Sixth Grade **Quarter 1 (September 5, 2018 – November 9, 2018)** **Math Matrix**

Unit	Modules	Lessons	Standards	Vocabulary
1 Numbers	**1 – Integers** **2 – Factors & Multiples** **3 – Rational Numbers**	**1.1 - 1.3** **2.1 - 2.2** **3.1 - 3.3**	6.NS.4 Find the greatest common factor of two whole numbers 6.NS.5 Understand that positive and negative numbers are used together to describe quantities having opposite directions or values 6.NS.6 Understand a rational number as a point on the number line… 6.NS.6a Recognize opposite signs of number as locations on opposite side of 0… 6.NS.6c Find and position integers and other rational numbers on a horizontal or vertical number line diagram 6.NS.7a Interpret statements of inequality… 6.NS.7b Write, interpret, and explain statements of order for rational numbers in real-world contexts 6.NS.7c Understand the absolute value of a rational number… interpret absolute value as magnitude…in a real-world situation	Opposites Integers Inequality Whole Numbers Absolute Value Natural Numbers Terminating Decimals Repeating Decimals Greatest Common Factor Least Common Multiple Venn Diagram
2 Number Operations	**4- Operations with Fractions** **5- Operations with Decimals**	**4.1 - 4.4** **5.1 - 5.5**	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. 6.NS.2 Fluently divide multi-digit numbers using the standard algorithm. 6.NS.3 Fluently add [and] subtract … decimals using the standard algorithm… . 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.	Reciprocals Remainder Denominator Dividend Divisor Mixed Number Order of operations

Sixth Grade **Quarter 2 (November 13, 2018 – January 25, 2019)** **Math Matrix**

Unit	Modules	Lessons	Standards	Vocabulary
3 Proportionality: Ratios & Rates	**6 – Representing Ratios & Rates** **7 – Applying Ratios & Rates** **8 – Percents**	**6.1 - 6.3** **7.1 - 7.4** **8.1 - 8.3**	6.RP.1 Understand the concept of a ratio and use ratio language to describe a relationship between two quantities. 6.RP.2 Understand the concept of a unit rate a/b associated with a ratio a:b with b ≠ 0, and use rate language… 6.RP.3a Make tables of equivalent ratios… , find missing values in the tables, and plot the pairs of values on the coordinate plane… 6.RP.3b Use ratio and rate reasoning to solve real-world and mathematical problems, e.g., by reasoning about… equations. 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); … 6.RP.3d Use ratio reasoning to convert measurement units; manipulate and transform units appropriately when multiplying or dividing quantities.	Ratio Equivalent Ratios Rate Unit Rate Scale Scale Drawing Scale Factor Conversion Factor Proportion Percent
4 Equivalent Expressions	**9 - Generating Equivalent Numerical Expressions** **10 - Generating Equivalent Algebraic Expressions**	**9.1 - 9.3** **10.1 - 10.3** **** Five days are allotted in Q3 to complete Module 10.***	6.EE.1 Write and evaluate numerical expressions involving whole-number exponents. 6.EE.2a Write expressions that record operations with numbers and with letters standing for numbers 6.EE.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). 6.EE.3 Apply the properties of operations to generate equivalent expressions. Write and evaluate numerical expressions involving whole-number exponents. 6.EE.6 Use variables to represent numbers and write expressions when solving a real-world problem…	Base Exponent Coefficient Constant Variable Distributive Property Order of Operations Like Terms Algebraic Expression Evaluate

Sixth Grade **Quarter 3 (January 28, 2019 – April 7, 2019)** **Math Matrix**

Unit	Modules	Lessons	Standards	Vocabulary
4 Equivalent Expressions	****10 - Continued*** **Generating Equivalent Algebraic Expressions**	10.1 – 10.3	6.EE.1 Write and evaluate numerical expressions involving whole-number exponents. 6.EE.2a Write expressions that record operations with numbers and with letters standing for numbers 6.EE.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). 6.EE.3 Apply the properties of operations to generate equivalent expressions. Write and evaluate numerical expressions involving whole-number exponents.	
5 Equations & Inequalities	**11 – Equations & Relationships** **12 - Relationships in Two Variables**	11.1 – 11.4 12.1 – 12.4	6.EE.2a Write expressions that record operations with numbers and with letters standing for numbers. 6.EE.5 Understand solving an equation or inequality as a process of answering a question: which values from a specified set, if any, 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.NS.6b Find and position integers and other rational numbers on a horizontal or vertical number line diagram. 6.NS.6c . . . find and position pairs of integers and other rational numbers on a coordinate plane. 6.EE.7 Solve real-world 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. 6.EE.8 Write an inequality of the form x > c or x < c to represent a constraint or condition… 6.EE.9. . . Analyze the relationship between the dependent and independent variables using graphs and tables…	Equation Solution Identity Variable Dependent Variable Independent variable Origin Quadrant Coordinates Axes
6 Relationships in Geometry	**13 – Areas & Polygons** **14 – Distance & Area in the Coordinate Plane** **15 – Surface Area & Volume**	13.1 – 13.4 14.1 – 14.2 15.1 – 15.3	6.G.1 Find the area of…special quadrilaterals, and polygons by composing into rectangles or decomposing into triangles and other shapes;… . 6.G.2 Find the volume of a right rectangular prism with fractional edge lengths… 6.G.3 Draw polygons in the coordinate plane;…find the length of a side…in the context of solving problems. 6.G.4 Represent three-dimensional figures using nets…and use the nets to find…surface area. 6.NS.8 Solve…problems by graphing points…include use of coordinates and absolute value to find distances between points…	Unit Squares Net Unit Cube Area Surface Area Volume Parallelogram Trapezoid Rhombus Pyramid Prism Polygon

Sixth Grade **Quarter 4 (April 5, 2019 – June 15, 2019)** **Math Matrix**

Unit	Modules	Lessons	Standards	Vocabulary
7 Measurement & Data	**16 – Displaying, Analyzing, and Summarizing Data**	16.1 – 16.5	6.SP.1 Recognize a statistical question as one that anticipates variability in the data related to the question. … **6.SP.2** Understand that a set of data … has a distribution which can be described by its center, spread, and overall shape. **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. … **6.SP.4** Display numerical data in plots on a number line, including dot plots, histograms, and box plots. **6.SP.5** Summarize numerical data sets in relation to their context. **6.SP.5c** Summarize numerical data sets in relation to their context, such as by giving quantitative measures of center (median and/or mean) and variability (interquartile range and/or mean absolute deviation), as well as describing any overall pattern and an striking deviations from the overall pattern with reference to the context in which the data were gathered.	Mean Median Mode Quartile Lower Quartile Upper Quartile Outliers Box Plot Dot Plot Histogram Mean Absolute Deviation Range Interquartile Range Variability Measures of Variability Statistical Question