

6th Grade Mathematics

Teacher

Mr. Sloman

Grade Level

6th Grade

Course

6th Grade Mathematics

Course Description

This course prepares students for Pre-Algebra. General topics that are covered include decimals, fractions, equations, percents, graphing in the coordinate plane, and probability. A review of measurement, patterns, displaying and analyzing data, multiplication, and division will also be covered. Guided Problem solving strategies throughout the text provide students with the tools they need to be effective and independent learners. An emphasis on fractions solidifies student understanding of rational number operations in preparation for applying these skills to algebraic equations. Both formative and summative assessments will be used when determining student grades.

Textbook:

Title: Mathematics Course 2

ISBN: 0-13-133992-5

Authors: Charles, Illingworth, McNemar, Mills, Ramirez, Reeves

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Assessment

There will be a minimum of 3 assignments scored for each of the weeks in a quarter. Points will be obtained from assignments, quizzes, chapter tests, and projects.

1st Quarter 6th Grade Mathematics				
Content	Assessment	Standards	Common Core	Essential Questions
Adding & Subtracting Decimals	Quarterly Exams, Chapter Tests, Quizzes, Book Assignments, Worksheets, & Projects		6NS 3,4	Students will be able to add, subtract, multiply, & divide decimals
Multiplying Decimals			6NS 3,4	
Dividing Decimals			6NS 3,4	
Measuring Metric Units			5MD 1	Students will be able to use and convert metric units of measurement
Adding & Subtracting Integers			6NS 5	Students will be able to add, subtract, multiply, & divide integers
Multiplying & Dividing Integers			6NS5	
Order of Operations			6EE 1,2c,3	Students will use Order of Operations and the Distributive Property to solve problems
Mean, Median, Mode, & Range			6SP 5	Students will describe data using Mean, Median, Mode, & Range

Exponents & Order of Operations	Quarterly Exams, Chapter Tests, Quizzes, Book Assignments, Worksheets, & Projects		6EE 1,2c,3	Students will write & simplify expressions with exponents
Prime Factorization			6NS 2,4	Students will be able to find multiple and factors
Greatest Common Factor			6NS 2,4	Students will find the Greatest Common Factor of two or more numbers
Least Common Multiple			6NS 2,4	Students will find the Least Common Multiple of two or more numbers
Simplifying Fractions			6NS 1	Students will be able to simplify and write equivalent fractions
Comparing & Ordering Fractions			6NS 1	Students will be able to compare and order fractions
Mixed Numbers & Improper Fractions			6NS 1	Students will be able to convert between mixed numbers & improper fractions
Fractions & Decimals			6NS 1	Students will be able to convert between fractions & decimals
Rational Numbers			6NS 7	Students will compare and order rational numbers

2nd Quarter 6th Grade Mathematics					
Content	Assessment	Standards	Common Core	Essential Questions	
Adding & Subtracting Fractions	Quarterly Exams, Chapter Tests, Quizzes, Book Assignments, Worksheets, & Projects		6NS 1	Students will be able to add, subtract, multiply, & divide fractions & mixed numbers	
Adding & Subtracting Mixed Numbers			6NS 1		
Multiplying Fractions & Mixed Numbers			6NS 1		
Dividing Fractions & Mixed Numbers			6NS 1		
Changing Units in Customary System				5MD 1	Students will be able to change units of length, capacity, and weight in the customary system
Precision				4MD 1,2,3	Students will be able to find and compare the precision of measurement
Algebraic Expressions				6EE 1,2 5,6,7,8	Students will be able to write and evaluate algebraic expressions
Number Sense to Solve Equations				6EE 1,2 5,6,7,8	Students will be able to solve one-step equations by substitution, mental math, and estimation

Solving Inequalities by Addition and Subtraction			6EE 1,2 5,6,7,8	Students will be able solve equations by adding and subtracting
Solving Equations by Multiplying & Dividing	Quarterly Exams, Chapter Tests, Quizzes, Book Assignments, Worksheets, & Projects		6EE 1,2 5,6,7,8	Students will solve equations by multiplying and dividing
Two Step Equations			6EE 1,2 5,6,7,8	Students will write and evaluate two-step operations using number sense and inverse operations
Solving Inequalities by Addition & Subtraction			6EE 1,2 5,6,7,8	Students will be able to solve inequalities by adding, subtracting, multiplying, & dividing
Solving Inequalities by Multiplication and Division			6EE 1,2 5,6,7,8	
Ratio			6RP 1,2,3abcd	Students will be able to write ratios and use them to compare quantities
Unit Rates			6RP 1,2,3abcd	Students will use proportional reasoning to find unit rates and unit costs
Proportion			6RP 1,2,3abcd	Students will test whether ratios form a proportion by using equivalent ratios and cross products

3rd Quarter 6th Grade Mathematics				
Content	Assessment	Standards	Common Core	Essential Questions
Maps & Scale	Quarterly Exams, Chapter Tests, Quizzes, Book Assignments, Worksheets, & Projects		7G 1	Students will use proportions to solve problems involving scale
Similar Figures				Students will be able to use proportions to find missing lengths of similar figures
Understanding Percents			6RP 3c	
Percent, Fractions, & Decimals			6RP 3c	Students will be able to convert between Percents, Fractions, & Decimals
Solving Percent Using Proportion & Equations			6RP 3c	Students will use proportion & equations to find the percent of a number
Sale Price & Discount			6RP 3c	Students will use real life examples to find sale price, discount amount, & percent of discount
Percent of Change			6RP 3c	Students will find percents of increase & decrease
Lines & Planes				7G 4,5,6

Angles	Quarterly Exams, Chapter Tests, Quizzes, Book Assignments, Worksheets, & Projects		7G 4,5,6	Students will classify and work with both single angles & pairs of angles
Line Angle Relationship			7G 4,5,6	
Classifying Triangles			7G 4,5,6	Students will be able to find the angle measures and classify triangles
Polygons			6G 1	Students will be able to classify polygons & various other quadrilaterals
Similar Figures			7G 4,5,6	Students will identify congruent figures and use them to find missing measurements
Graphing on a Coordinate Plane			6NS 6b, 6C	Students will be able to name and graph coordinates on a coordinate plane
Graphing Equations			6NS 6b, 6C	Students will find solutions and graph linear equations
Finding Slope			6NS 6b, 6C	Students will be able to find the slope of a line and be able to use that knowledge to solve problems
Translations, Reflections, Rotations, and Tessellations				Students will be able to identify and graph Translations, Reflections, and Rotations

4th Quarter 6th Grade Mathematics				
Content	Assessment	Standards	Common Core	Essential Questions
Area of Parallelogram	Quarterly Exams, Chapter Tests, Quizzes, Book Assignments, Worksheets, & Projects		6G 1,2,3,4	Students will find the area and perimeter of a parallelogram, triangle, circle, & other various polygons
Perimeter and Area of a Triangle			6G 1,2,3,4	
Area of other figures			6G 1,2,3,4	
Circumference and Area of Circles			6G 1,2,3,4	
Surface Area of Prisms & Cylinders			6G 1,2,3,4	Students will find the surface area of Prisms & cylinders
Volume of Prisms and Cylinders			6G 1,2,3,4	Students will be able to find the volume of prisms & cylinders
Pythagorean Theorem				Students will use the Pythagorean theorem to solve real world problems
Irrational Numbers				Students will find square roots and classify them as rational or irrational numbers
Square Roots				

Tree Diagrams & Fundamental Counting Principals	Quarterly Exams, Chapter Tests, Quizzes, Book Assignments, Worksheets, & Projects		6SP 1,2,3,4	Students will make and use sample spaces and use the fundamental counting principle to solve real world problems
Probability			6SP 1,2,3,4	Students will be able to find the probability and the complement of an event
Independent & Dependent Events			6SP 1,2,3,4	Students will find the probability of independent & dependent events
Permutations			6SP 1,2,3,4	Students will be able to find and distinguish between permutations & combinations
Combinations			6SP 1,2,3,4	
Frequency Tables & Line Plots			6SP 1,2,3,4	Students will construct and analyze data in multiple graph forms
Bar, Line, Circle Graphs & Histograms			6SP 1,2,3,4	
Stem & Leaf Plots			6SP 1,2,3,4	
Scatter Plots			6SP 1,2,3,4	

Spread Sheet & Data Display			6SP 1,2,3,4	Students will create spreadsheets and use that data to persuade
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