



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

## Math Long-Range Plan

**School Year: 2024-2025**

**Grade Level: 5**

**Teacher: Ms. Matos**

**Book: BigIdeas Math**

**September: Operations and Algebraic Thinking**

**Chapter:**

<b>Chapter 2</b>		<b>8 Days</b>
<b>Chapter Opener</b>		<b>1 Day</b>
<b>Lesson 2.1</b>		<b>1 Day</b>
<b>Lesson 2.2</b>		<b>1 Day</b>
<b>Lesson 2.3</b>		<b>1 Day</b>
<b>Lesson 2.4</b>		<b>1 Day</b>
<b>Connect and Grow</b>		<b>2 Days</b>
<b>Chapter Assessment</b>		<b>1 Day</b>

**Standards:**

- 5.OA.1: Use parentheses, brackets, or braces in numerical expressions, and evaluate expressions with these symbols.
  - 5.OA.2: Write simple expressions that record calculations with numbers, and interpret numerical expressions without evaluating them.
- Topics:**
    - Order of operations
    - Evaluating expressions
  - Activities:**
    - Introduce PEMDAS/BODMAS rules for order of operations
    - Practice evaluating expressions with various symbols
  - Assessments:**
    - Quiz on order of operations and expression evaluation



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## October: Number and Operations in Base Ten

### Chapter:

<b>Chapter 1</b>		<b>11 Days</b>
<b>Chapter Opener</b>		<b>1 Day</b>
<b>Lesson 1.1</b>		<b>1 Day</b>
<b>Lesson 1.2</b>		<b>1 Day</b>
<b>Lesson 1.3</b>		<b>1 Day</b>
<b>Lesson 1.4</b>		<b>1 Day</b>
<b>Lesson 1.5</b>		<b>1 Day</b>
<b>Lesson 1.6</b>		<b>1 Day</b>
<b>Lesson 1.7</b>		<b>1 Day</b>
<b>Connect and Grow</b>		<b>2 Days</b>
<b>Chapter Assessment</b>		<b>1 Day</b>

- **Standards:**

1. 5.NBT.1: Recognize that in a multi-digit number, a digit in one place represents 10 times as much as it represents in the place to its right and  $1/10$  of what it represents in the place to its left.
2. 5.NBT.2: Explain patterns in the number of zeros of the product when multiplying a number by powers of 10.
3. 5.NBT.3: Read, write, and compare decimals to thousandths.

- **Topics:**

- Place value understanding (up to thousandths)
- Multiplication and division by powers of ten

- **Activities:**

- Practice converting between different place values
- Explore patterns when multiplying decimals by powers of ten

- **Assessments:**

- Place value and decimal comparison quiz
- Multiplication and division by powers of ten assessment



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## November: Fractions and Operations

### Chapter: 8

<b>Chapter 8</b>		<b>12 Days</b>
<b>Chapter Opener</b>		<b>1 Day</b>
<b>Lesson 8.1</b>		<b>1 Day</b>
<b>Lesson 8.2</b>		<b>1 Day</b>
<b>Lesson 8.3</b>		<b>1 Day</b>
<b>Lesson 8.4</b>		<b>1 Day</b>
<b>Lesson 8.5</b>		<b>1 Day</b>
<b>Lesson 8.6</b>		<b>1 Day</b>
<b>Lesson 8.7</b>		<b>1 Day</b>
<b>Lesson 8.8</b>		<b>1 Day</b>
<b>Connect and Grow</b>		<b>2 Days</b>
<b>Chapter Assessment</b>		<b>1 Day</b>

- **Standards:**

1. 5.NF.1: Add and subtract fractions with unlike denominators (including mixed numbers).
2. 5.NF.2: Solve word problems involving addition and subtraction of fractions referring to the same whole, including cases of unlike denominators.
3. 5.NF.3: Interpret a fraction as division of the numerator by the denominator ( $a/b = a \div b$ ). Solve word problems involving division of whole numbers leading to answers in the form of fractions or mixed numbers.

- **Topics:**

- Adding and subtracting fractions with unlike denominators
- Multiplying fractions and interpreting as division

- **Activities:**

- Use visual models to add, subtract, multiply, and divide fractions
- Solve word problems involving fractions and mixed numbers

- **Assessments:**

- Fraction operations quiz
- Word problem solving assessment



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**December: Measurement and Data**

**Chapter:**

<b>Chapter 11</b>		<b>12 Days</b>
<b>Chapter Opener</b>		<b>1 Day</b>
<b>Lesson 11.1</b>		<b>1 Day</b>
<b>Lesson 11.2</b>		<b>1 Day</b>
<b>Lesson 11.3</b>		<b>1 Day</b>
<b>Lesson 11.4</b>		<b>1 Day</b>
<b>Lesson 11.5</b>		<b>1 Day</b>
<b>Lesson 11.6</b>		<b>1 Day</b>
<b>Lesson 11.7</b>		<b>1 Day</b>
<b>Connect and Grow</b>		<b>2 Day</b>
<b>Chapter Assessment</b>		<b>1 Day</b>
<b>Cumulative Practice/STEAM Performance Task</b>		<b>1 Day</b>

- **Standards:**
  1. 5.MD.1: Convert among different-sized standard measurement units within a given measurement system (e.g., convert 5 cm to 0.05 m), and use these conversions in solving multi-step, real-world problems.
  2. 5.MD.2: Make a line plot to display a data set of measurements in fractions of a unit ( $\frac{1}{2}$ ,  $\frac{1}{4}$ ,  $\frac{1}{8}$ ).
- **Topics:**
  - Converting measurements within the metric system
  - Creating and interpreting line plots
- **Activities:**
  - Practice converting measurements between units (e.g., centimeters to meters)
  - Collect data and create line plots to represent data sets
- **Assessments:**
  - Measurement conversion quiz
  - Line plot interpretation assessment



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**January: Geometry**  
**Chapter: 12 & 14**

<b>Chapter 12</b>	<b>11 Days</b>
<b>Chapter Opener</b>	<b>1 Day</b>
<b>Lesson 12.1</b>	<b>1 Day</b>
<b>Lesson 12.2</b>	<b>1 Day</b>
<b>Lesson 12.3</b>	<b>1 Day</b>
<b>Lesson 12.4</b>	<b>1 Day</b>
<b>Lesson 12.5</b>	<b>1 Day</b>
<b>Lesson 12.6</b>	<b>1 Day</b>
<b>Lesson 12.7</b>	<b>1 Day</b>
<b>Connect and Grow</b>	<b>2 Days</b>
<b>Chapter Assessment</b>	<b>1 Day</b>

<b>Chapter 14</b>	<b>8 Days</b>
<b>Chapter Opener</b>	<b>1 Day</b>
<b>Lesson 14.1</b>	<b>1 Day</b>
<b>Lesson 14.2</b>	<b>1 Day</b>
<b>Lesson 14.3</b>	<b>1 Day</b>
<b>Connect and Grow</b>	<b>2 Days</b>
<b>Chapter Assessment</b>	<b>1 Day</b>
<b>Cumulative Practice/STEAM Performance Task</b>	<b>1 Day</b>

- **Standards:**
  1. 5.G.1: Graph points on the coordinate plane to solve real-world and mathematical problems.
  2. 5.G.2: Represent real-world and mathematical problems by graphing points in the first quadrant of the coordinate plane, and interpret coordinate values of points in the context of the situation.
  3. 5.G.3: Understand that attributes belonging to a category of two-dimensional figures also belong to all subcategories of that category.
- **Topics:**
  - Coordinate plane and ordered pairs
  - Properties of two-dimensional figures
- **Activities:**
  - Plot points on a coordinate plane and solve problems
  - Identify and classify polygons based on attributes
- **Assessments:**
  - Coordinate plane quiz
  - Geometric shapes assessment



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## February: Number and Operations – Fractions

### Chapter:

<b>Chapter 9</b>		<b>12 Days</b>
<b>Chapter Opener</b>		<b>1 Day</b>
<b>Lesson 9.1</b>		<b>1 Day</b>
<b>Lesson 9.2</b>		<b>1 Day</b>
<b>Lesson 9.3</b>		<b>1 Day</b>
<b>Lesson 9.4</b>		<b>1 Day</b>
<b>Lesson 9.5</b>		<b>1 Day</b>
<b>Lesson 9.6</b>		<b>1 Day</b>
<b>Lesson 9.7</b>		<b>1 Day</b>
<b>Lesson 9.8</b>		<b>1 Day</b>
<b>Connect and Grow</b>		<b>2 Days</b>
<b>Chapter Assessment</b>		<b>1 Day</b>

- **Standards:**

1. 5.NF.4: Apply and extend previous understandings of multiplication to multiply a fraction or whole number by a fraction.
2. 5.NF.5: Interpret multiplication as scaling (resizing), by:
  - Comparing the size of a product to the size of one factor on the basis of the size of the other factor, without performing the indicated multiplication.
  - Explaining why multiplying a given number by a fraction greater than 1 results in a product greater than the given number (recognizing multiplication by whole numbers greater than 1 as a familiar case); explaining why multiplying a given number by a fraction less than 1 results in a product smaller than the given number; and relating the principle of fraction equivalence  $a/b = (n \times a)/(n \times b)$  to the effect of multiplying  $a/b$  by 1.

- **Topics:**

- Multiplying fractions and whole numbers
- Scaling and understanding fraction multiplication

- **Activities:**

- Use visual models to understand fraction multiplication as scaling
- Apply fraction multiplication to solve real-world problems

- **Assessments:**

- Fraction multiplication quiz
- Problem-solving assessment involving fraction scaling



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## **March: Algebraic Thinking and Patterns**

### **Chapter: 12.6, 12.7**

- **Standards:**
  1. 5.OA.3: Generate two numerical patterns using two given rules, and identify apparent relationships between corresponding terms.
  2. 5.OA.4: Use variables to represent quantities in a real-world or mathematical problem, and construct simple equations and inequalities to solve problems by reasoning about the quantities.
- **Topics:**
  - Generating and analyzing numerical patterns
  - Using variables to solve equations and inequalities
- **Activities:**
  - Create and extend numerical patterns using different rules
  - Write and solve equations and inequalities based on real-world scenarios
- **Assessments:**
  - Pattern generation assessment
  - Equation solving quiz



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**April: Measurement and Geometry (continued)**

**Chapter: 13.1 , 14.1, 14.2, 14.3**

- **Standards:**
  1. 5.MD.3: Recognize volume as an attribute of solid figures, and understand concepts of volume measurement.
  2. 5.G.4: Classify two-dimensional figures in a hierarchy based on properties.
- **Topics:**
  - Volume of rectangular prisms
  - Classifying two-dimensional figures based on properties
- **Activities:**
  - Calculate volume using formula and manipulatives
  - Identify and classify polygons and other geometric shapes
- **Assessments:**
  - Volume calculation quiz
  - Geometric shapes classification assessment





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## May: Data Analysis and Probability

### Chapter:

<b>Chapter 13</b>		<b>9 Days</b>
<b>Chapter Opener</b>		<b>1 Day</b>
<b>Lesson 13.1</b>		<b>1 Day</b>
<b>Lesson 13.2</b>		<b>1 Day</b>
<b>Lesson 13.3</b>		<b>1 Day</b>
<b>Lesson 13.4</b>		<b>1 Day</b>
<b>Lesson 13.5</b>		<b>1 Day</b>
<b>Connect and Grow</b>		<b>2 Days</b>
<b>Chapter Assessment</b>		<b>1 Day</b>

- **Standards:**

1. 5.MD.4: Make a line plot to display a data set of measurements in fractions of a unit ( $\frac{1}{2}$ ,  $\frac{1}{4}$ ,  $\frac{1}{8}$ ).
2. 5.MD.5: Recognize volume as an attribute of solid figures and understand concepts of volume measurement.

- **Topics:**

- Creating and interpreting line plots
- Introduction to probability

- **Activities:**

- Collect data, create line plots, and interpret data patterns
- Introduce basic concepts of probability through experiments and simulations

- **Assessments:**

- Line plot interpretation quiz
- Probability assessment

## June: Review and Integration

### Chapter:

- **Topics:**

- Comprehensive review of all topics covered during the year
- Integration of math topics with other subjects (e.g., science, social studies)

- **Activities:**

- Complete comprehensive review exercises covering all standards
- Final project integrating math concepts with other subjects

- **Assessments:**

- Comprehensive review assessment
- Final project presentation

This long-range plan for Grade 5 Math ensures thorough 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.