Geometry C&C Daily Agenda - Unit 6 Circles

Unit 6 Georgia's K-12 Standards	***Geometry: Concepts and Connections*** **Making Sense of Circles**	**Considerations or scaffolds for Support**
Day 1	**G.GSR.8.1** Identify and apply angle relationships formed by chords, tangents, secants, and radii with circles. LT: ● I can identify parts of a circle. ● I can explore relationships in circles. SC: ● I can name a circle, identify radius, diameter, chord, secant line, tangent line. ● I can identify and name minor arcs and major arcs. Lesson/Activities: 3 Act Task Circles Vocabulary	Scaffolding throughout the lesson and applications will be provided for rigor. Students will work in pairs for turn and talk. Graphic organizers
Days 2-3	**G.GSR.8.1** Identify and apply angle relationships formed by chords, tangents, secants, and radii with circles. LT: ● I can identify parts of a circle. ● I can explore relationships for tangent lines and radii. SC: ● I can identify a point of tangency and apply angle relationships formed tangents and radii. ● I can solve problems involving right triangles and circles. ● I can solve problems involving quadrilaterals formed by tangent lines and radii.	

	Lesson/Activities: Tangent line and radius theorems.	
Day 4	**G.GSR.8.1** Identify and apply angle relationships formed by chords, tangents, secants, and radii with circles LT: ● I can explore relationships for angles and arcs. SC: ● I can identify and apply angle relationships formed by radii. ● I can solve problems finding the measure of central angles and the arcs they inscribe. Lesson/Activities: Central angles and their arcs.	
Days 5-6	**G.GSR.8.1** Identify and apply angle relationships formed by chords, tangents, secants, and radii with circles LT: ● I can explore relationships for angles and arcs.. SC: ● I can identify and apply angle relationships formed by chords, tangents, secants, and radii with circles. ● I can solve problems finding the measure of inscribed angles and the arcs they inscribe. ● I can solve problems involving opposite angles of a quadrilateral inscribed in a circle, which are supplementary.	

	Lesson/Activities: Central angles and their arcs. Inscribed angles and their arcs	
Day 7	**Quiz**	
Days 8-10	**G.GSR.8.1** Identify and apply angle relationships formed by chords, tangents, secants, and radii with circles LT: ● I can explore relationships for angles and arcs. SC: ● I can identify and apply angle relationships formed by chords, tangents, secants, and radii with circles. ● I can solve problems finding the measure of angles and arcs with a vertex outside the circle. ● I can solve problems finding the measure of angles and arcs with a vertex inside the circle (but not the center). Lesson/Activities: Angles formed outside the circle by two tangent lines, or one secant and one tangent line, or two secant lines. Angles formed inside the circle (but not the center) formed by chords or secant lines.	
Day 11	**Review**	
Day 12	**Unit 6A Assessment**	
Days 13-14	**G.GSR.8.2** 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.	

	LT: ● I can calculate arc length in a circle. ● I can calculate the area of a sector in a circle. **SC**: ● 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. Lesson/Activities: Arc length and sector area of a circle.	
Day 15	**G.GSR.8.2** 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. **LT**: ● I can use the arc length and area of a circle to solve circle application problems. **SC**: ● I can solve application problems involving arc length and area of a sector. Lesson/Activities: Arc length and sector area of a circle application problems.	
Days 16-17	**G.GSR.8.3** Write and graph the equation of circles in standard form. **LT**: ● I can write and graph circles in standard form. ● I can write and graph circles in general form.	

	SC: ● 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.) Lesson/Activities: Write the equation of a graph in standard form. Graph the circle given an equation.	
Days 18-19	**G.GSR.8.3** Write and graph the equation of circles in standard form. **LT**: ● I can write and graph circles in standard form. ● I can write and graph circles in general form. **SC**: ● 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 and general form of an equation of a circle. Lesson/Activities Convert standard form to general form equation of a circle. Convert general form to standard form equation of a circle.	
Day 20	**Quiz**	
Day 21	**G.GSR.7.1**	

	Explore and interpret a radian as the ratio of the arc length to the radius of a circle. LT: ● I can measure angles in degrees and radians. ● I can convert between radian and degree measures. SC: ● I understand the relationship between the radius of a circle, an arc length, and the associated radian measure. Lesson/Activities A Rad Way to Measure Instructional Learning Plan	
Day 22	**G.GSR.7.3** Use special right triangles on the unit circle to determine the values of sine, cosine, and tangent for 30° $\left(\frac{\pi}{6}\right)$, 45° $\left(\frac{\pi}{4}\right)$, and 60° $\left(\frac{\pi}{3}\right)$ angle measures. LT: ● I can review special right triangle patterns from unit 5. SC: ● I can find the side lengths for a 45-45-90 right triangle. ● I can find the side lengths for a 30-60-90 right triangle. Lesson/Activities Review special right triangles.	
Days 23-26	**G.GSR.7.3** Use special right triangles on the unit circle to determine the values of sine, cosine, and tangent for 30° $\left(\frac{\pi}{6}\right)$, 45° $\left(\frac{\pi}{4}\right)$, and 60° $\left(\frac{\pi}{3}\right)$ angle measures. Use reflections of triangles to determine reference angles and identify coordinate values in all four quadrants of the coordinate plane. LT: ● I can measure angles in degrees and radians. ● I can convert between radian and degree measures.	

	SC: ● I can use Special Right Triangles to find the values of sine, cosine, and tangent for 30° $\left(\frac{\pi}{6}\right)$, 45° $\left(\frac{\pi}{4}\right)$, and 60° $\left(\frac{\pi}{3}\right)$ 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. Lesson/Activities Unit Circle - use knowledge of special right triangles to find measures on the unit circle.	
Day 27	Review	
Day 28	Unit 6B Assessment	