

# KMS Connected Mathematics Program

---

## Grade 8

### Math

The goal of the math curriculum is for all students to communicate proficiently in mathematics. The curriculum is structured around mathematical concepts, processes, ways of thinking, skills, and problem solving. Mathematical concepts are embedded in the context of interesting problems through real applications, or mathematical situations. Students explore a series of connected problems, and develop skill and understanding of mathematical ideas.

The mathematical content in both the 8th Grade Math class and the Algebra course relate to algebraic content, thinking and application. The courses differ in  **pacing**, in the resources used to present the content and the instructional presentation. Students successfully completing either of these courses will have an ability to enter high school in a second year Mathematics course, including Geometry or Interactive Math Program, Year 2.

<u>UNIT TITLES</u>	<u>CONCEPTS COVERED</u>
Thinking W/ Mathematical Models	<b>Linear and Inverse Variation</b> -Introduction to functions and modeling; finding the equation of a line; inverse functions; inequalities
Growing, Growing, Growing	<b>Exponential Relationships</b> -Recognize and represent exponential growth and decay in tables, graphs, words, and symbols; rules of exponents; scientific notation
Frogs, Fleas,& Painted Cubes	<b>Quadratic Relationships</b> -Recognize and represent quadratic functions in tables, graphs, words and symbols; factor simple quadratic expressions
Say It With Symbols	<b>Making Sense of Symbols</b> -Equivalent expressions, substitute and combine expressions, solve quadratic equations, the quadratic formula
Looking for Pythagoras	<b>The Pythagorean Theorem</b> -Square roots; the Pythagorean Theorem; connections among coordinates, slope, distance, and area; distances in the plane
Shapes of Algebra	<b>Linear Systems and Inequalities</b> -Coordinate geometry solve inequalities, standard form of linear equations, solve systems of linear equations and linear equalities.







