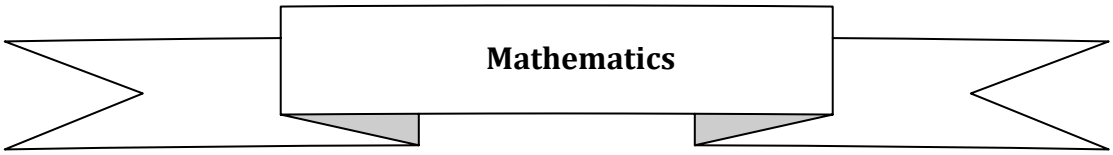

All students are required to take a mathematics course. Placement depends upon student performance in previous mathematics courses and teacher and parent recommendation.

Note: Students interested in the Richard Montgomery International Baccalaureate Program, the Poolesville Global Ecology Program, or the Poolesville Science and Math Magnet must successfully complete Algebra 1 by end of the eighth grade.

Middle School Math 6 (Full Year)
Middle School Math 6 extends students' understanding of numbers and computation to include fractions, decimals, and percents. All concepts and skills are presented in the context of problem solving that requires the use of reasoning and communication. Areas of focus include *data representation and analysis using frequency table and circle graphs, customary and metric measurement, geometric relationships and transformations, algebraic patterns and relationships,* and *probability*. Students in Middle School Math 6 will go on to either Middle School Math 7 or Investigations into Mathematics the following year.

Middle School Math 7 (Full Year)
Middle School Math 7 extends students' understanding of numbers and computation to include integers and proportional reasoning. All concepts and skills are presented in the context of problem solving that requires the use of reasoning and communication. Areas of focus include *functional relationships, arithmetic and geometric sequences, geometric precision, and data analysis and representation using box and whisker plots, histograms*, and *scatter plots*.

This course is for students who have completed the Kindergarten to Grade 5 mathematics curriculum as well as the indicators in Middle School Math 6. Students in Middle School Math 7 will go on to Middle School Algebra Prep, Investigations into Mathematics, or Algebra 1 the following year.

Investigations in Mathematics (Full Year)
Investigations into Mathematics is an enriched course for mathematically accelerated students who have successfully completed the Kindergarten to Grade 5 mathematics curriculum as well as the indicators of Middle School Math 6 and the majority of the indicators of Middle School Math 7 by the end of either Grade 5 or Grade 6. Students successful in this course will take Algebra 1 the following year.

This course is designed for students with exceptional talent in mathematics. The course provides a strong foundation for Algebra 1 and future honors level math students. The units of study include *statistical applications and set theory, real number system, investigation of geometry, patterns, relations, and functions, algebra foundations, operational systems,* and *probability.*

Algebra Prep (Full Year)
Algebra Prep extends students' understanding of numbers to include rational and irrational numbers in the real number system. One goal is to have all students develop computational fluency of real numbers. All concepts and skills are presented in the context of problem solving that requires the use of reasoning and communication. Areas of focus include *multiple representations of linear function, data analysis and representation, probability experiments and simulations,* and *geometric properties and relationships between two- and three-dimensional figures.* Middle School Algebra Prep also previews concepts that are assessed on the Algebra/Data Analysis High School Assessment.

This course is for students who have completed Math 7. Those who are successful will take Algebra 1 the following year.

Algebra I (Full Year)
Algebra 1 examines the basic structure of real numbers, algebraic expressions, and functions. The topics studied are *linear equations, inequalities, functions and systems, quadratic equations and functions, polynomial expressions, data analysis, probability,* and *properties of functions.* Mathematical modeling of real-life problems and problem solving are major themes of the course.

Students in this course take the state Algebra High School Assessment for Mathematics, which includes both algebraic and statistical concepts. This course satisfies the high school Algebra I requirement.

Honors Geometry (Full Year)
Geometry is studied as a mathematical system through the deductive development of relationships in the plane and space. Students formalize their understanding of *geometric concepts, including congruence and similarity, circle chords, secants and tangent segments, parallel and perpendicular lines, angle and side measures in polygons, proofs, logic, transformations, the Pythagorean Theorem, constructions, coordinate geometry,* and *surface area and volume of solids.* Students who are successful in this course satisfy the high school geometry requirement.