

Course Title:	Mathematics C (Grade 6)
Department:	Mathematics
Grade Level:	6
Time Per Day/Week:	50 minutes a day
Length of Course:	Full Academic Year

Course Overview:

Mathematics C (Grade 6) equips students with essential skills needed to meet the PA Standards in Mathematics fostering comprehension, retention, and application of eligible content throughout the academic year. Building upon the foundation laid in K-4 Math, Mathematics C (Grade 6) maintains its focus on developing students' ability to think critically, communicate effectively, reason logically, and solve problems using a variety of tools and strategies by leveraging the 8 Standards of Mathematical Practice. By continuing to hone these practices, students cultivate a deeper understanding of mathematical concepts, while also acquiring essential skills for real-world application. Alongside the 65-minute core content block, Mathematics C (Grade 6) provides students the opportunity to engage in supplementary practice or enrichment activities during RAM time, enhancing their comprehension of mathematical concepts and skills through the use of differentiated instruction supported by online platforms, such as Redbird and Freckle. Students mastery of the [Grade 6 PA Standards in Mathematics](#) and proficiency in the [8 Standards of Mathematical Practice](#) contribute to our Pine-Richland math matrix, aligning students' ability to the appropriate math placement. Within Mathematics C (Grade 6) , there are twelve units of study aligned to the PA Standards for Grade 5 in particular as reflected below.

Primary Resources:

Glencoe Math Built to the Common Core, Glencoe/McGraw Hill/Copyright 2016

Secondary Resources (District Approved):

Computer Adaptive Resources:

- ALEKS, McGraw- Hill, Prodigy, Khan Academy

Unit 1:	Algebraic Concepts: Expressions, Equations and the Number System
Skill:	Compute with Multi-Digit Numbers
Days in Unit:	10
Representative Learning Goals	
• Fluently add, subtract, multiply, and divide decimals • Compute with multi-digit numbers	

Unit 2:	Ratio and Proportional Relationships
Skill:	Ratio and Rates
Days in Unit:	11-12
Representative Learning Goals	
• Apply ratio concepts and use ratio reasoning to solve problems • Express comparisons as ratios in multiple ways. (Ex. a/b, a to b, $a:b$) • Demonstrate ratio reasoning by determining better buy, scale measurements, unit rates, and percents	

Unit 2:	Ratio and Proportional Relationships
Skill:	Fractions, Decimals, and Percents
Days in Unit:	12-13
Representative Learning Goals	
• Converting percents, fractions, and decimals • Model and compare values of whole numbers, mixed numbers, fractions, and decimals	

Unit 1:	Algebraic Concepts: Expressions, Equations and the Number System
Skill:	Multiply and Divide Fractions
Days in Unit:	14-15
Representative Learning Goals	
• Assess and review adding, subtracting and multiplying fractions (mixed numbers, fractions and whole number as fraction) • Apply the associative, commutative, distributive and/or identify properties to write equivalent fractions or expressions	

Unit 1:	Algebraic Concepts: Expressions, Equations and the Number System
Skill:	Integers and the Coordinate Plane
Days in Unit:	11-12
Representative Learning Goals	
• Solve Algebraic Equations with positive and negative integers • Understand magnitude and distance in relation to absolute value	

Unit 1:	Algebraic Concepts: Expressions, Equations and the Number System
Skill:	Expressions
Days in Unit:	11-12
Representative Learning Goals	
• Reinforce the concepts of base and exponent as it applies to expanded and standard form • Utilize the terms squared and cubed • Apply the associative, commutative, distributive and/or identify properties to write equivalent fractions or expressions. • Construct mathematical expressions and equations that correspond to given situations, evaluate expressions, and use expressions and formulas to solve problems.	

Unit 1:	Algebraic Concepts: Expressions, Equations and the Number System
Skill:	Equations
Days in Unit:	9-10
Representative Learning Goals	
• Construct mathematical expressions and equations that correspond to given situations, evaluate expressions, and use expressions and formulas to solve problems • Create, solve, and interpret algebraic expressions, one-variable equations, or inequalities in real-world and mathematical problems • Determine combinations of symbols and numbers to create expressions, equations, and inequalities that model mathematical situations	

Unit 1:	Algebraic Concepts: Expressions, Equations and the Number System
Skill:	Functions and Inequalities
Days in Unit:	11-12
Representative Learning Goals	
• Identify and graph solutions to inequalities on a number line • Create, solve, and interpret algebraic expressions, one-variable equations, or inequalities in real-world and mathematical problems	

Unit 4:	Geometry
Skill:	Area
Days in Unit:	10-11

Representative Learning Goals

- Extend prior knowledge of the characteristics of 2-D and 3-D shapes, including the measures of area and volumes, by exploring, solving, and interpreting real world problems.
- Use models to illustrate the meaning of perimeter, area, and volume
- Solve problems involving length, perimeter, area and/or volume of geometric figures

Unit 4: Geometry

Skill: Volume and Surface Area

Days in Unit: 9-10

Representative Learning Goals

- Extend prior knowledge of the characteristics of 2-D and 3-D shapes, including the measures of area and volumes, by exploring, solving, and interpreting real world problems.
- Estimate Areas and Volumes of shapes and solids as the sums of areas of tiles and volumes of cubes
- Use given measurements to calculate a missing length. perimeter, area, and/or volume

Unit 3: Statistics and Probability: Analyzing Data and Measurements

Skill: Statistical Measure

Days in Unit: 8

Representative Learning Goals

- Assimilate the concepts of the measures of central tendency (mean, median, mode) of a data set, calculate accurately the measures of central tendency, and interpret these measures in the context of the given situation.
- Determine all possible combinations, outcomes and/or calculate the probability of a simple event

Unit 3: Statistics and Probability: Analyzing Data and Measurements

Skill: Statistical Displays

Days in Unit: 10-11

Representative Learning Goals

- Demonstrate an understanding of statistical variability by displaying, analyzing, and summarizing distributions
- Interpret data displayed in a table, histogram, graph, or data summarized by numerical measures. Ex. Box and Whisker Plots

Assessments - Classroom-Based

Quizzes, Unit Tests, Individual & Collaborative Projects, Common Assessments, Formative Assessments through Homework Checks and Classwork

Assessments - Standardized

[Standards of Math Practice Rubric](#); STAR 360 Benchmark Testing; PSSA Mathematics

Standards

[6th Grade Mathematics Assessment Anchors and Eligible Content](#)