Honors Algebra 1 Syllabus

Course Description/Goals:

The Honors Algebra I course includes the same course of study designed for Algebra I. In addition, students will develop advanced problem solving and symbol manipulation skills. Honors students will be expected to take course concepts to advanced levels of development, understanding, and justification. Honors assignments and assessments will be designed to model AP exam formatting. In Algebra I, students will build on the knowledge and skills from mathematics in Grades 6-8, which provide a foundation in linear relationships, number and operations, and proportionality. Students will study linear, quadratic, and exponential functions and their related transformations, equations, and associated solutions. Students will connect functions and their associated solutions in both mathematical and real-world situations. Students will use technology to collect and explore data and analyze statistical relationships. In addition, students will study polynomials of degree one and two, radical expressions, sequences, and laws of exponents. Students will generate and solve linear systems with two equations and two variables and will create new functions through transformations.

Course TEKS/Objectives:

The Algebra 1 TEKS (Texas Essential Knowledge and Skills) are organized into reporting categories, each focusing on a specific area of algebra. These categories -include: Number and Algebraic Methods; Describing and Graphing Linear Functions, Equations and Inequalities; Writing and Solving Linear Functions, Equations, and Inequalities; and Quadratic and Exponential Functions and Equations. Each category contains specific standards (TEKS) that students are expected to master.
https://tea.texas.gov/sites/default/files/ch111c.pdf

Course Outline:

Semester 1	Semester 2
• Solving Equations and Inequalities • Forms of Linear Equations • Linear Functions and Features • Lines of Best Fit • Systems of Linear Equations & Linear Inequalities • Exponents, Radicals, and Sequences	• Polynomial Operations • Factoring Polynomials • Attributes of Quadratics • Linear, Exponential, and Quadratic Models • Solving Quadratics • Using Algebra in Geometry