Math 7 Course Syllabus

**Unit 1:** Operations with Integers

* Order of operations
* Evaluating expressions using substitution
* Absolute value
* Operations with positive and negative integers
* Defining variable and writing equations
* Inverse operations and identities
* Solving 1-step equations with integers
* Real world problems involving integers

**Unit 2:** Rational Numbers

* All operations with rational numbers
* Divisibility rules
* Converting between fractions and decimals
* Putting rational number in order from least to greatest
* Solving 1-step equations with rational numbers
* Real world problems involving rational numbers

**Unit 3:** Rate and Ratio

* Ratio
* Rate
* Unit rate
* Proportions
* Plotting points on a coordinate plane
* Rate of change (slope)
* Constant of proportionality
* Similar polygons
* Scale Drawings
* Indirect measurement
* Dilations
* Real world problems involving rate and ratio

**Unit 4:** Percent

* Percent
* Representing quantities as fractions, decimals, and percents
* Representing a ratio as a percent
* Percent of change
* Simple interest
* Real world problems involving percent

**Unit 5:** Solving Equations

* Simplifying expressions by combining like-terms
* Simplifying expressions with the distributive property
* Solving multi-step equations with integers and with rational numbers
* Solving inequalities
* Plotting inequalities on a number line
* Real world problems involving equations and inequalities

**Unit 6:** Geometry

* Angle definitions
* Classifying angles
* Parallel and perpendicular lines
* Properties of parallel lines and a transversal
* Properties and classification of triangles
* Properties and classification of quadrilaterals
* Area and perimeter formulas of several geometric shapes
* Real world problems involving geometry

**Unit 7:** Statistics and Probability

* Random sampling to draw inferences about a population
* Draw informal comparative inferences about two populations
* Investigate chance processes and develop, use, and evaluate probability models
* Find probabilities of events and compare probabilities
* Find probabilities of compound events using organized lists, tables, tree diagrams, and simulation
* Real world problems involving statistics and probability