

Options EHS Geometry A		Scope and Sequence
Unit	Lesson	Objectives
Foundations of Euclidean Geometry		
Euclidean Geometry		
Identify and name undefined terms of point, line, plane, and distance along a line.		
Analyze descriptions and diagrams that illustrate basic postulates about points, lines, and planes.		
Defining Terms		
Use undefined terms to precisely define parallel lines, perpendicular lines, ray, angle, arc, circle, and line segment.		
Identify and name a pair of parallel lines, a pair of perpendicular lines, a ray, an angle, an arc, a circle, and a line segment.		
Measuring Length and Angles		
Identify a midpoint or bisector of a line segment or angles.		
Apply the ruler postulate and segment addition postulate to calculate the lengths of line segments.		
Apply the protractor postulate and angle addition postulate to calculate angle measures.		
Introduction to Proof		
Complete the steps to prove algebraic and geometric statements.		
Identify proof formats, the essential parts of a proof, and the assumptions that can be made from a given drawing.		
Linear Pairs and Vertical Angles		
Calculate angle measures by using definitions and theorems about linear pairs and vertical angles.		
Identify linear pairs and vertical angles from given diagrams.		
Complete the steps to prove statements using linear pairs and vertical angles.		
Complementary and Supplementary Angles		
Identify complementary angles and supplementary angles from given diagrams.		

Unit Lesson**Objectives**

Solve problems involving measures of complementary and supplementary angles.

Complete the steps to prove statements using complementary angles and supplementary angles.

Unit Test

Angles and Lines

Slope

Identify linear functions by a constant rate of change

Interpret slope as an average rate of change

Determine slope of a line between two points

Identify increasing and decreasing linear functions using slope

Parallel and Perpendicular
Lines

Construct parallel and perpendicular lines.

Identify parallel, perpendicular, and skew lines from three-dimensional figures.

Solve problems involving the distance from a point on the perpendicular bisector to both endpoints of the line segment.

Lines Cut by a Transversal

Solve for angle measures when parallel lines are cut by a transversal.

Complete the steps to prove angle relationships given parallel lines cut by a transversal.

Proving Lines Parallel

Apply theorems to determine if lines are parallel.

Prove lines are parallel given angle relationships.

Slopes of Parallel and
Perpendicular Lines

Complete the steps to prove the slope criteria for parallel and perpendicular lines using coordinate geometry.

Unit Lesson**Objectives**

Determine if two lines are parallel or perpendicular.

Use slope criteria to find additional points on a line parallel or perpendicular to a given line.

Prove the slope criteria for perpendicular lines.

Writing Linear Equations

Write the equation of a line parallel to a given line that goes through a particular point.

Write the equation of a line perpendicular to a given line or segment that goes through a particular point.

Unit Test

Geometric TransformationsIntroduction to
Transformations

Determine if a transformation is isometric and identify corresponding parts of the pre-image and image.

Identify the type of transformation given a pre-image and an image.

Reflections

Develop the definition of a reflection using constructions.

Describe the properties of and write rules for reflections.

Determine the image or pre-image of a figure after a given reflection.

Translations

Develop the definition of a translation using constructions.

Write the rule that describes a given translation.

Determine the image or pre-image of a figure after a given translation.

Rotations

Develop the definition of a rotation using constructions.

Describe the properties of and write rules for rotations.

Options EHS Geometry A		Scope and Sequence
Unit	Lesson	Objectives
		Determine the image or pre-image of a figure after a given rotation.
	Compositions	Determine the rule that describes a given composition of transformations. Determine the image of a figure after a given composition of transformations.
	Symmetry	Identify reflectional symmetry in geometric figures and the number of lines of symmetry. Identify rotational symmetry and its order in geometric figures.
	Unit Test	
	Triangles	
	Triangle Angle Theorems	Complete the steps to prove that the sum of the measures of the interior angles of a triangle is 180 degrees. Identify and relate the interior and exterior angles of a triangle. Calculate the measures of interior and exterior angles of a triangle.
	Triangles and Their Side Lengths	Construct or justify the construction of isosceles and equilateral triangles. Analyze the relationships between the angles of acute, right, and obtuse triangles. Determine if three given segments will satisfy the triangle inequality. Determine the length or parameters for a third side of a triangle given the other two sides.
	Triangle Inequalities	Identify angle and side relationships in a triangle. Identify angle and side relationships between two triangles. Solve real world problems involving relationships between angle measures and side lengths of one or two triangles.

Options EHS Geometry A		Scope and Sequence
Unit	Lesson	Objectives
	Isosceles Triangles	<p>Complete the steps to prove the isosceles triangle theorem and its converse.</p> <p>Identify characteristics of an isosceles triangle.</p> <p>Solve for unknown measures of isosceles triangles.</p>
	Centroid and Orthocenter	<p>Complete the steps to prove that the medians of a triangle meet at a point.</p> <p>Identify the characteristics of the centroid or orthocenter of a triangle.</p> <p>Solve for unknown measures created by medians in a triangle.</p>
	Incenter and Circumcenter	<p>Construct inscribed and circumscribed circles of a triangle.</p> <p>Identify the characteristics of the incenter or circumcenter of a triangle.</p> <p>Solve for unknown measures created by perpendicular or angle bisectors in a triangle.</p>
	Unit Test	
Distances- Pythagorean Theorem, Distance Formula and Equation of a Circle		
	Rewriting Expressions with Radicals	<p>Use operations to rewrite expressions involving radicals.</p>
	Pythagorean Theorem	<p>Apply the Pythagorean theorem to find side lengths of a right triangle</p> <p>Solve problems using the Pythagorean theorem in modeling situations</p>
	Finding Distance in the Coordinate Plane	<p>Apply the Pythagorean theorem to find the distance between two points on the coordinate plane.</p>

Unit Lesson**Objectives**

Generate and use the distance formula to find the distance between two points on the coordinate plane.

Equation of a Circle

Identify the center and radius from the equation of a circle, including equations given in general form.

Determine the equation of a circle.

Determine if a given point lies on a circle.

Test

Triangle Congruence

Congruent Figures

Write congruency statements for transformed figures.

Determine if figures are congruent and, if so, identify their corresponding parts.

Determine unknown measures of congruent figures.

Triangle Congruence: SAS

Determine the isometric transformations that would map one triangle onto another triangle given that two corresponding sides and the included angle are congruent.

Identify the sides and angle that can be used to prove triangle congruency using SAS.

Complete the steps to prove triangles are congruent using SAS.

Triangle Congruence: ASA
and AAS

Identify the side and angles that can be used to prove triangle congruency using ASA or AAS.

Complete the steps to prove triangles are congruent using ASA or AAS.

Determine the isometric transformations that would map one triangle onto another triangle given that two pairs of corresponding angles and one pair of corresponding sides are congruent.

Triangle Congruence: SSS
and HL

Unit Lesson**Objectives**

Identify the parts that can be used to prove triangle congruency using SSS or HL.

Complete the steps to prove triangles are congruent using SSS or HL.

Determine the isometric transformations that would map one triangle onto another triangle given that three corresponding sides are congruent.

Using Triangle Congruence
Theorems

Identify the triangle congruency theorem that can be used to prove two triangles congruent.

Complete the steps to prove angles, segments, and triangles are congruent using triangle congruence theorems and CPCTC.

Performance Task:
Congruency Proofs

Unit Test

Cumulative Exam

Cumulative Exam Review

Cumulative Exam