Curriculum Sample Template
Max. 8 Pages

Grade Level	High School	**Content Area**	Math
Course Title (grades 9-12 Only)	Geometry		
Length of Unit	6 Days	**Time of Year**	4th quarter
Expected Prior Knowledge *The knowledge/skills mastered earlier in the year foundational to the mastery of the required Standard in the current sample.*	Students can prove theorems about triangles. Theorems include: measures of interior angles of a triangle sum to 180° (G-CO.10). Students can use the Pythagorean Theorem to solve right triangles in applied problems (G-SRT.8). Students work through standards of mathematical practice in every mathematics lesson throughout the year.		
Alignment to Program of Instruction *Briefly outline methods of instruction found in this sequence of lessons that align to the Program of Instruction described in A.3.*	The following methods of instruction are aligned to the program of instruction: *RTI*: Notes in CLOZE form are provided for Tier 2 and Tier 3 students as needed. Teacher will organize small group guided instruction for students as needed. Teacher will re-teach objectives focusing on multiple learning styles (verbal, visual, kinesthetic, etc.) as needed. *What Works Strategies*: Objectives are clearly communicated to students at the beginning of every lesson. Cooperative learning is used regularly in lessons emphasizing the thought process used as problems are solved (think-alouds). Homework is assigned for independent practice. Students will regularly receive criterion-referenced, timely and specific feedback on their performance. *SIOP*: Students regularly work with partners and small groups. Scaffolding involves significant teacher modeling and guided practice. Students will verbalize their thought processes as related to the problems they have solved (think-alouds). Notes in CLOZE form are provided for students as needed. When appropriate, mathematics vocabulary will be broken down and analyzed to help with comprehension of unfamiliar terms (e.g.: tangent, inscribed angle, etc.) *Culturally Relevant Pedagogy*: Students will solve real-world problems that include topics relevant to them and their community.		
Standard Number and Description *List the Number* and full description for the required Standard.*	G-C.2 - Identify and describe relationships among inscribed angles, radii, and chords. Include the relationship between central, inscribed, and circumscribed angles; inscribed angles on a diameter are right angles; the radius of a circle is perpendicular to the tangent where the radius intersects the circle.		
Summative Assessment	The summative assessment for this objective is in the form of a quiz. Students will calculate radii		

	and angle measures of given circles using relationships among inscribed angles, radii, and chords.
Scoring Scale and Mastery Level	The summative assessment will be scored using an answer key. Each question is assigned a point value. Mastery is demonstrated with a score of 80% or above. A score of 20 = 100%, a score of 19 = 95%, a score of 18 = 90%, a score of 17 = 85%, a score of 16 = 80%, a score of 15 = 75%, etc.
Materials/Resources Needed	Textbook (*Prentice Hall, Geometry), notes in CLOZE form, homework starters for Tier 3 students. **Note: 2013-2014 Pearson textbooks, as mentioned in A.3 Program of Instruction, were not available at time of planning and publication, so earlier editions of Pearson/Prentice Hall textbooks were used.*

	Instruction	**Student Activities**
1	Objective: Students will solve for the length of a chord using the fact that chords are equidistant from the center of a circle are congruent; and when a diameter is perpendicular to a chord the chord is bisected; and using the Pythagorean Theorem to solve for length of chords. 1) Teacher reads the objective aloud to students. 2) Teacher introduces and models how congruency is used to solve for the length of a missing measurement. Teacher models correct use of vocabulary and verbalizes the thought process used to calculate solutions (think alouds). 3) Teacher provides students with problems in which they are to solve for missing lengths (i.e., chords) in a circle. Teacher actively roams around the classroom monitoring discussions and making notes of observations to be shared with the class. 4) Teacher introduces and models: when a diameter is perpendicular to a chord the chord is bisected. Teacher models correct use of vocabulary and verbalizes the thought process used to calculate solutions (think alouds). 5) Teacher provides examples for students to solve with partners. Teacher actively roams around the classroom monitoring	1) Students follow along with the teacher and the write objective into their notes. (A set of notes in CLOZE form are provided to students who have been identified as needing them, Tier 3 and some Tier 2.) 2) Students write definition and examples in their notes and ask clarifying questions as needed. 3) Working in pairs, students discuss and solve for length of a chord. 4) Students write definition and examples in their notes and ask clarifying questions as needed. 5) Students discuss and solve given problems with their partners. 6) Pairs of student volunteers will present their solutions to the class, focusing on correct use of vocabulary and verbalizing their thought processes (think alouds). 7) Students complete homework problems independently. (For Tier 3 students, the first three problems will be in hand-out form with the first problem completed and the next two problems partially completed)

	discussions and making notes of observations to be shared with the class. 6) Teacher facilitates classroom discussion on given examples and shares observations when appropriate. 7) Teacher assigns homework: Students are provided problems in which to calculate missing lengths inside a given circle. (Additional problems are available for enrichment, when appropriate, for individual students.)	
2	Objective: Students understand that the measure of an inscribed angle is half the measure of the intercepted arc. 1) Teacher instructs students to check their homework with their table groups (4 students). Teacher actively roams around the classroom monitoring discussions and making notes of any observations to be shared with the class. 2) Teacher facilitates whole-class discussion about individual homework problems, if necessary, asking for volunteers to share their solutions/thought processes with the class. Teacher shares observations when appropriate. 3) Teacher reads objective aloud to students. 4) Teacher introduces and models with examples: the measure of an inscribed angle is half the measure of the intercepted arc AND two inscribed angles intercepting the same arc are congruent. Teacher models correct use of vocabulary and verbalizes the thought process used to calculate solutions (think alouds). 5) Teacher provides students with problems in which they calculate the measurement of inscribed angles and intercepted arcs. Teacher actively roams around the classroom monitoring discussions and making notes of any observations to be shared with the class. 6) Teacher facilitates classroom discussion on given examples and shares observations when appropriate. 7) Teacher assigns homework: Students are provided problems in which to calculate inscribed angles and intercepted arcs. (Additional problems are available for enrichment, when	1) Students cooperatively share their answers. They discuss any solutions that they did not agree on and attempt to come to a group consensus on the solutions to these problems. If there is a solution they do not agree on, they will note that problem to share with the whole class to see if someone else in the room can explain/model the solution. 2) Selected students share their solutions/thought processes if needed. Students are the teachers at this point. 3) Students follow along with the teacher and the write objective into their notes. (A set of notes in CLOZE form are provided to students who have been identified as needing them, Tier 3 and some Tier 2.) 4) Students write examples in their notes and ask clarifying questions as needed. 5) Students discuss and solve given problems with their partners. 6) Pairs of student volunteers present their solutions to the class, focusing on correct use of vocabulary and verbalizing their thought processes (think alouds). 7) Students complete homework problems independently. (For Tier 3 students, the first three problems will be in hand-out form with the first problem completed and the next two problems partially completed.)

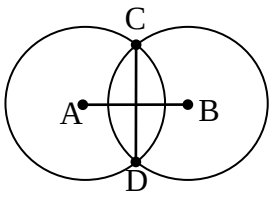
	appropriate, for individual students.)	
3	Objective: Students understand that an angle inscribed in a semicircle is a right angle. 1) Teacher instructs students to check their homework with their table groups (4 students). Teacher actively roams around the classroom monitoring discussions and making notes of any observations to be shared with the class. 2) Teacher facilitates whole-class discussion about individual homework problems, if necessary, asking for volunteers to share their solutions/thought processes with the class. 3) Teacher reads today's objective aloud to students. 4) Teacher introduces and models with examples: an angle inscribed in a semicircle is a right angle and this fact can be used to find angle measures in a circle. Teacher models correct use of vocabulary and verbalizes the thought process used to calculate solutions (think alouds). 5) Teacher provides students with problems in which they find missing angle measures in a circle. Teacher will actively roam around the classroom monitoring the discussions and making notes of any observations to be shared with the class. 6) Teacher facilitates classroom discussion on given examples and shares observations when appropriate. 7) Teacher assigns homework: Students will be provided several problems in which to calculate missing angle measures in a circle. (Additional problems will be made available for enrichment, when appropriate, for individual students.)	1) Students cooperatively share their answers. They discuss any solutions that they did not agree on and attempt to come to a group consensus on the solutions to these problems. If there is a solution they do not agree on, they will note that problem to share with the whole class to see if someone else in the room can explain/model the solution. 2) Selected students share their solutions/thought processes if needed. Students are the teachers at this point. 3) Students follow along with the teacher and the write objective into their notes. (A set of notes in CLOZE form are provided to students who have been identified as needing them, Tier 3 and some Tier 2.) 4) Students write examples in their notes and ask clarifying questions as needed. 5) Students discuss and solve given problems with their partners. 6) Pairs of student volunteers present their solutions to the class, focusing on correct use of vocabulary and verbalizing their thought processes (think alouds). 7) Students complete homework problems independently. (For Tier 3 students, the first three problems will be in hand-out form with the first problem completed and the next two problems partially completed.)
4	Objective: Students understand that two segments tangent to a circle from a point outside the circle are congruent. 1) Teacher instructs students to check their homework with their table groups (4 students). Teacher actively roams around the classroom monitoring the discussions and making notes of any	1) Students cooperatively share their answers. They discuss any solutions that they did not agree on and attempt to come to a group consensus on the solutions to these problems. If there is a solution they do not agree on, they will note that problem to share with the whole class to see if someone else

	observations to be shared with the class. 2) Teacher facilitates whole-class discussion about individual homework problems, if necessary, asking for volunteers to share their solutions/thought processes with the class. 3) Teacher reads today's objective aloud to students. 4) Teacher introduces and models with examples: two segments tangent to a circle from a point outside the circle are congruent. Teacher models correct use of vocabulary and verbalizes the thought process used to calculate solutions (think alouds). 5) Teacher provides students with practice problems. Teacher will actively roam around the classroom monitoring discussions and making notes of any observations to be shared with the class. 6) Teacher facilitates classroom discussion on given examples and shares observations when appropriate. 7) Teacher assigns homework: Students are provided problems in which to calculate measurements of tangent line segments to circles. (Additional problems will be made available for enrichment, when appropriate, for individual students.)	in the room can explain/model the solution. 2) Selected students share their solutions/thought processes if needed. Students are the teachers at this point. 3) Students follow along with the teacher and the write objective into their notes. (A set of notes in CLOZE form are provided to students who have been identified as needing them, Tier 3 and some Tier 2.) 4) Students write examples in their notes and ask clarifying questions as needed. 5) Students discuss and solve given problems with their partners. 6) Pairs of student volunteers present their solutions to the class, focusing on correct use of vocabulary and verbalizing their thought processes (think alouds). 7) Students complete homework problems independently. (For Tier 3 students, the first three problems will be in hand-out form with the first problem completed and the next two problems partially completed.)
5	Objective: Students understand that the measure of an angle formed by a tangent and a chord is half the measure of the intercepted arc. 1) Teacher instructs students to check their homework with their table groups (4 students). Teacher actively roams around the classroom monitoring the discussions and making notes of any observations to be shared with the class. 2) Teacher facilitates whole-class discussion about individual homework problems, if necessary, asking for volunteers to share their solutions/thought processes with the class. Teacher shares observations when appropriate. 3) Teacher reads today's objective aloud to students. 4) Teacher introduces and models with examples: the measure of an	1) Students cooperatively share their answers. They discuss any solutions that they did not agree on and attempt to come to a group consensus on the solutions to these problems. If there is a solution they do not agree on, they will note that problem to share with the whole class to see if someone else in the room can explain/model the solution. 2) Selected students share their solutions/thought processes if needed. Students are the teachers at this point. 3) 1) Students follow along with the teacher and the write objective into their notes. (A set of notes in CLOZE form are provided to students who have been identified as needing them, Tier 3 and some Tier 2.) 4) Students write examples in their notes and ask clarifying

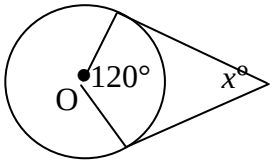
	angle formed by a tangent and a chord is half the measure of the intercepted arc. Teacher models correct use of vocabulary and verbalizes the thought process used to calculate solutions (think alouds). 5) Teacher provides students with problems in which they use properties of tangents and chords to calculate measurements of angles and intercepted arcs. Teacher will actively roam around the classroom monitoring the discussions and making notes of any observations to be shared with the class. 6) Teacher facilitates classroom discussion on given examples and shares observations when appropriate. 7) Teacher assigns homework: Students are provided problems in which to calculate measures of intercepted arcs created by tangents and chords. (Additional problems will be made available for enrichment, when appropriate, for individual students.)	questions as needed. 5) Students discuss and solve given problems with their partners. 6) Pairs of student volunteers present their solutions to the class, focusing on correct use of vocabulary and verbalizing their thought processes (think alouds). 7) Students complete homework problems independently. (For Tier 3 students, the first three problems will be in hand-out form with the first problem completed and the next two problems partially completed.)
	Objective: Students identify and describe relationships among inscribed angles, radii, and chords. Include the relationship between central, inscribed, and circumscribed angles; inscribed angles on a diameter are right angles; the radius of a circle is perpendicular to the tangent where the radius intersects the circle. 1) Teacher instructs students to check their homework with their table groups (4 students). Teacher actively roams around the classroom monitoring the discussions and making notes of any observations to be shared with the class. 2) Teacher facilitates whole-class discussion about individual homework problems, if necessary, asking for volunteers to share their solutions/thought processes with the class. Teacher shares observations when appropriate. 3) Teacher gives summative assessment.	1) Students cooperatively share their answers. They discuss any solutions that they did not agree on and attempt to come to a group consensus on the solutions to these problems. If there is a solution they do not agree on, they will note that problem to share with the whole class to see if someone else in the room can explain/model the solution. 2) Selected students share their solutions/thought processes if needed. Students are the teachers at this point. 3) Students will complete summative assessment.

Paste Summative Assessment Here:
Quiz – Geometry - Circles

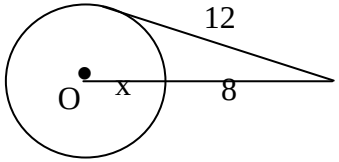
1. Given ⊙A and ⊙B are congruent and $\overline{CD}$ is a chord of both circles:
   If $\overline{AB}$ = 16 inches and $\overline{CD}$ = 12 inches, what is the radius of the circles?



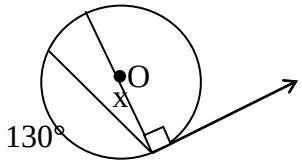
2. Assume the lines are tangent. O is the center of the circle. Find *x*.



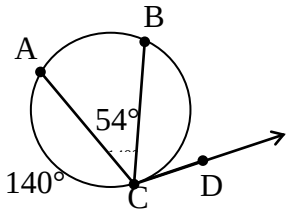
3. Assume the line is tangent. What is the value of the variable *x*?



4. Find the angle measure of angle *x*.



5. Find $\measuredangle BCD$.



Paste Answer Key/Scoring Rubric Here:

Quiz – Geometry / Circles ANSWER KEY

Mastery is 80% or above.

Quiz is worth 20 points. Each problem is worth four points.

1. 10 inches

2. 60°

3. 5

4. 25°

5. 56°