

Course Title:	Pre-Algebra
Department:	Mathematics
Grade Level:	6th
Time Per Day/Week:	45 minutes per day/5 days per week
Length of Course:	One year

Course Overview:
<p>Pre-Algebra is a comprehensive introduction to Algebra which focuses not only on Algebraic concepts but also arithmetic as well. Along with the introduction to Algebra, consisting of a strong emphasis on variables, equations and inequalities, the Pre-Algebra class works extensively with different number systems, concepts in geometry (construction of figures, finding area, perimeter and volume), percentages, ratios and similarities, and data analysis. This Pre-Algebra course will take a more in-depth approach to the curriculum and students will be expected to be more independent in and out of class. Pre-Algebra students will study various topics on a rigorous level appropriate for each student.</p>

Primary Resources:
<i>Glencoe Math Accelerated, A Pre-Algebra Program</i> - McGraw Hill, 2017
Secondary Resources (District Approved):
<i>ALEKS</i> , McGraw-Hill

Unit 1 Name:	Operations and Real World Problems Involving Integers and Expressions
Days in Unit:	20 - 25
Representative Learning Goals	
<ul style="list-style-type: none"> • Solve real world and mathematical problems using integers and whole numbers • Identify all types of integers and whole numbers on a number line and understand their value in relation to other integers • Locate and graph points in all four quadrants on a coordinate plane 	

Unit 2 Name:	Operations and Real World Problems Involving Rational Numbers
Days in Unit:	10 -15
Representative Learning Goals	
<ul style="list-style-type: none"> • Identify and describe the differences between rational, irrational, real, and non-real numbers • Simplify expressions involving rational numbers by performing mathematical operations • Solve real world and mathematical problems using rational numbers 	

Unit 3 Name:	Exponents and Square Roots
Days in Unit:	10 -15
Representative Learning Goals	
<ul style="list-style-type: none"> • Simplify expressions involving exponents by performing mathematical operations • Simplify expressions involving square roots by performing mathematical operations 	

Unit 4 Name:	Ratios, Rates, Proportions, and Similarity
Days in Unit:	15 - 20
Representative Learning Goals	
<ul style="list-style-type: none"> • Identify and describe rates and ratios and use those values in proportional reasoning • Graph proportional relationships, interpreting the unit rate as the slope (constant of proportionality) of the graph. • Solve real world and mathematical problems involving scale models, drawings, and maps 	

Unit 5 Name:	Solving Equations and Inequalities
Days in Unit:	15 - 20
Representative Learning Goals	
<ul style="list-style-type: none"> • Solve simple, two-step, and multi-step equations and inequalities involving both integers and rational numbers • Solve real world problems using expressions, equations, and inequalities • Write and translate algebraic phrases 	

Unit 6 Name:	Percents
Days in Unit:	10 - 15
Representative Learning Goals	
<ul style="list-style-type: none"> • Convert between fractions, decimals, and percents • Solve real world and mathematical problems involving percents, percent increase and decrease, sales tax, commission rate, and simple interest. 	

Unit 7 Name:	Probability
Days in Unit:	15 - 20
Representative Learning Goals	
<ul style="list-style-type: none"> • Solve real world and mathematical problems involving the probability, permutation, or combination of an event. • Identify, describe, and calculate independent and dependent probabilities • Calculate the experimental and theoretical probability of an event 	

Unit 8 Name:	Geometry
Days in Unit:	20 - 25
Representative Learning Goals	
<ul style="list-style-type: none"> • Classify and describe the differences that exist within triangles and polygons • Solve real world and mathematical problems using geometric concepts and constructions, area, volume, and surface area • Calculate the perimeter(circumference) and area of polygons and circles 	

Unit 9 Name:	Collecting, Analyzing, and Displaying Data
Days in Unit:	10 -15
Representative Learning Goals	
<ul style="list-style-type: none"> • Use measures of central tendency to analyze a set of data and create comparisons between different sets of data • Solve real world and mathematical problems by collecting, analyzing, and displaying data. • Display a set of data by using charts and graphs 	

Assessments - Classroom-Based
Quizzes, Unit Tests, Individual & Collaborative Projects, Common Assessments, Formative Assessments through Homework Checks and Classwork, ALEKS, Midterm and Final Exams
Assessments - Standardized
Standards of Math Practice Rubric ; STAR 360 Benchmark Testing, Classroom Diagnostic Tools (CDT); PSSA Mathematics

Standards
Pennsylvania Academic Standards for Mathematics Grade 7