Course Description
Grades 8-9 Algebra I

Philosophy Statement: God is a God of order, and through the study of mathematics, students will appreciate the orderliness, exactness, and completeness that God has infused throughout his creation. Through the study of mathematics, students can develop a better appreciation of the infinite wisdom of God when compared to the finiteness of man.

Course Objective: The course sets a strong, solid foundation in working with negative numbers and proceeds to introduce algebraic concepts of variables, functions, relations, polynomials, systems of equations and inequalities, rational exponents, and
quadratic equations.

Textbooks:

Algebra 1   Algebra, Structure and Method, Book 1
McDougal Littell   McDougal Littell/Houghton Mifflin
Copyright 2001   Copyright 1997

Materials:
- Student textbook
- Practice and enrichment worksheets
- Manipulative materials
- Overhead transparencies
- Graph paper
- Calculators

Time Allotment: 44 minutes per day, 5 days per week (One or two year course)

Course Content:
- Introduction to algebra concepts involved with simplifying and evaluating algebraic expressions. Order of operations will be emphasized
- Investigation of real numbers and the properties involved in addition, subtraction, multiplication and division
- Solving linear equations and exploring strategies needed to solve multi-step equations
- Graphing linear equations and functions
- Writing linear equations
- Solving and graphing linear inequalities
- Systems of linear equations and inequalities
- Exponents and exponential functions
- Quadratic equations and functions
- Working with polynomials involving addition, subtraction, multiplication, and division
- Factoring polynomials using all patterns
- Rational equations and functions
- Radicals and the geometric connection with special emphasis on the Pythagorean Theorem and trigonometric ratios

Areas to be evaluated:
- Class participation
- Guided practice
- Homework assignments
- Tests
- Quizzes
- Example notebook

Additional activities:
- Guest speakers (Math related careers)
- Math Club