

CURRICULUM – GRADE 5, 6, 7, & 8 MATH

Mathematics – Grade 5

Mathematics - Pearson – Scott Foresman

This course begins with reinforcement and advancement of prerequisite skills including place value, addition, subtraction, multiplication, and division. The students are then introduced to fractions, graphs and probability, geometry measurement, ratios and percents, and pre-algebra. Throughout the course students are taught problem solving skills and strategies.

Instruction involves introduction of a concept, an activity to practice the concept and individual work to master the concept. Students work individually and in small and large groups to “discover” math concepts.

Pre-algebra Grade 6

Impact Mathematics: Algebra and More, Course 1 - McGraw-Hill

All three levels of middle school pre-algebra cover algebra, geometry, number and operation, and probability and statistics. The algebra portion of the course covers symbolic manipulation of expressions, multiple representations of algebraic relationships and equation solving. The program uses an exposure to mastery approach that introduces concepts informally in the 6th grade and then revisits them with increasing formality and depth through 8th grade. The geometry portion of the 6th grade curriculum focuses on two-dimensional geometry. Students learn terminology and basic properties of polygon and develop area and perimeter formulas.

This course also covers fractions, decimals and percents, and the relationship among these three number representations. Basic concepts of probability are introduced and students determine the difference between theoretical and experimental probability.

Instruction involves individual, and small and large group work to “discover” math concepts.

Pre-algebra – Grade 7

Impact Mathematics: Algebra and More, Course 2 - McGraw-Hill

All three levels of middle school pre-algebra cover algebra, geometry, number and operation, and probability and statistics. The algebra portion of the course covers symbolic manipulation of expressions, multiple representations of algebraic relationships and equation solving. The program revisits concepts that were informally introduced in the 6th grade, with increasing formality and depth.

The geometry portion of the 7th grade curriculum focuses on three-dimensional geometry. Students gain experience visualizing and representing 3D figures and develop surface area and volume formulas.

This course also covers signed numbers and exponents. Additional concepts of probability are introduced that focus on dependent events.

Instruction involves individual, and small and large group work to “discover” math concepts.

8th Grade – Algebra 1

Impact Mathematics: Algebra and More, Course 3 - McGraw-Hill, copyright 2004

All three levels of middle school pre-algebra cover algebra, geometry, number and operation, and probability and statistics. The algebra portion of the course covers symbolic manipulation of expressions, multiple representations of algebraic relationships and equation solving. The program revisits concepts that were informally introduced in the 6th grade, with increasing formality and depth. The primary focus is linear and quadratic equations and their graphs.

The geometry portion of the 8th grade curriculum introduces students to symmetry and geometric transformations including the coordinate plane.

This course extends the understanding of exponents. Students use their statistical knowledge to solve complex problems involving real data.

Instruction involves individual, and small and large group work to “discover” math concepts.