Math: Grade 6

UNIT/Weeks (not consecutive)	Timeline/Topics	Essential Questions
4	**<u>Numbers</u>** • Identifying Integers and Their Opposites • Comparing and Ordering Integers • Absolute Value • Greatest Common Factor • Least Common Factor • Least Common Multiple • Identifying Opposites and Absolute Value of Rational Numbers • Comparing and Ordering Rational Numbers	• How do you identify an integer and its opposite? • How do you compare and order integers? • How do you find and use absolute value? • How do you find and use the greatest common factor of two whole numbers? • How do you find and use the least common multiple of two whole numbers? • How can you classify rational numbers? • How can you identify opposites and absolute values of rational numbers? • How do you compare and order rational numbers?
4.6	**<u>Number Operations</u>** • Applying GCF and LCM to Fraction Operations • Dividing Fractions • Dividing Mixed Numbers • Solving Multi-step Problems with Fractions and Mixed Numbers • Dividing Whole Numbers • Adding and Subtracting Decimals • Multiplying Decimals • Dividing Decimals • Applying Operations with Rational Numbers	• How do you use the GCF and LCM when adding, subtracting, and multiplying fractions? • How do you divide fractions? • How do you divide mixed numbers? • How can you solve word problems involving more than one fraction operation? • How do you divide multi-digit whole numbers? • How do you add and subtract decimals? • How do you multiply decimals? • How do you divide decimals? • How can you solve problems involving multiplication and division

		of fractions and decimals?
5.4	**<u>Proportionality: Ratios and Rates</u>** • Ratios • Rates • Using Ratios and Rates to Solve Problems • Rations, Rates, Tables and Graphs • Solving Problems with Proportions • Converting Within Measurement Systems • Converting Between Measurement Systems • Understanding Percent • Percents, Fractions and Decimals • Solving Percent Problems	• How do you use ratios to compare two quantities? • How do you use rates to compare quantities? • How can you use ratios and rates to make comparisons and predictions? • How can you represent real-world problems involving ratios and rates with tables and graphs? • How can you solve problems with proportions? • How do you convert units within a measurement system? • How do you use ratios and proportions to convert measurements? • How can you write a ratio as a percent? • How can you write equivalent percents, fractions and decimals? • How do you use percents to solve problems?
3.8	**<u>Equivalent Expressions</u>** • Exponents • Prime Factorization • Order of Operations • Modeling and Writing Expressions • Evaluating Expressions • Generating Equivalent Expressions	• How do you use exponents to represent numbers? • How do you write the prime factorization of a number? • How do you use the order of operations to simplify expressions with exponents? • How do you write algebraic expressions

		and use models to decide if expressions are equivalent? • How can you use the order of operations to evaluate algebraic expressions? • How can you identify and write equivalent expressions?
4.6	**<u>Equations and Inequalities</u>** • Writing Equations to Represent Situations • Addition and Subtraction Equations • Multiplication and Division Equations • Writing Inequalities • Graphing in the Coordinate Plane • Independent and Dependent Variables in Tables and Graphs • Writing Equations from Tables • Representing Algebraic Relationships in Tables and Graphs	• How do you write equations and determine whether a number is a solution of an equation? • How do you solve equations that contain addition and subtraction? • How do you solve equations that contain multiplication or division? • How can you use inequalities to represent real-world constraints or conditions? • How do you locate and name points in the coordinate plane? • How can you identify independent and dependent quantities from tables and graphs? • How can you use an equation to show a relationship between two variables? • How can you use verbal descriptions, tables, and graphs to represent algebraic relationships?
4.4	**<u>Relationships in Geometry</u>** • Area of Quadrilaterals • Area of Triangles • Solving Area Equations	• How can you find the areas of parallelograms, rhombuses, and trapezoids? • How do you find the area of a triangle?

	• Area of Polygons • Distance in the Coordinate Plane • Polygons in the Coordinate Plane • Nets and Surface Area • Volume of Rectangular Prisms • Solving Volume Equations	• How do you use equations to solve problems about area of rectangles, parallelograms, trapezoids, and triangles? • How can you find the area of a polygon by breaking it into simpler shapes? • How can you use absolute value to find the distance between two points with the same x or y coordinates? • How can you solve problems by drawing polygons in the coordinate plane? • How can you use nets to find surface area? • How do you find the volume of a rectangular prism? • How do you write equations to solve problems involving volume of rectangular prisms?
3	**Measurement and Data** • Measure of Center • Mean Absolute Deviation • Box Plots • Dot Plots and Data Distribution • Histograms	• How can you use measures of center to describe a data set? • How can you determine and use the mean absolute deviation of a set of data points? • How can you use a box plot and measures of spread to describe a data set? • How can you summarize and display numeric data? • How do you display data in a histogram?
3.2	**Integers**	

	• Areas of Parallelograms and Triangles • Adding Integers • Subtracting Integers • Multiplying Integers • Dividing Integers	• How do you add integers? • How do you subtract integers? • How do you multiply integers? • How do you divide integers?