## **Essential Questions**

* How can the geometric definitions, postulates, properties, and theorems be used to support a hypothesis and lead to a conclusion?
* How can you use geometric theorems or postulates to justify segment length or angle measure?
* How can construction techniques be used to solve real-world problems?

## **Vocabulary**

| Terms | Terms | Terms |
| --- | --- | --- |
| acute angle  adjacent angle  bisector  collinear  complementary  congruent  coplanar  exterior/interior | line  line segment  linear pair  midpoint  obtuse angle  opposite rays  perpendicular  plane | point  polygon  ray  reflex angle  right angle  supplementary  vertex  vertical angles |

## **Unit Topics**

### Topic A: Understanding Points, Lines, and Planes

* I can understand that points, lines, and planes provide the foundation for all geometric terms in Geometry. (Knowledge, G.CO.1)
* I can identify in a figure, define, and represent geometric terms. (Knowledge, G.CO.1)

### Topic B: Measuring and Constructing Segments

* I can use the Segment Addition Postulate to determine the lengths of segments. (Reasoning, SMP 4).
* I can construct midpoints and congruent segments. (Reasoning, G.CO.12).

### Topic C: Measuring and Constructing Angles

* I can name, measure and classify angles. (Skill, SMP 4)
* I can use the Angle Addition Postulate to determine the angle measurement. (Reasoning, G.CO.1)
* I can construct congruent angles and angle bisectors. (Skill, G.CO.12)

### Topic D: Pairs of Angles

* I can identify angle pairs and special angle relationships, such as vertical angles, adjacent angles, complementary and supplementary angles. (Knowledge, G.CO.1)
* I can determine the measure of the angles pairs formed by vertical angles, adjacent angles, complementary angles and supplementary angles. (Skill, G.CO.1)

### Topic E: Using Formulas in Geometry

* I can apply formulas for perimeter and area of rectangles. (Skill, A.CED.4)
* I can apply formulas for circumference and areas of circles. (Skill, A.CED.4)

### Topic F: Midpoint and Distance in the Coordinate Plane

* I can apply the formula for Midpoint of a segment (Skill, G.GPE.7)
* I can use the Distance Formula and the Pythagorean Theorem to determine the distance between two points (Skill, 8.G.8).