



Geometry Mathematics Curriculum

Reading and Writing Standards

Marking Period	Reading/Writing Assessment	Chapter/Section
1	Garden Project & Geometric Art: Design projects incorporating construction of geometric shapes	Chapter 1: 1.1 - 1.5
2	My Town Project: Geometric constructions including parallel & perpendicular lines	Chapter 3: 3.1 - 3.4
3	Truss Project & Congruent Triangles: Roof or bridge truss design with precise angle constructions	Chapter 5: 5.1 - 5.6
4	Trigonometry Measuring Project: Use ground measurements and angle of elevation to estimate the height of tall objects	Chapter 9: 9.1 - 9.6

Scoring Rubric for Written Work

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



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Content Topics and Pacing

Topic	Duration	Learning Targets
Chapter 1 Basics of Geometry	~4 Weeks	<ul style="list-style-type: none">• Name points, lines, and planes• Measure segments and angles• Classify and name polygons• Find area and perimeter of polygons• Use a compass and straightedge to copy segments, copy angles, and bisect angles• Identify complementary and supplementary angles, linear pairs, and vertical angles
Chapter 2 Reasoning and Proofs	~4 Weeks	<ul style="list-style-type: none">• Use inductive and deductive reasoning to make and verify conjectures• Justify steps using algebraic reasoning• Write conditional and biconditional statements• Interpret diagrams• Identify algebraic properties of equality and use them to solve equations• Write a two-column proof
Chapter 3 Parallel and Perpendicular Lines	~4 Weeks	<ul style="list-style-type: none">• Identify lines and angles• Describe angle relationships formed by parallel lines and a transversal• Prove theorems involving parallel and perpendicular lines• Write equations of parallel and perpendicular lines• Construct parallel lines, perpendicular lines, and bisectors
Chapter 4	~3 Weeks	<ul style="list-style-type: none">• Identify transformations



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Transformations		<ul style="list-style-type: none">• Perform translations, reflections, rotations, and dilations• Describe congruence, similarity, and rigid motion in transformations• Perform compositions of transformations• Identify lines of symmetry and rotational symmetry
Chapter 5 Congruent Triangles	~4 Weeks	<ul style="list-style-type: none">• Classify triangles by sides and angles• Solve problems involving congruent polygons• Prove that triangles are congruent using different theorems• Write a coordinate proof
Chapter 6 Relationships Within Triangles	~3 Weeks	<ul style="list-style-type: none">• Identify and use perpendicular and angle bisectors of triangles• Use medians and altitudes of triangles to solve problems• Find distances using the triangle midsegment theorem• Find and construct circumcenter and incenter of a triangle
Chapter 9 Right Triangles and Trigonometry	~4 Weeks	<ul style="list-style-type: none">• Use the Pythagorean Theorem to solve problems• Find side lengths in special right triangles• Explain how similar triangles are used with trigonometric ratios• Use trigonometric ratios to solve problems
Chapter 10 Circles	~4 Weeks	<ul style="list-style-type: none">• Identify lines and segments that intersect circles• Find angle and arc measures in circles• Use circle relationships to solve problems• Use circles to model and solve real-life problems
Chapter 11 Circumference and Area	~3 Weeks	<ul style="list-style-type: none">• Find circumferences of circles and arc lengths of sectors• Find areas of circles and sectors• Find areas of polygons• Solve real-life problems involving area
Chapter 12	If Possible	<ul style="list-style-type: none">• Describe attributes of solids



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Surface Area and Volume		<ul style="list-style-type: none">• Find surface area and volume of solids• Find missing dimensions of solids• Solve real-life problems involving surface area and volume
Chapter 13 Probability	If Possible	<ul style="list-style-type: none">• Define theoretical and experimental probability• Use two-way tables to determine probability• Compare independent and dependent events• Construct and interpret probability and binomial distributions