



Bronx Manhattan Seventh-day Adventist School
1440 Plimpton Avenue, N.Y. 10452
Office: (718) 588-7598 Website: bmsdaschool.org

Math Long-Range Plan

School Year: 2024-2025

Grade Level: 6

Teacher: Ms. Matos

Book: BigIdeas Math

September: Ratios and Proportional Relationships

Chapter:

Chapter 3	22 Days
Chapter Opener	1 Day
Section 3.1	3 Days
Section 3.2	3 Days
Section 3.3	3 Days
Section 3.4	3 Days
Section 3.5	3 Days
Section 3.6	3 Days
Connecting Concepts	1 Days
Chapter Review	1 Day
Chapter Test	1 Day

- **Standards:**
 - 6.RP.1: Understand the concept of a ratio and use ratio language to describe a ratio relationship between two quantities.
 - 6.RP.2: Understand the concept of a unit rate a/b associated with a ratio a with $b \neq 0$, and use rate language in the context of a ratio relationship.
 - 6.RP.3: Solve unit rate problems including those involving unit pricing and constant speed.
- **Topics:**
 - Introduction to ratios and ratio language
 - Calculating and interpreting unit rates
 - Solving problems involving ratios and proportional relationships
- **Activities:**
 - Explore different ways to represent ratios (fraction, colon, word form)
 - Calculate unit rates from real-life scenarios (e.g., unit pricing, speed)
- **Assessments:**
 - Ratio and unit rate quiz
 - Problem-solving assessment involving proportional relationships



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October: The Number System

Chapter:

Chapter 2		15 Days
Chapter Opener		1 Day
Section 2.1		1 Day
Section 2.2		3 Days
Section 2.3		2 Days
Section 2.4		1 Day
Section 2.5		1 Day
Section 2.6		1 Day
Section 2.7		2 Days
Connecting Concepts		1 Day
Chapter Review		1 Day
Chapter Test		1 Day

- **Standards:**
 - 6.NS.1: Interpret and compute quotients of fractions and solve word problems involving division of fractions by fractions.
 - 6.NS.2: Fluently divide multi-digit numbers using the standard algorithm.
 - 6.NS.3: Fluently add, subtract, multiply, and divide multi-digit decimals using the standard algorithm for each operation.
- **Topics:**
 - Dividing fractions and interpreting quotient
 - Fluently dividing multi-digit numbers
 - Operations with multi-digit decimals
- **Activities:**
 - Practice dividing fractions using visual models and algorithms
 - Apply operations to solve real-world problems involving decimals
- **Assessments:**
 - Fraction division quiz
 - Multi-digit operations assessment (decimals and whole numbers)



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November: Expressions and Equations

Chapter:

Chapter 5		15 Days
Chapter Opener		1 Day
Section 5.1		2 Days
Section 5.2		2 Days
Section 5.3		2 Days
Section 5.4		2 Days
Section 5.5		3 Days
Connecting Concepts		1 Day
Chapter Review		1 Day
Chapter Test		1 Day

- **Standards:**
 - 6.EE.1: Write and evaluate numerical expressions involving whole-number exponents.
 - 6.EE.2: Write, read, and evaluate expressions in which letters stand for numbers.
 - 6.EE.3: Apply the properties of operations to generate equivalent expressions.
- **Topics:**
 - Evaluating expressions with exponents
 - Writing and solving equations with variables
 - Using properties of operations to simplify expressions
- **Activities:**
 - Simplify and evaluate expressions with exponents
 - Solve equations and apply properties to generate equivalent expressions
- **Assessments:**
 - Expression evaluation quiz
 - Equation solving assessment



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December: Geometry

Chapter:

Chapter 7		16 Days
Chapter Opener		1 Day
Section 7.1		1 Day
Section 7.2		1 Day
Section 7.3		2 Days
Section 7.4		2 Days
Section 7.5		2 Days
Section 7.6		2 Days
Section 7.7		2 Days
Connecting Concepts		1 Day
Chapter Review		1 Day
Chapter Test		1 Day

- **Standards:**
 - 6.G.1: Find the area of right triangles, other triangles, special quadrilaterals, and polygons by composing into rectangles or decomposing into triangles and other shapes; apply these techniques in the context of solving real-world and mathematical problems.
 - 6.G.2: Find the volume of a right rectangular prism with fractional edge lengths by packing it with unit cubes, and show that the volume is the same as would be found by multiplying the edge lengths.
- **Topics:**
 - Area of triangles and polygons
 - Volume of rectangular prisms
- **Activities:**
 - Calculate area using various methods (composition, decomposition)
 - Determine volume by packing with unit cubes and using the formula
- **Assessments:**
 - Area calculation quiz
 - Volume assessment



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January: Statistics and Probability

Chapter: 9 and 10

Chapter 9		12 Days
Chapter Opener		1 Day
Section 9.1		2 Days
Section 9.2		1 Day
Section 9.3		1 Day
Section 9.4		2 Days
Section 9.5		2 Days
Connecting Concepts		1 Day
Chapter Review		1 Day
Chapter Test		1 Day

- **Standards:**
 - 6.SP.1: Recognize a statistical question as one that anticipates variability in the data related to the question and accounts for it in the answers.
 - 6.SP.2: Understand that a set of data collected to answer a statistical question has a distribution which can be described by its center, spread, and overall shape.
 - 6.SP.3: Recognize that a measure of center for a numerical data set summarizes all its values with a single number, while a measure of variation describes how its values vary with a single number.
- **Topics:**
 - Statistical questions and variability
 - Measures of center and variation
 - Interpreting data distributions
- **Activities:**
 - Formulate statistical questions and design surveys to collect data
 - Analyze data sets to determine measures of center and spread
- **Assessments:**
 - Statistical question assessment
 - Data interpretation quiz



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February: Ratios and Proportional Relationships (continued)

Chapter:

Chapter 3		22 Days
Chapter Opener		1 Day
Section 3.1		3 Days
Section 3.2		3 Days
Section 3.3		3 Days
Section 3.4		3 Days
Section 3.5		3 Days
Section 3.6		3 Days
Connecting Concepts		1 Days
Chapter Review		1 Day
Chapter Test		1 Day

- **Standards:**
 - 6.RP.3: Solve unit rate problems including those involving unit pricing and constant speed.
 - 6.RP.3a: Make tables of equivalent ratios relating quantities with whole-number measurements, find missing values in the tables, and plot the pairs of values on the coordinate plane.
- **Topics:**
 - Unit rates and ratio tables
 - Plotting points on the coordinate plane
- **Activities:**
 - Create and analyze tables of equivalent ratios
 - Plot points on a coordinate plane to represent ratio relationships
- **Assessments:**
 - Ratio table assessment
 - Coordinate plane quiz



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March: Expressions and Equations (continued)

Chapter:

Chapter 6		14 Days
Chapter Opener		1 Day
Section 6.1		3 Days
Section 6.2		2 Days
Section 6.3		2 Days
Section 6.4		3 Days
Connecting Concepts		1 Day
Chapter Review		1 Day
Chapter Test		1 Day

- **Standards:**
 - 6.EE.4: Identify when two expressions are equivalent (i.e., when the two expressions name the same number regardless of which value is substituted into them).
 - 6.EE.5: Understand solving an equation or inequality as a process of answering a question: which values from a specified set, if any, make the equation or inequality true?
- **Topics:**
 - Recognizing equivalent expressions
 - Solving equations and inequalities
- **Activities:**
 - Determine if expressions are equivalent by substituting values
 - Solve equations and inequalities with one variable
- **Assessments:**
 - Equivalent expressions assessment
 - Equation solving quiz
 - Test



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April: The Number System (continued)

Chapter: 1.4, 1.5, 5.5

Chapter 8		22 Days
Chapter Opener		1 Day
Section 8.1		2 Days
Section 8.2		2 Days
Section 8.3		2 Days
Section 8.4		2 Days
Section 8.5		2 Days
Section 8.6		2 Days
Section 8.7		3 Days
Section 8.8		3 Days
Connecting Concepts		1 Day
Chapter Review		1 Day
Chapter Test		1 Day

Standards:

- 6.NS.4: Find the greatest common factor of two whole numbers less than or equal to 100 and the least common multiple of two whole numbers less than or equal to 12.
- 6.NS.5: Understand that positive and negative numbers are used together to describe quantities having opposite directions or values (e.g., temperature above/below zero, elevation above/below sea level, credits/debits, positive/negative electric charge).
- **Topics:**
 - Greatest common factor and least common multiple
 - Integers and understanding positive/negative numbers
- **Activities:**
 - Find the greatest common factor and least common multiple of numbers
 - Represent and perform operations with positive and negative numbers
- **Assessments:**
 - GCF and LCM quiz
 - Integer operations assessment
 - Test



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May: Geometry (continued)

- **Standards:**
 - 6.G.3: Draw polygons in the coordinate plane given coordinates for the vertices; use coordinates to find the length of a side joining points with the same first coordinate or the same second coordinate.
 - 6.G.4: Represent three-dimensional figures using nets made up of rectangles and triangles, and use the nets to find the surface area of these figures.
- **Topics:**
 - Polygons on the coordinate plane
 - Surface area of three-dimensional figures
- **Activities:**
 - Plot polygons on a coordinate plane and calculate side lengths
 - Create nets for three-dimensional figures and calculate surface area
- **Assessments:**
 - Polygon coordinates quiz
 - Surface area assessment
 - Test

June: Review and Integration

Chapter:

- **Topics:**
 - Review of key concepts from the year
 - Integration of math topics with other subjects (e.g., science, social studies)
- **Activities:**
 - Comprehensive review exercises covering all topics
 - Final project integrating math concepts with other subjects
- **Assessments:**
 - Comprehensive review assessment
 - Final project presentation
 - Test

This long-range plan for Grade 6 Math ensures comprehensive coverage of all New York State standards through thematic units, engaging activities, and varied assessments designed to promote deeper understanding and critical thinking among students throughout the academic year.