>
<tr><td colspan="2"><u>Instructional Tasks and Task Arcs:</u>
Link to Tasks in all Domains
Task Completion involves use of Mathematical Practices 1 through 8</td><td><u>Websites and Other Resources:</u>
7.NS.1 Worksheets
7.NS.2 Worksheets</td></tr>
</table>

Resources for Teachers		Resources for Students
Braining Camp Lessons Braining Camp Manipulatives IXL Math Videos Math is Fun – how to Brain Pop Study Jams NCTM Classroom Resources Inside Mathematics Performance Tasks Goal Book App Balanced Assessment Performance Tasks 2 Middle School (Grades 6-8) Smarter Balanced Link to CCSS Resources Florida Uploaded Assessment Achieve Exemplar Tasks	Ten Marks Math Games and Worksheets Math Guide - Lessons Math Drills Worksheets Math Aids Worksheets/Handouts Illustrative Mathematics Flocabulary PBSLearning Videos Math Fluency Pages 15-70 Balanced Assessment Performance Tasks Transition (Grades 5-7) Louisiana Believes Practice Tests Achieve the Core CPalms – Resources, Lessons, Assessments Learn Zillion	Adapted Mind – great for student practice A-Plus Math – worksheets, flashcards, games, homework helper (basic skills) AAAMath – notes on how to complete a skill (not all links in website work) Math Central - how you use math in the real world/resources for teachers Math Tutorials Get the Math - how you use math in the real world