Essential Questions for Math
Grade 6

Module 1: Ratios and Unit Rates	1. How are ratios and rates used in everyday life? 2. How can ratio language and notation be used to describe a relationship between two quantities? 3. How can tables, graphs and equations be used to represent and solve ratio and rate problems?
Module 2: Arithmetic Operations	1. What are the procedures for computing quotients of fractions (including mixed numbers)? 2. Given a word problem, how do you decide which operation(s) (+, -, x, ÷) to use to solve the problem? 3. In what situations can least common multiple and greatest common factor be used? 4. How can you identify a problem involving the distributive property and what procedures do you use for using the distributive property?
Module 3: Rational Numbers	1. What situations in the real-world can be represented by positive and negative numbers, and what is the meaning of zero as it relates to these situations? 2. What is the opposite of a number and use this concept to explain why the opposite of the opposite of a number is the number itself? 3. How do you locate and/or plot a rational number on a vertical or horizontal number line? 4. How can you locate and/or plot a pair of rational numbers in a coordinate plane?
Module 4: Expressions and Equations	1. What are some similarities and differences between algebraic expressions, equations, and inequalities? 2. What are some key words that can be identified to help write an expression, equation, or inequality? 3. What properties can be used to solve real-world equations showing relationships between independent and dependent variables?
Module 5: Area, Surface Area, Volume	1. What is area and why is it valuable to know how to find the area for triangles, quadrilaterals, and irregular or compound polygons? 2. What is volume and how does it relate to rectangular prisms? 3. What procedures can be used for finding surface area of triangular and rectangular prisms and to what real-world problems can surface area for these figures be applied?
Module 6: Statistics	1. What types of graphs can be used to display numerical data and how do you know which graph(s) to choose for the best representation of the data? 2. How can you describe a set of data using quantitative measures of center (median, mean, mode) and variability (range, interquartile range, mean absolute deviation) and select the one that best represents the data? 3. How can you interpret data using overall patterns and any deviations from the overall pattern with reference to the context in which the data were gathered? •