8th Grade Mathematics Curriculum

Reading and Writing Standards

Marking Period	Reading/Writing Assignment	Chapter/Section
1	Rigid Transformations Writing Assignment	Chapter 2: Transformations
2	Using Linear Equations to Solve Real World Problems	Chapter 4: Graphing and Writing Linear Equations
3	Talk - Write - Solve Writing Assignment	Chapter 5: Systems of Linear Equations
4	Hula Hoop Relay - Data Analysis	Chapter 6: Data Analysis and Displays

Scoring Guide for Written Work

1 - Emerging	2 - Intermediate	3 - Proficient	4 - Exemplary
Conceptual Understanding Demonstrates almost no understanding of learning targets, and includes significant errors or deficiencies in thought. **Mathematical Skills** Gives incorrect answers and explanations and does not follow or implement correct processes or methods for the solution. **Work Habits** Does not complete the majority of tasks and/or work is unintelligible.	**Conceptual Understanding** Demonstrates some understanding of learning targets, potentially including several errors or deficiencies in thought. **Mathematical Skills** Gives partially correct answers and explanations, does not use ideal processes or methods, and work is not clear. **Work Habits** Completes almost all tasks but work is not organized or easily understood.	**Conceptual Understanding** Demonstrates nearly all understanding of learning targets, potentially including a minor error or deficiency in thought. **Mathematical Skills** Gives correct or nearly correct answers and explanations through solving equations, drawing graphs, identifying figures, etc., and may also lack some clarity. **Work Habits** Completes tasks thoroughly, and work is mostly organized and legible.	**Conceptual Understanding** Demonstrates complete understanding of learning targets. **Mathematical Skills** Gives clear and correct answers and explanations through solving equations, drawing graphs, identifying figures, etc.. **Work Habits** Completes tasks thoroughly, and work is organized, legible, and easily understood.

8th Grade Mathematics Curriculum

Content Topics and Pacing

Topic	Duration	Learning Target(s)
Chapter 1 Equations	**4 weeks**	• Write and solve one-step equations. • Write and solve multi-step equations. • Write and solve equations with variables on both sides. • Solve literal equations for given variables and convert temperatures.
Chapter 2 Transformations	**4 weeks**	• Translate figures in the coordinate plane. • Reflect figures in the coordinate plane. • Rotate figures in the coordinate plane. • Understand the concept of congruent figures. • Dilate figures in the coordinate plane. • Understand the concept of similar figures. • Find perimeters and areas of similar figures.
Chapter 3 Angles and Triangles	**3-4 weeks**	• Find missing angle measures created by the intersections of lines. • Understand properties of interior and exterior angles of triangles. • Find interior angle measures of polygons • Use similar triangles to find missing measures.
Chapter 4 Graphing and Writing Linear Equations	**5 weeks**	• Graph linear equations. • Find and interpret the slope of a line. • Graph proportional relationships. • Graph linear equations in slope-intercept form. • Graph linear equations in standard form. • Write equations of lines in slope-intercept form.

8th Grade Mathematics Curriculum

Chapter 5 Systems of Linear Equations	**5 weeks**	• Understand how to solve systems of linear equations by graphing. • Understand how to solve systems of linear equations by substitution. • Understand how to solve systems of linear equations by elimination. • Solve systems with different numbers of solutions.
Chapter 6 Data Analysis and Displays	**3 weeks**	• Use scatter plots to describe patterns and relationships between two quantities. • Use lines of fit to model data. • Use two-way tables to represent data. • Use appropriate data displays to represent situations.
Chapter 7 Functions	**3-4 weeks**	• Understand the concept of a function. • Represent functions in a variety of ways. • Use functions to model linear relationships. • Understand differences between linear and nonlinear functions. • Use graphs of functions to describe relationships between quantities.
Chapter 8 Exponents and Scientific Notation	**4 weeks**	• Use exponents to write and evaluate expressions. • Generate equivalent expressions involving products of powers. • Generate equivalent expressions involving quotients of powers. • Understand the concepts of zero and negative exponents. • Round numbers and write the results as the product of a single digit and a power of 10. • Understand the concept of scientific notation.