

**Wyoming Department of Education Required Virtual Education Course Syllabus**

**Niobrara County School District # 1**

Program Name	Wyoming Virtual Academy	Content Area	MA
Course ID	D-MTH-208AV1-K	Grade Level	9-12
Course Name	Summit Geometry-Semester 1	# of Credits	0.5
SCED Code	02072G0.5012	Curriculum Type	K12 Inc

**COURSE DESCRIPTION**

Generally offered 1st semester. K12's Geometry Summit course builds on the geometry covered in middle school to explore more complex geometric situations and deepen students' ability to explain geometric relationships, moving toward formal mathematical arguments. Specific topics include basic tools and transformations, reasoning and proof, congruence and constructions, analytic geometry, line and triangle relationships, and similarity.

**WYOMING CONTENT AND PERFORMANCE STANDARDS**

STANDARD#	<a href="#">BENCHMARK (Standard/Indicator) Use the Standards and Benchmarks as Spreadsheets</a>
A.REI.1	Explain each step in solving a simple equation as following from the equality of numbers asserted at the previous step, starting from the assumption that the original equation has a solution. Construct a viable argument to justify a solution method.
G.CO.1	Know precise definitions of angle, circle, perpendicular line, parallel line, and line segment, based on the undefined notions of point, line, distance along a line, and distance around a circular arc.
G.CO.10	Prove theorems about triangles. Theorems include: measures of interior angles of a triangle sum to 180 degrees; base angles of isosceles triangles are congruent; the segment joining midpoints of two sides of a triangle is parallel to the third side and half the length; the medians of a triangle meet at a point.
G.CO.11	Prove theorems about parallelograms. Theorems include: opposite sides are congruent, opposite angles are congruent, the diagonals of a parallelogram bisect each other, and conversely, rectangles are parallelograms with congruent diagonals.
G.CO.2	Represent transformations in the plane using, e.g., transparencies and geometry software; describe transformations as functions that take points in the plane as inputs and give other points as outputs. Compare transformations that preserve distance and angle to those that do not (e.g., translation versus horizontal stretch).
G.CO.3	Given a rectangle, parallelogram, trapezoid, or regular polygon, describe the rotations and reflections that carry it onto itself.
G.CO.4	Develop definitions of rotations, reflections, and translations in terms of angles, circles, perpendicular lines, parallel lines, and line segments.

G.CO.5	Given a geometric figure and a rotation, reflection, or translation, draw the transformed figure using, e.g., graph paper, tracing paper, or geometry software. Specify a sequence of transformations that will carry a given figure onto another.
G.CO.9	Prove theorems about lines and angles. Theorems include: vertical angles are congruent; when a transversal crosses parallel lines, alternate interior angles are congruent and corresponding angles are congruent; points on a perpendicular bisector of a line segment are exactly those equidistant from the segment’s endpoints.
G.GPE.4	For example, prove or disprove that a figure defined by four given points in the coordinate plane is a rectangle; prove or disprove that the point $(1, \sqrt{3})$ lies on the circle centered at the origin and containing the point $(0, 2)$ .
G.GPE.5	Prove the slope criteria for parallel and perpendicular lines and use them to solve geometric problems (e.g., find the equation of a line parallel or perpendicular to a given line that passes through a given point).
G.GPE.6	Find the point on a directed line segment between two given points that partitions the segment in a given ratio.
G.GPE.7	Use coordinates to compute perimeters of polygons and areas of triangles and rectangles, e.g., using the distance formula.*
G.SRT.1	Understand similarity in terms of similarity transformations. Verify experimentally the properties of dilations given by a center and a scale factor: <b>a.</b> A dilation takes a line not passing through the center of the dilation to a parallel line, and leaves a line passing through the center unchanged. <b>b.</b> The dilation of a line segment is longer or shorter in the ratio given by the scale factor.
G.SRT.2	Given two figures, use the definition of similarity in terms of similarity transformations to decide if they are similar; explain using similarity transformations the meaning of similarity for triangles as the equality of all corresponding pairs of angles and the proportionality of all corresponding pairs of sides.
G.SRT.5	Use congruence and similarity criteria for triangles to solve problems and to prove relationships in geometric figures.

**SCOPE AND SEQUENCE**

UNIT OUTLINE	STANDARD#	OUTCOMES OBJECTIVES/STUDENT CENTERED GOALS
Unit 1: Basic Tools and Transformations Lesson 1: Exchange Ideas: Basic Tools and Transformations	G.CO.1	Define the term <i>angle</i> . Name the parts of an angle.
Unit 1: Basic Tools and Transformations Lesson 2: Basic Geometric Terms and Definitions 1	G.CO.1	Name the parts of an angle. Define the term <i>angle</i> . Define the term <i>plane</i> .

		<p>Define the term <i>line</i>.</p> <p>Define the term <i>point</i>.</p> <p>Define the term <i>line segment</i>.</p> <p>Define the term <i>ray</i>.</p>
<p>Unit 1:Basic Tools and Transformations Lesson 3: Basic Geometric Terms and Definitions 2</p>	G.CO.1	<p>Define the term <i>parallel lines</i>.</p> <p>Define the term <i>perpendicular lines</i>.</p> <p>Identify a pair of parallel lines in a figure.</p> <p>Identify a pair of perpendicular lines in a figure.</p>
<p>Unit 1:Basic Tools and Transformations Lesson 4: Measure Length</p>	G.CO.1	<p>Determine the length of a line segment on a number line.</p> <p>Determine the length of a line segment using the segment addition postulate.</p> <p>Determine the length of a line segment on a number line using the segment congruence postulate.</p>
<p>Unit 1: Basic Tools and Transformations Lesson 5: Measure Angles</p>	G.CO.1	<p>Draw geometric shapes, using given angle measures.</p> <p>Name special angle pairs.</p> <p>Determine the measure of an angle, given the measure of the other angle in the angle pair.</p> <p>Determine the measure of an angle using the angle addition postulate.</p> <p>Determine the measure of an angle using the linear pair postulate.</p> <p>Classify angles as either acute, right, obtuse, straight, or reflex.</p> <p>Name the parts of an angle.</p>
<p>Unit 1:Basic Tools and Transformations Lesson 6: Transformations 1</p>	<p>G.CO.2 G.CO.3 G.CO.4 G.CO.5</p>	<p>Classify a transformation, given the pre-image and image.</p> <p>Define the term <i>reflection</i>.</p>

		<p>Define the term <i>rotation</i>.</p> <p>Define the term <i>translation</i>.</p> <p>Identify a center of rotation.</p> <p>Identify a line of reflection.</p> <p>Identify a translation vector.</p>
<p>Unit 1: Basic Tools and Transformations Lesson 7: Transformations 2</p>	<p>G.CO.2 G.CO.3 G.CO.4 G.CO.5</p>	<p>Describe the rotations that map a given polygon onto itself.</p> <p>Determine a figure's angle of rotation.</p> <p>Determine if a figure has rotation symmetry.</p>
<p>Unit 1: Basic Tools and Transformations Lesson 8: Discuss: Transformations</p>	<p>G.CO.5</p>	<p>Determine the sequence of transformations that map one figure onto another.</p>
<p>Unit 1: Basic Tools and Transformations Lesson 9: Your Choice</p>	<p>G.CO.1 G.CO.2 G.CO.3 G.CO.4 G.CO.5</p>	<p>You may use today's lesson time to</p> <ul style="list-style-type: none"> <li>• Complete work in progress.</li> <li>• Review prior lessons in the unit to prepare for the Unit Test.</li> <li>• Post or respond to posts on the discussion board for the Exchange Ideas activity in this unit.</li> <li>• Prepare for your state standardized test.</li> <li>• Go on to the next lesson.</li> </ul>
<p>Unit 1: Basic Tools and Transformations Lesson 10: Use Algebra to Describe Geometry 1</p>	<p>G.CO.2</p>	<ul style="list-style-type: none"> <li>• Explain why transformations are functions.</li> <li>• Classify a transformation, given an ordered-pair rule.</li> </ul>
<p>Unit 1: Basic Tools and Transformations Lesson 11: Use Algebra to Describe Geometry 2</p>	<p>G.CO.2 G.CO.5</p>	<p>Draw an image, given a pre-image and a description of the transformation.</p> <p>Draw an image, given a pre-image and an ordered-pair rule.</p> <p>Determine the sequence of transformations that map one figure onto another.</p>
<p>Unit 1: Basic Tools and Transformations Lesson 12: Polygons and Symmetry 1</p>	<p>G.CO.3</p>	<p>Classify polygons.</p> <p>Classify a polygon as concave or convex.</p>

		<p>Determine the sum of the interior angles of a polygon.</p> <p>Determine the sum of the exterior angles of a polygon.</p>
<p>Unit 1: Basic Tools and Transformations Lesson 13: Polygons and Symmetry 2</p>	G.CO.3	<p>Describe the reflections that map a given polygon onto itself.</p> <p>Determine if a figure has reflection symmetry.</p> <p>Determine the number of lines of symmetry in a figure.</p>
<p>Unit 1: Basic Tools and Transformations Lesson 14: Dilations</p>	G.CO.2	<p>Draw a dilation whose center of dilation is not on the pre-image.</p> <p>Draw a dilation whose center of dilation is on the pre-image.</p> <p>Determine the scale factor used in a dilation.</p> <p>Determine if a dilation is an expansion or contraction, given the scale factor.</p>
<p>Unit 1: Basic Tools and Transformations Lesson 15: Unit Review</p>	G.CO.1 G.CO.2 G.CO.3 G.CO.4 G.CO.5	<p>Use today's lesson time to prepare for the Unit Test. You may</p> <ul style="list-style-type: none"> <li>• Revisit Review activities located before each quiz in the unit.</li> <li>• Look at the Summary activities in each lesson.</li> <li>• Read through the Reference Guide pages linked in each lesson.</li> <li>• Ask for help on any Practice problems you did not fully understand.</li> </ul>
<p>Unit 1: Basic Tools and Transformations Lesson 16: Unit Test</p>	G.CO.1 G.CO.2 G.CO.3 G.CO.4 G.CO.5	<p>Demonstrate knowledge on concepts in this unit.</p>
<p>Unit 2: Reasoning and Proof Lesson 1: Exchange Ideas: Reasoning and Proof</p>	A.REI.1	<p>Justify each step in solving an equation.</p>
<p>Unit 2: Reasoning and Proof Lesson 2: Reasoning 1</p>	G.CO.9 G.CO.10 G.CO.11	<p>Use inductive reasoning to identify patterns (in preparation for proving theorems about lines and angles).</p>

		<p>Use inductive reasoning to identify patterns (in preparation for proving theorems about triangles).</p> <p>Use inductive reasoning to identify patterns (in preparation for proving theorems about parallelograms).</p> <p>Identify a counterexample for a given conjecture.</p>
<p>Unit 2: Reasoning and Proof Lesson 3: Reasoning 2</p>	<p>G.CO.9 G.CO.10 G.CO.11</p>	<p>Use deductive reasoning to identify patterns (in preparation for proving theorems about lines and angles).</p> <p>Use deductive reasoning to identify patterns (in preparation for proving theorems about triangles).</p> <p>Use deductive reasoning to identify patterns (in preparation for proving theorems about parallelograms).</p>
<p>Unit 2: Reasoning and Proof Lesson 4: Reasoning 3</p>	<p>G.CO.9 G.CO.10 G.CO.11</p>	<p>Use deductive reasoning to make logical conclusions (in preparation for proving theorems about lines and angles).</p> <p>Use deductive reasoning to make logical conclusions (in preparation for proving theorems about triangles).</p> <p>Use deductive reasoning to make logical conclusions (in preparation for proving theorems about parallelograms).</p>
<p>Unit 2: Reasoning and Proof Lesson 5: Your Choice</p>	<p>A.REI.1 G.CO.9 G.CO.10 G.CO.11</p>	<p>You may use today's lesson time to</p> <ul style="list-style-type: none"> <li>• Complete work in progress.</li> <li>• Review prior lessons in the unit to prepare for the Unit Test.</li> <li>• Post or respond to posts on the discussion board for the Exchange Ideas activity in this unit.</li> <li>• Prepare for your state standardized test.</li> </ul> <p>Go on to the next lesson.</p>
<p>Unit 2: Reasoning and Proof Lesson 6: Styles of Proofs</p>	<p>G.CO.9 G.CO.10 G.CO.11</p>	<p>Use paragraph proofs (in preparation for proving theorems about lines and angles).</p> <p>Use flowchart proofs (in preparation for proving theorems about lines and angles).</p>

		<p>Use paragraph proofs (in preparation for proving theorems about triangles).</p> <p>Use flowchart proofs (in preparation for proving theorems about triangles).</p> <p>Use paragraph proofs (in preparation for proving theorems about parallelograms).</p> <p>Use flowchart proofs (in preparation for proving theorems about parallelograms).</p>
<p>Unit 2: Reasoning and Proof Lesson 7: Algebraic Proof</p>	<p>A.REI.1</p>	<p>Justify each step in solving an equation.</p>
<p>Unit 2: Reasoning and Proof Lesson 8: Geometric Two-Column Proof</p>	<p>G.CO.9 G.CO.10. G.CO.11</p>	<p>Use two-column proofs (in preparation for proving theorems about lines and angles).</p> <p>Use two-column proofs (in preparation for proving theorems about triangles).</p> <p>Use two-column proofs (in preparation for proving theorems about parallelograms).</p>
<p>Unit 2: Reasoning and Proof Lesson 9: Unit Review</p>	<p>A.REI.1 G.CO.9 G.CO.10 G.CO.11</p>	<p>Use today’s lesson time to prepare for the Unit Test. You may</p> <ul style="list-style-type: none"> <li>• Revisit Review activities located before each quiz in the unit.</li> <li>• Look at the Summary activities in each lesson.</li> <li>• Read through the Reference Guide pages linked in each lesson.</li> </ul> <p>Ask for help on any Practice problems you did not fully understand.</p>
<p>Unit 2: Reasoning and Proof Lesson 10: Unit Test</p>	<p>A.REI.1 G.CO.9 G.CO.10 G.CO.11</p>	<p>Demonstrate knowledge on concepts in this unit.</p>
<p>Geometry Checkpoint 1</p>	<p>A.REI.1 G.CO.1 G.CO.2 G.CO.3 G.CO.4 G.CO.5 G.CO.9 G.CO.10 G.CO.11</p>	<p>Demonstrate knowledge on concepts in this semester.</p>

<p>Unit 3: Congruence and Constructions Lesson 1: Exchange Ideas: Congruence and Constructions</p>	<p>G.CO.7 G.CO.8 G.CO.9</p>	<p>Write congruence statements for congruent triangles.</p> <p>Determine the postulate or theorem that proves that two triangles are congruent.</p> <p>Identify the included side or angle (in preparation for the SAS, ASA, and AAS congruence postulates).</p> <p>Prove that a point on a segment's perpendicular bisector is equidistant from the segment's endpoints.</p> <p>Prove that vertical angles are congruent.</p> <p>Solve problems involving the measures of vertical angles.</p>
<p>Unit 3: Congruence and Constructions Lesson 2: Constructions of Segments, Angles, and Bisectors</p>	<p>G.CO.12</p>	<p>Construct a segment bisector.</p> <p>Construct a segment congruent to a given segment.</p> <p>Construct an angle bisector.</p> <p>Construct a line perpendicular to a given line through a point not on the line.</p> <p>Construct a line perpendicular to a given line through a point on the line.</p> <p>Construct a line parallel to a given line through a point not on the line.</p>
<p>Unit 3: Congruence and Constructions Lesson 3: Vertical Angle Relationships</p>	<p>G.CO.9</p>	<p>Prove that a point on a segment's perpendicular bisector is equidistant from the segment's endpoints.</p> <p>Prove that a point on an angle's bisector is equidistant from the angle's sides.</p> <p>Prove that vertical angles are congruent.</p> <p>Solve problems involving the measures of vertical angles.</p> <p>Solve problems using theorems regarding angle relationships, given two parallel lines and a transversal.</p>



<p>Unit 3: Congruence and Constructions Lesson 4: Congruent Polygons and Their Corresponding Parts 1</p>	<p>G.CO.7</p>	<p>Determine missing measures in congruent triangles.</p> <p>Determine whether two triangles are congruent, using rigid motions.</p> <p>Explain whether two triangles are congruent using rigid motions.</p> <p>Identify the corresponding parts of congruent triangles.</p> <p>Write congruence statements for congruent triangles.</p>
<p>Unit 3: Congruence and Constructions Lesson 5: Congruent Polygons and Their Corresponding Parts 2</p>	<p>G.CO.7</p>	<p>Determine missing measures in congruent triangles.</p> <p>Determine whether two triangles are congruent, using rigid motions.</p> <p>Explain whether two triangles are congruent using rigid motions.</p> <p>Identify the corresponding parts of congruent triangles.</p> <p>Write congruence statements for congruent triangles.</p>
<p>Unit 3: Congruence and Constructions Lesson 6: Your Choice</p>	<p>G.CO.7 G.CO.8 G.CO.9 G.CO.12</p>	<p>You may use today's lesson time to</p> <ul style="list-style-type: none"> <li>• Complete work in progress.</li> <li>• Review prior lessons in the unit to prepare for the Unit Test.</li> <li>• Post or respond to posts on the discussion board for the Exchange Ideas activity in this unit.</li> <li>• Prepare for your state standardized test.</li> </ul> <p>Go on to the next lesson.</p>
<p>Unit 3: Congruence and Constructions Lesson 7: Triangle Congruence: SSS, SAS, and ASA 1</p>	<p>G.CO.7 G.CO.8</p>	<p>Write congruence statements for congruent triangles.</p> <p>Determine the postulate or theorem that proves that two triangles are congruent.</p> <p>Identify the included side or angle (in preparation for the SAS, ASA, and AAS congruence postulates).</p>

<p>Unit 3: Congruence and Constructions Lesson 8: Triangle Congruence: SSS, SAS, and ASA 2</p>	<p>G.CO.7 G.CO.8</p>	<p>Determine missing measures in congruent triangles.</p> <p>Determine whether two triangles are congruent, using rigid motions.</p> <p>Explain whether two triangles are congruent using rigid motions.</p> <p>Identify the corresponding parts of congruent triangles.</p> <p>Write congruence statements for congruent triangles.</p>
<p>Unit 3: Congruence and Constructions Lesson 9: Your Choice</p>	<p>G.CO.6 G.CO.7 G.CO.8 G.CO.9 G.CO.12 G.CO.13</p>	<p>You may use today’s lesson time to</p> <ul style="list-style-type: none"> <li>• Complete work in progress.</li> <li>• Review prior lessons in the unit to prepare for the Unit Test.</li> <li>• Post or respond to posts on the discussion board for the Exchange Ideas activity in this unit.</li> <li>• Prepare for your state standardized test.</li> </ul> <p>Go on to the next lesson.</p>
<p>Unit 3: Congruence and Constructions Lesson 10: Constructions with Polygons 1</p>	<p>G.CO.13</p>	<p>Construct an equilateral triangle.</p> <p>Construct a square.</p> <p>Construct a regular hexagon inscribed in a circle.</p>
<p>Unit 3: Congruence and Constructions Lesson 11: Constructions with Polygons 2</p>	<p>G.CO.13</p>	<p>Construct an equilateral triangle.</p> <p>Construct a square.</p> <p>Construct a regular hexagon inscribed in a circle.</p>
<p>Unit 3: Congruence and Constructions Lesson 12: Congruence and Rigid Motions</p>	<p>G.CO.6</p>	<p>Determine whether two figures are congruent.</p> <p>Determine whether two figures will be congruent, given an ordered-pair rule.</p> <p>Explain whether two figures are congruent using rigid motions.</p>
<p>Unit 3: Congruence and Constructions Lesson 13: Unit Review</p>	<p>G.CO.6 G.CO.7 G.CO.8 G.CO.9</p>	<p>Use today’s lesson time to prepare for the Unit Test. You may</p>

	G.CO.12 G.CO.13	<ul style="list-style-type: none"> <li>• Revisit Review activities located before each quiz in the unit.</li> <li>• Look at the Summary activities in each lesson.</li> <li>• Read through the Reference Guide pages linked in each lesson.</li> </ul> <p>Ask for help on any Practice problems you did not fully understand.</p>
Unit 3: Congruence and Constructions Lesson 14: Unit Test	G.CO.6 G.CO.7 G.CO.8 G.CO.9 G.CO.12 G.CO.13	Demonstrate knowledge on concepts in this unit.
Unit 4: Analytic Geometry Lesson 1: Exchange Ideas: Analytic Geometry	G.GPE.7	<p>Determine perimeters of rectangles using coordinates.</p> <p>Determine perimeters of triangles using coordinates.</p> <p>Determine areas of rectangles using coordinates.</p> <p>Determine areas of triangles using coordinates.</p> <p>Determine perimeters of polygons using coordinates.</p>
Unit 4: Analytic Geometry Lesson 2: Rectangles, Triangles, and Composite Figures	G.GPE.7	<p>Determine perimeters of rectangles using coordinates.</p> <p>Determine perimeters of triangles using coordinates.</p> <p>Determine areas of rectangles using coordinates.</p> <p>Determine areas of triangles using coordinates.</p> <p>Determine perimeters of polygons using coordinates.</p> <p>Determine the area of a composite figure using coordinates.</p>
Unit 4: Analytic Geometry Lesson 3: Compute Area and Perimeter with Coordinates	G.GPE.7	Determine perimeters of rectangles using coordinates.

		<p>Determine perimeters of triangles using coordinates.</p> <p>Determine areas of rectangles using coordinates.</p> <p>Determine areas of triangles using coordinates.</p> <p>Determine perimeters of polygons using coordinates.</p> <p>Determine the area of a composite figure using coordinates.</p>
<p>Unit 4: Analytic Geometry Lesson 4: Applications of Coordinates</p>	<p>G.GPE.7</p>	<p>Determine the area of a parallelogram.</p> <p>Determine the area of a trapezoid.</p> <p>Determine perimeters of rectangles using coordinates.</p> <p>Determine perimeters of triangles using coordinates.</p> <p>Determine areas of rectangles using coordinates.</p> <p>Determine areas of triangles using coordinates.</p> <p>Determine perimeters of polygons using coordinates.</p> <p>Estimate the area of an irregular shape drawn on a coordinate grid.</p>
<p>Unit 4: Analytic Geometry Lesson 5: Parallel and Perpendicular Lines</p>	<p>G.GPE.4 G.GPE.5</p>	<p>Determine whether lines are parallel, perpendicular, or neither parallel nor perpendicular, given their equations.</p> <p>Determine whether lines are parallel, perpendicular, or neither parallel nor perpendicular, given their slopes.</p> <p>Determine the slope of a line that is perpendicular to another line when the slope of one line is given.</p>

		<p>Determine the slope of a line that is parallel to another line when the slope of one line is given.</p> <p>Determine the equation of a line parallel to another line.</p> <p>Determine the equation of a line perpendicular to another line.</p> <p>Prove that perpendicular lines have slopes that are opposite reciprocals.</p> <p>Prove that parallel lines have the same slope.</p>
<p>Unit 4: Analytic Geometry Lesson 6: Use Slope</p>	<p>G.GPE.4 G.GPE.5</p>	<p>Determine whether a triangle is a right triangle using the coordinates of its vertices.</p> <p>Classify a quadrilateral using the coordinates of its vertices.</p>
<p>Unit 4: Analytic Geometry Lesson 7: Your Choice</p>	<p>G.GPE.4 G.GPE.5 G.GPE.7</p>	<p>You may use today’s lesson time to</p> <ul style="list-style-type: none"> <li>• Complete work in progress.</li> <li>• Review prior lessons in the unit to prepare for the Unit Test.</li> <li>• Post or respond to posts on the discussion board for the Exchange Ideas activity in this unit.</li> <li>• Prepare for your state standardized test.</li> </ul> <p>Go on to the next lesson.</p>
<p>Unit 4: Analytic Geometry Lesson 8: Coordinate Proofs</p>	<p>G.GPE.4</p>	<p>Determine how to place a figure in a coordinate plane for use in a coordinate proof or to solve problems.</p> <p>Prove a theorem using a coordinate proof.</p> <p>Prove or disprove statements about geometric figures using coordinates.</p>
<p>Unit 4: Analytic Geometry Lesson 9: Unit Review</p>	<p>G.GPE.4 G.GPE.5 G.GPE.7</p>	<p>Use today’s lesson time to prepare for the Unit Test. You may</p> <ul style="list-style-type: none"> <li>• Revisit Review activities located before each quiz in the unit.</li> <li>• Look at the Summary activities in each lesson.</li> <li>• Read through the Reference Guide pages linked in each lesson.</li> </ul>

		Ask for help on any Practice problems you did not fully understand.
Unit 4: Analytic Geometry Lesson 10: Unit Test	G.GPE.4 G.GPE.5 G.GPE.7	Demonstrate knowledge on concepts in this unit.
Geometry Checkpoint 2	A.REI.1 G.CO.1 G.CO.2 G.CO.3 G.CO.4 G.CO.5 G.CO.9 G.CO.10 G.CO.11 G.GPE.4 G.GPE.5 G.GPE.7	Demonstrate knowledge on concepts in this semester.
Unit 5: Line and Triangle Relationships Lesson 1: Exchange Ideas: Line and Triangle Relationships	G.CO.10	Determine the centroid of a triangle.  Determine the orthocenter of a triangle.  Solve problems using the properties of medians in a triangle.
Unit 5: Line and Triangle Relationships Lesson 2: Parallel Lines and Transversals 1	G.CO.9	Name the theorem or postulate used to determine the angle relationship, given two parallel lines and a transversal.  Prove theorems regarding angle relationships, given two parallel lines and a transversal.  Solve problems using theorems regarding angle relationships, given two parallel lines and a transversal.  Identify relationships between lines and identify angle relationships formed by transversals.
Unit 5: Line and Triangle Relationships Lesson 3: Parallel Lines and Transversals 2	G.CO.9	Name the theorem or postulate used to determine the angle relationship, given two parallel lines and a transversal.  Prove theorems regarding angle relationships, given two parallel lines and a transversal.

		<p>Solve problems using theorems regarding angle relationships, given two parallel lines and a transversal.</p> <p>Identify relationships between lines and identify angle relationships formed by transversals.</p>
<p>Unit 5: Line and Triangle Relationships Lesson 4: Converses of Parallel Line Properties 1</p>	<p>G.CO.9</p>	<p>Name the theorem or postulate used to determine the angle relationship, given two parallel lines and a transversal.</p> <p>Prove theorems regarding angle relationships, given two parallel lines and a transversal.</p> <p>Solve problems using theorems regarding angle relationships, given two parallel lines and a transversal.</p> <p>Name the theorem or postulate used to determine whether two lines are parallel, based on given angle conditions.</p> <p>Prove that two lines are parallel, based on given angle conditions.</p>
<p>Unit 5: Line and Triangle Relationships Lesson 5: Your Choice</p>	<p>G.CO.9 G.CO.10 G.CO.11 G.GPE.4 G.GPE.5</p>	<p>You may use today's lesson time to</p> <ul style="list-style-type: none"> <li>• Complete work in progress.</li> <li>• Review prior lessons in the unit to prepare for the Unit Test.</li> <li>• Post or respond to posts on the discussion board for the Exchange Ideas activity in this unit.</li> <li>• Prepare for your state standardized test.</li> </ul> <p>Go on to the next lesson.</p>
<p>Unit 5: Line and Triangle Relationships Lesson 6: Converses of Parallel Line Properties 2</p>	<p>G.CO.9</p>	<p>Name the theorem or postulate used to determine the angle relationship, given two parallel lines and a transversal.</p> <p>Prove theorems regarding angle relationships, given two parallel lines and a transversal.</p> <p>Solve problems using theorems regarding angle relationships, given two parallel lines and a transversal.</p>

		<p>Name the theorem or postulate used to determine whether two lines are parallel, based on given angle conditions.</p> <p>Prove that two lines are parallel, based on given angle conditions.</p>
<p>Unit 5: Line and Triangle Relationships Lesson 7: The Triangle Sum Theorem 1</p>	G.CO.10	<p>Prove the angle sum theorem for triangles.</p> <p>Prove the exterior angle theorem for triangles.</p> <p>Solve problems using the angle sum theorem for triangles.</p> <p>Solve problems using the exterior angle theorem for triangles.</p>
<p>Unit 5: Line and Triangle Relationships Lesson 8: The Triangle Sum Theorem 2</p>	G.CO.10	<p>Prove the angle sum theorem for triangles.</p> <p>Prove the exterior angle theorem for triangles.</p> <p>Solve problems using the angle sum theorem for triangles.</p> <p>Solve problems using the exterior angle theorem for triangles.</p>
<p>Unit 5: Line and Triangle Relationships Lesson 9: Isosceles and Equilateral Triangles</p>	G.CO.10	<p>Prove that the base angles of an isosceles triangle are congruent.</p> <p>Solve problems involving angle measures in isosceles triangles.</p> <p>Solve problems involving isosceles triangles.</p> <p>Solve problems involving equilateral triangles.</p>
<p>Unit 5: Line and Triangle Relationships Lesson 10: Your Choice</p>	<p>G.CO.9 G.CO.10 G.CO.11 G.GPE.4 G.GPE.5</p>	<p>You may use today's lesson time to</p> <ul style="list-style-type: none"> <li>• Complete work in progress.</li> <li>• Review prior lessons in the unit to prepare for the Unit Test.</li> <li>• Post or respond to posts on the discussion board for the Exchange Ideas activity in this unit.</li> <li>• Prepare for your state standardized test.</li> </ul> <p>Go on to the next lesson.</p>



<p>Unit 5: Line and Triangle Relationships Lesson 11: Bisectors of a Triangle: Circumcenter</p>	<p>G.CO.10</p>	<p>Determine the circumcenter of a triangle.</p> <p>Determine the incenter of a triangle.</p> <p>Prove geometric theorems about triangles.</p> <p>Solve problems using the circumcenter of a triangle.</p> <p>Solve problems using the incenter of a triangle.</p>
<p>Unit 5: Line and Triangle Relationships Lesson 12: Bisectors of a Triangle: Incenter</p>	<p>G.CO.10</p>	<p>Determine the incenter of a triangle.</p> <p>Prove geometric theorems about triangles.</p> <p>Solve problems using the incenter of a triangle.</p>
<p>Unit 5: Line and Triangle Relationships Lesson 13: Medians of a Triangle: Centroid and Orthocenter</p>	<p>G.CO.10</p>	<p>Determine the centroid of a triangle.</p> <p>Determine the orthocenter of a triangle.</p> <p>Solve problems using the properties of medians in a triangle.</p>
<p>Unit 5: Line and Triangle Relationships Lesson 14: Triangle Midsegment Theorem</p>	<p>G.CO.10</p>	<p>Prove the triangle midsegment theorem.</p> <p>Solve problems using the triangle midsegment theorem.</p>
<p>Unit 5: Line and Triangle Relationships Lesson 15: Quadrilaterals and Their Properties 1</p>	<p>G.CO.11</p>	<p>Prove that the diagonals of a rhombus are perpendicular.</p> <p>Prove that each diagonal of a rhombus bisects a pair of opposite angles.</p> <p>Compare the properties of squares and rhombi to the properties of other quadrilaterals.</p> <p>Solve problems using properties of rhombi and squares.</p> <p>Determine whether a parallelogram is a rhombus or a square.</p>
<p>Unit 5: Line and Triangle Relationships Lesson 16: Quadrilaterals and Their Properties 2</p>	<p>G.GPE.4 G.GPE.5</p>	<p>Prove properties of trapezoids and kites.</p> <p>Solve problems using the properties of trapezoids and kites.</p>

		<p>Prove that a quadrilateral is a trapezoid, an isosceles trapezoid, or a kite.</p> <p>Compare the properties of squares and rhombi to the properties of other quadrilaterals.</p>
<p>Unit 5: Line and Triangle Relationships Lesson 17: Parallelograms 1</p>	<p>G.CO.11</p>	<p>Prove that the consecutive angles of a parallelogram are supplementary.</p> <p>Prove that the diagonals of a parallelogram bisect each other.</p> <p>Prove that the opposite angles of a parallelogram are congruent.</p> <p>Prove that the opposite sides of a parallelogram are congruent.</p> <p>Solve problems using the properties of parallelograms.</p> <p>Determine whether a quadrilateral is a parallelogram.</p>
<p>Unit 5: Line and Triangle Relationships Lesson 18: Parallelograms 2</p>	<p>G.CO.11</p>	<p>Prove that if a parallelogram is a rectangle, then its diagonals are congruent.</p> <p>Solve problems using the properties of rectangles.</p> <p>Determine whether a parallelogram is a rectangle.</p>
<p>Unit 5: Line and Triangle Relationships Lesson 19: Unit Review</p>	<p>G.CO.9 G.CO.10 G.CO.11 G.GPE.4 G.GPE.5</p>	<p>Use today's lesson time to prepare for the Unit Test. You may</p> <ul style="list-style-type: none"> <li>• Revisit Review activities located before each quiz in the unit.</li> <li>• Look at the Summary activities in each lesson.</li> <li>• Read through the Reference Guide pages linked in each lesson.</li> </ul> <p>Ask for help on any Practice problems you did not fully understand.</p>
<p>Unit 5: Line and Triangle Relationships Lesson 20: Unit Test</p>	<p>G.CO.9 G.CO.10 G.CO.11 G.GPE.4 G.GPE.5</p>	<p>Demonstrate knowledge on concepts in this unit.</p>

<p>Unit 6: Similarity Lesson 1: Exchange Ideas: Similarity</p>	<p>G.SRT.1</p>	<p>Draw a dilation whose center of dilation is not on the pre-image.</p> <p>Draw a dilation whose center of dilation is on the pre-image.</p>
<p>Unit 6: Similarity Lesson 2: Dilations</p>	<p>G.SRT.1</p>	<p>Draw a dilation whose center of dilation is not on the pre-image.</p> <p>Draw a dilation whose center of dilation is on the pre-image.</p>
<p>Unit 6: Similarity Lesson 3: Dilations and Scale Factors</p>	<p>G.SRT.1</p>	<p>Determine the length of a line segment in a dilation, given the scale factor and the length of the pre-image.</p> <p>Determine the scale factor used in a dilation.</p> <p>Determine if a dilation is an expansion or contraction, given the scale factor.</p>
<p>Unit 6: Similarity Lesson 4: Directed Line Segments</p>	<p>G.GPE.6</p>	<p>Determine the coordinates of the midpoint of a line segment.</p> <p>Determine the coordinates of the point between two given points that separates the segment into a given ratio.</p>
<p>Unit 6: Similarity Lesson 5: Similar Polygons 1</p>	<p>G.SRT.2</p>	<p>Determine if two figures are similar.</p> <p>Explain how corresponding parts of similar triangles are related.</p> <p>Identify corresponding sides and angles in similar polygons.</p> <p>Write similarity statements for similar polygons.</p>
<p>Unit 6: Similarity Lesson 6: Your Choice</p>	<p>G.SRT.1 G.SRT.2 G.SRT.5 G.GPE.6</p>	<p>You may use today's lesson time to</p> <ul style="list-style-type: none"> <li>• Complete work in progress.</li> <li>• Review prior lessons in the unit to prepare for the Unit Test.</li> <li>• Post or respond to posts on the discussion board for the Exchange Ideas activity in this unit.</li> <li>• Prepare for your state standardized test.</li> </ul> <p>Go on to the next lesson.</p>
<p>Unit 6: Similarity Lesson 7: Similar Polygons 2</p>	<p>G.SRT.2</p>	<p>Determine if two figures are similar.</p>

		<p>Explain how corresponding parts of similar triangles are related.</p> <p>Identify corresponding sides and angles in similar polygons.</p> <p>Write similarity statements for similar polygons.</p> <p>Determine missing measures in similar figures.</p>
<p>Unit 6: Similarity Lesson 8: Extended Problems: Similarity</p>	<p>G.SRT.5</p>	<p>Solve problems using congruence and similarity criteria for triangles.</p> <p>Determine the scale factor of similar figures with at least one known pair of corresponding sides.</p> <p>Use applications to describe the properties of similar objects.</p>
<p>Unit 6: Similarity Lesson 9: Unit Review</p>	<p>G.SRT.1 G.SRT.2 G.SRT.5 G.GPE.6</p>	<p>Use today’s lesson time to prepare for the Unit Test. You may</p> <ul style="list-style-type: none"> <li>• Revisit Review activities located before each quiz in the unit.</li> <li>• Look at the Summary activities in each lesson.</li> <li>• Read through the Reference Guide pages linked in each lesson.</li> </ul> <p>Ask for help on any Practice problems you did not fully understand.</p>
<p>Unit 6: Similarity Lesson 10: Unit Test</p>	<p>G.GPE.6 G.SRT.1 G.SRT.2 G.SRT.5</p>	<p>Demonstrate knowledge on concepts in this unit.</p>
<p>Unit 7: Geometry Semester A Assessment Lesson 1: Your Choice</p>	<p>A.REI.1 G.CO.1 G.CO.2 G.CO.3 G.CO.4 G.CO.5 G.CO.9 G.CO.10 G.CO.11 G.GPE.4 G.GPE.5 G.GPE.6 G.GPE.7 G.SRT.1</p>	<p>Demonstrate knowledge on concepts in this semester.</p>

	<p>G.SRT.2 G.SRT.5</p>	
<p>Unit 7: Geometry Semester A Assessment Lesson 2: Semester A Test, Parts 1 and 2</p>	<p>A.REI.1 G.CO.1 G.CO.2 G.CO.3 G.CO.4 G.CO.5 G.CO.9 G.CO.10 G.CO.11 G.GPE.4 G.GPE.5 G.GPE.6 G.GPE.7 G.SRT.1 G.SRT.2 G.SRT.5</p>	<p>Demonstrate knowledge on concepts in this semester.</p>