



Description Of Secondary Courses

Math-U-See *Pre-Algebra* integrates text, DVD, and manipulatives to teach all basic pre-algebra concepts. These include negative numbers, exponents, factoring, and ratios. The student is taught basic rules of solving equations using the associative, commutative and other properties. Simple operations with polynomials are demonstrated with place-value blocks for conceptual understanding before being taught conventionally. Geometry concepts include surface area, volume, and the Pythagorean theorem.

Math-U-See *Algebra 1* integrates text, DVD, and manipulatives to teach all basic algebra concepts. These include basic properties, solving equations (including simultaneous equations), coin problems, exponents and square roots, scientific notation, unit multipliers, and metric conversions. Graphing lines is taught in detail, and graphing conic sections is introduced. Operations with polynomials are demonstrated with place-value blocks for conceptual understanding before being taught conventionally.

Math-U-See *Geometry* has three main areas of emphasis. They are: the vocabulary of geometry, practical applications of geometry, and traditional geometry, including proofs. Topics include lines, angles, area, perimeter, volume, Pythagorean theorem, axioms and postulates, congruency, and similarity. An introduction to trigonometric functions is included to prepare students for testing they may do before taking a trigonometry course.

Math-U-See *Algebra 2* is a more rigorous algebra course that builds on the previous two courses. Besides review and expansion of topics taught in *Algebra 1*, the course covers advanced factoring, imaginary and complex numbers, conjugate numbers, the binomial theorem, the quadratic formula, motion problems, and other kinds of application problems. Graphing includes extensive practice with conic sections and solving systems of equations visually and algebraically. Vectors are also introduced.

Math-U-See *PreCalculus* combines classic trigonometry with the advanced algebra needed for calculus and other courses. Topics include trig ratios, trigonometric identities, laws of trigonometry, radian measure, polar equations, functions and their graphs, sequences and series, and limits.

Math-U-See *Calculus* begins with a review of graphing, functions, limits, and basic trigonometry. The course introduces derivatives and integrals, along with various techniques and rules for using them. A wide variety of application problems involving science, business, and other topics are included. It is equivalent to a one-year high school calculus course.