Grade 6 - Math

Course Outline

Topics	Overview & Purpose	Education Standard
Positive Rational Numbers	Students add, subtract, and multiply decimals. They use estimation to check if their answers are reasonable..Students use the long division algorithm, annexing zeros as necessary, to divide whole numbers and decimals. They find dividends with terminating decimals. They use powers of ten to create equivalent division expressions with whole number divisors.Students solve multi-step problems with both fractions and decimals. They make use of all four operations and carefully plan the steps of their solutions.	6.NS.B.3 6.NS.B.2 6.NS.A.1
Integers and Rational Numbers	Students use integers to describe quantities. They read, write, compare, and order positive and negative numbers. They use integers in real-world contexts and apply the definition of opposite.Students extend their understanding of numbers to include absolute value. They interpret the meaning of absolute values in real-world situations. They learn to distinguish between comparisons of absolute value and statements about order.	6.NS.C.7c 6.NS.C.7d 6.NS.C.5
Numeric and Algebraic Equations	Students learn how to rewrite a repeated multiplication expression using exponents. Students then evaluate expressions with exponents. Students also learn that any nonzero number raised to an exponent of zero is equal to one.Students evaluate numerical expressions with whole numbers, fractions, and decimals using order of operations. Students	*6.EE.A.1* 6.EE.B.6 6.EE.A.4

	also learn to insert parentheses into a numerical expression to obtain a certain value.	
Solve Equations and Inequalities	Students use substitution to determine whether a value is a solution to a one-step equation. They do not use properties of equality to solve the equation.Students write one-step addition and subtraction equations for real-world problems, then solve them using the properties of equality .Students write one-step multiplication and division equations for real-world problems, then solve them using the properties of equalityStudents learn how to represent a relationship as a table, graph, and equation. They see how the three representations of a relationship are related. They work with one- and two-step equations.	*6.EE.B.5* 6.EE.B.7 6.EE.C.9
Understand Ratios and Rates	Students use ratios, bar diagrams, and double number lines to describe the relationship between two quantities.Students use multiplication and division to generate equivalent ratios. They determine if given ratios are equivalent.Students use unit rates, including unit prices, to solve problems. They also solve problems related to constant speed using ratio tables and equations.	*6.RP.A.3c* 6.RP.A.1 6.RP.A.3 6.RP.A.3b
Understand and use percent	students use number lines and grids to represent and find percents. They also determine the part and the whole.Students write parts of a whole as fractions, decimals and percents. They convert from one form of the number to the other two forms.Students determine the whole given the part and percent, including when the percent is greater than one hundred or less than one.	6.RP.A.3c