

Pre-Algebra

Updated 5/7/20

Course Description

The eighth grade math curriculum includes review and extension math skills in the areas of computation, estimation, algebra, geometry, statistics, number theory, ratios, proportions, and percent. Emphasis is on problem solving and applying these skills to everyday situations. The course includes hands-on activities and projects.

Big Ideas

1. Numbers can be expressed in a variety of ways.
2. Variables can help solve for unknown answers found in equations, tables, graphs.
3. Algebra concepts are applied to geometry.
4. Figures can maintain the same shape and size regardless of movement.

Essential Learning Objectives

ELO #	Essential Learner Outcome Description	Standards
1.	Students will know that there are numbers that are not rational, and approximate them by rational numbers.	8.NS.1, 8.NS.2
2.a	Students will understand the connections between proportional relationships, lines, and linear equations.	8.EE.5
2.b	Students will analyze and solve linear equations and pairs of simultaneous linear equations.	8.EE.6
2.c	Students will define, evaluate, and compare functions.	8.F.1, 8.F.2, 8.F.3
2.d	Students will use functions to model relationships between quantities.	8.F.4
3.	Students will work with radicals and exponents.	8.EE.1
4.	Students will understand similarity using physical models, transparencies, or geometry software.	8.G.9
5	Students will investigate patterns of association in bivariate data.	8.SP.1, 8.SP.2
6.a	Students will understand and apply Pythagorean Theorem.	8.G.6, 8.G.7, 8.G.8
6.b	Students will solve real-world and mathematical problems involving volume of cylinders, cones, prisms, pyramids, and spheres.	8.G.5
6.c	Students will understand congruence using physical models, and transparencies.	8.G.2