Reavis High School
Algebra Curriculum Snapshot

Unit 1: Connections to Algebra

18 Days	The students will learn how to use expressions, equations, and inequalities to model real-life situations and to solve problems. Students will write and evaluate variable expressions. They will check solutions to equations and inequalities, and they will use verbal and algebraic models to represent real-life problems.

Unit 2: Properties of Real Numbers

13 Days	In this unit, students will learn how to compute with real numbers. They will graph, compare, and order real numbers. Students will add, subtract, multiply, and divide real numbers. They use the Distributive Property and combine like terms.

Unit 3: Solving Linear Equations

14 Days	Students will learn how to solve linear equations and to use formulas, ratios, rates, and percents. Students will solve linear equations which involve multiple steps. They will solve decimal equations and a formula for a specified variable. They will solve real-world problems involving ratios, rates, and percents.

Unit 4: Graphing Linear Equations and Functions

15 Days	In this unit, students will learn how to graph lines, solve direct variation problems, and evaluate functions. They will graph linear equations using tables of values and point plotting, intercepts, and slope. Students will identify equations of horizontal and vertical lines. They will use graphs of linear equations to model and solve real-life problems. Finally, they will identify and evaluate functions.

Unit 5: Writing Linear Equations

15 Days	In this unit, students will learn how to write linear equations and apply them in real-life situations. They will write linear equations in slope intercept, point-slope, and standard forms. They will find the equation of a line using two points and find equations of parallel and perpendicular lines.

Unit 6: Solving and Graphing Linear Inequalities

21 Days	In this unit, students will write, solve and graph linear inequalities in one variable and use inequalities to model real-life situations. They will solve compound inequalities. They will solve absolute value equations and inequalities. They will also graph linear inequalities in two variables.

Unit 7: Systems of Linear Equations and Inequalities

15 Days	Students will solve systems of two linear equations and graph the solutions to systems of linear inequalities. They will solve linear systems by graphing, substitution, and linear combination. They will use linear systems to model real-life situations. Finally, they will determine the number of solutions to a linear system.

Unit 8: Exponents and Exponential Functions

14 Days	In this unit, students will learn to simplify expressions involving exponents, to graph exponential functions, and to model real-life situations using exponentials. Students will also learn properties of exponents, how to graph exponential functions, and use scientific notation. Finally, they will model exponential growth and decay.

Unit 9: Quadratic Equations and Functions

16 Days	Students will learn to evaluate square roots and simplify radicals, graph quadratic functions, and solve real-life problems using quadratic models. They will solve quadratic equations using square roots, graphing, and the quadratic formula. Students will use the discriminant to determine the number of solutions to a quadratic equation.

Unit 10: Polynomials and Factoring

| 18 Days | In this unit, students will identify, compute, and factor polynomial expressions. Students will add, subtract, and multiply polynomials. They will also learn special products of polynomials and factor polynomials. Finally, students will solve polynomial equations by factoring. |