

High School Weekly Lesson Plan Template Geometry Unit 6

Unit 6 Georgia's K-12 Standards	<i>Geometry: Concepts and Connections</i> Making Sense of Circles	Considerations or scaffolds for Support
Day 1	<p>G.GSR.8.1 Identify and apply angle relationships formed by chords, tangents, secants, and radii with circles.</p> <p>LT:</p> <ul style="list-style-type: none"> • I can identify parts of a circle. • I can explore relationships in circles. <p>SC:</p> <ul style="list-style-type: none"> • I can name a circle, identify radius, diameter, chord, secant line, tangent line. • I can identify angles based on the location of the vertex: central, inscribed. • I can solve problems involving central angles and inscribed angles. <p>Lesson/Activities: Central Angles, Arcs and Chords Instructional Learning Plan</p>	<p>Scaffolding throughout the lesson and applications will be provided for rigor.</p> <p>Students will work in pairs for turn and talk.</p> <p>Graphic organizers</p>
Day 2	<p>G.GSR.8.1 Identify and apply angle relationships formed by chords, tangents, secants, and radii with circles.</p>	

	<p>LT:</p> <ul style="list-style-type: none"> • I can identify parts of a circle. • I can explore relationships for angles and arcs. <p>SC:</p> <ul style="list-style-type: none"> • I can identify and apply angle relationships formed by chords, secants, and radii with circles. • I can solve problems involving opposite angles of a quadrilateral inscribed in a circle, which are supplementary. <p>Lesson/Activities: Central Angles, Arcs and Chords Instructional Learning Plan</p>	
Day 3	<p>G.GSR.8.1 Identify and apply angle relationships formed by chords, tangents, secants, and radii with circles</p> <p>LT:</p> <ul style="list-style-type: none"> • I can explore relationships for angles and arcs. <p>SC:</p> <ul style="list-style-type: none"> • I can identify and apply angle relationships formed by tangents, secants, and radii with circles. • I can identify perpendicular segments when a radius and tangent segment meet at a point of tangency on a circle. <p>Lesson/Activities: Tangents Intersecting a Radius Instructional Learning Plan</p>	
Day 4	<p>G.GSR.8.1 Identify and apply angle relationships formed by chords, tangents, secants, and radii with circles</p>	

	<p>LT:</p> <ul style="list-style-type: none"> • I can explore relationships for angles and arcs.. <p>SC:</p> <ul style="list-style-type: none"> • I can identify and apply angle relationships formed by chords, tangents, secants, and radii with circles. • I can identify perpendicular segments when a radius and tangent segment meet at a point of tangency on a circle. • I can solve problems involving opposite angles of a quadrilateral inscribed in a circle, which are supplementary. <p>Lesson/Activities: Angles and Circles Instructional Learning Plan</p>	
Day 5	<p>G.GSR.8.1 Identify and apply angle relationships formed by chords, tangents, secants, and radii with circles</p> <p>LT:</p> <ul style="list-style-type: none"> • I can explore relationships for angles and arcs. <p>SC:</p> <ul style="list-style-type: none"> • I can identify and apply angle relationships formed by chords, tangents, secants, and radii with circles. • I can identify perpendicular segments when a radius and tangent segment meet at a point of tangency on a circle. • I can solve problems involving opposite angles of a quadrilateral inscribed in a circle, which are supplementary. <p>Lesson/Activities: Inscribing and Circumscribing Right Triangles Instructional Learning Plan Cyclic Quadrilaterals Instructional Learning Plan Interior and Exterior Angles in Circle Instructional Learning Plan</p>	
Day 6	<p>G.GSR.8.2</p>	

	<p>Using similarity, derive the fact that the length of the arc (arc length) intercepted by an angle is proportional to the radius; derive the formula for the area of a sector. Solve mathematically applicable problems involving applications of arc length and area of sector.</p> <p>LT:</p> <ul style="list-style-type: none"> • I can calculate arc length in a circle. • I can calculate the area of a sector in a circle. <p>SC:</p> <ul style="list-style-type: none"> • I understand that arc length intercepted by an angle is proportional to the radius. • I can solve application problems involving arc length and area of a sector. <p>Lesson/Activities: Arcs, Strings, and Radii Instructional Learning Plan</p>	
Day 7	<p>G.GSR.8.2</p> <p>Using similarity, derive the fact that the length of the arc (arc length) intercepted by an angle is proportional to the radius; derive the formula for the area of a sector. Solve mathematically applicable problems involving applications of arc length and area of sector.</p> <p>LT:</p> <ul style="list-style-type: none"> • I can use the arc length and area of a circle to solve circle application problems. <p>SC:</p> <ul style="list-style-type: none"> • I can solve application problems involving arc length and area of a sector. <p>Lesson/Activities: Arc Length and Area of Sector Instructional Learning Plan</p>	

<p>Day 8</p>	<p>G.GSR.8.3 Write and graph the equation of circles in standard form.</p> <p>LT:</p> <ul style="list-style-type: none"> • I can write and graph circles in standard form. • I can write and graph circles in general form. <p>SC:</p> <ul style="list-style-type: none"> • I can identify the center and radius of a circle from an equation in standard form. • I can identify the center and radius of a circle from the graph of a circle. • I can write the equation of a circle in standard form given the graph of the circle. • I can graph a circle from the standard form equation of a circle. • I can use methods like completing the square to take the equation of a circle from general form to standard form. (Note: The leading coefficient of the quadratic terms should be limited to 1.) <p>Lesson/Activities: Sorting Equations of Circles Instructional Learning Plan</p>	
<p>Day 9</p>	<p>G.GSR.8.3 Write and graph the equation of circles in standard form.</p> <p>LT:</p> <ul style="list-style-type: none"> • I can write and graph circles in standard form. • I can write and graph circles in general form. <p>SC:</p> <ul style="list-style-type: none"> • I can write the equation of a circle in standard form given the graph of the circle. • I can graph a circle from the standard form equation of a circle. <p>Lesson/Activities</p>	

	Sorting Equations of Circles Instructional Learning Plan	
Day 10	<p>G.GSR.8.3 Write and graph the equation of circles in standard form.</p> <p>LT:</p> <ul style="list-style-type: none"> • I can write and graph circles in standard form. • I can write and graph circles in general form. <p>SC:</p> <ul style="list-style-type: none"> • I can use methods like completing the square to take the equation of a circle from general form to standard form. (Note: The leading coefficient of the quadratic terms should be limited to 1.) <p>Lesson/Activities Sorting Equations of Circles Instructional Learning Plan</p>	
Day 11	<p>G.GSR.7.1 Explore and interpret a radian as the ratio of the arc length to the radius of a circle.</p> <p>LT:</p> <ul style="list-style-type: none"> • I can measure angles in degrees and radians. • I can convert between radian and degree measures. <p>SC:</p> <ul style="list-style-type: none"> • I understand the relationship between the radius of a circle, an arc length, and the associated radian measure. <p>Lesson/Activities A Rad Way to Measure Instructional Learning Plan</p>	
Day 12	<p>G.GSR.7.3 Use special right triangles on the unit circle to determine the values of sine, cosine, and tangent for $30^\circ \left(\frac{\pi}{6}\right)$, $45^\circ \left(\frac{\pi}{4}\right)$, and $60^\circ \left(\frac{\pi}{3}\right)$ angle measures. Use reflections of triangles to determine reference angles and identify coordinate values in all four quadrants of the coordinate plane.</p> <p>LT:</p>	

	<ul style="list-style-type: none"> • I can measure angles in degrees and radians. • I can convert between radian and degree measures. <p>SC:</p> <ul style="list-style-type: none"> • I can use Special Right Triangles to find the values of sine, cosine, and tangent for $30^\circ \left(\frac{\pi}{6}\right)$, $45^\circ \left(\frac{\pi}{4}\right)$, and $60^\circ \left(\frac{\pi}{3}\right)$ angle measures. • I can articulate the pattern associated with angle measures in all four quadrants of the Unit Circle. (Students will be using reference angles as degrees in this skill). • I can use reflections of triangles to determine reference angles. • I can identify coordinate values in all four quadrants of the coordinate plane. • I can measure the arc length of a circle using radians, converted from degrees. • I know that the Unit Circle has a radius equal to 1. <p>Lesson/Activities Special Right Triangles on the Coordinate Plan Instructional Learning Plan</p>	
Day 13	Test	