High School Weekly Lesson Plan Template Geometry Unit 5 (Year Long)

16 days

Unit 5	Geometry: Concepts and Connections Right Triangle Trigonometry
Day 1	 G.GSR.6 Examine side ratios of similar triangles; use the relationship between right triangles to develop an understanding of sine, cosine, and tangent to solve geometric problems and to model and explain real-life phenomena. LT: I can identify the parts of a right triangle. I can use the Pythagorean Theorem to solve for sides of a right triangle. SC: I can identify the hypotenuse and the legs of a right triangle. I can use the Pythagorean Theorem to solve for a missing leg. Lesson/Activities: students will review solving for sides using the Pythagorean Theorem (include radical and decimal answers). If time, include Pythagorean Triples and the converse of the Pythagorean Theorem.
Day 2-3	 G.GSR.6.1 Explain that by similarity, side ratios in right triangles are properties of the angles in the triangle, leading to definitions of trigonometric ratios for acute angles. LT: I can apply rules for special right triangles. SC: I can identify a 30-60-90 and a 45-45-90 special right triangle. I understand the relationship between the angles and sides of 45-45-90 triangles. I understand the relationship between the angles and sides of 30-60-90 triangles. I can solve special right triangles. I can use special right triangle theorems to solve for missing sides and angles of squares and equilateral triangles. Lesson/Activity: students will learn and apply special right triangle theorems.

Day 4-5	G.GSR.6.1 Explain that by similarity, side ratios in right triangles are properties of the angles in the triangle, leading to definitions of trigonometric ratios for acute angles
	G.GSR.6.2
	Explain and use the relationship between the sine and cosine of complementary angles.
	 LT I can identify and create trigonometric ratios.
	 SC I can identify hypotenuse, opposite, adjacent legs.
	 I can decide which trig ratio to use (sine, cosine, tangent) and set up the appropriate trigonometric ratio. I can correctly simplify and round a trigonometric ratio to a specified place value
	• I can use the relationship between the sine and cosine of complementary angles to solve geometric problems.
	Lesson/Activities: students will create and simplify trig ratios. Students will explore the relationship sine and cosine of complementary angles.
Day 6-7	G.GSR.6.3 Use trigonometric ratios and the Pythagorean Theorem to solve for sides and ANGLES of right triangles in applied problems.
	 I can use the inverse trig ratios to solve for missing angles of a right triangle.
	 SC I can identify hypotenuse, opposite, adjacent legs. I can write a trigonometric equation and use inverse trig functions to solve for a missing angle.
	Lesson/ Δ ctivities: students will find missing angles of right triangles using inverse trig functions
	Ecsson/Activities. students will find missing angles of right thangles using inverse trig functions.
Day 8	Review & QUIZ
Days 9-10	G.GSR.6.3 Use trigonometric ratios and the Pythagorean Theorem to solve for SIDES and angles of right triangles in applied problems.
	LTI can use the trig ratios to solve for missing sides of a right triangle.

	 SC I can identify hypotenuse, opposite, adjacent legs. I can write a trigonometric equation and use trig functions to solve for a missing side.
	Lesson/Activities: students will find missing sides of right triangles using trig functions.
Days 11-12	G.GSR.6.3 Use trigonometric ratios and the Pythagorean Theorem to solve for sides and angles of right triangles in applied problems.
	LT:
	 Fear solve a right thangle. SC: I can identify hypotenuse, opposite, adjacent legs. I can use the Pythagorean Theorem or write a trigonometric equation and use trig functions to solve for a missing side. I can use Triangle Sum Theorem or write a trigonometric equation and use inverse trig functions to solve for a missing angle. Lesson/Activity: students will solve for all missing sides and angles of a right triangle.
Day	G.GSR.6.3
13-14	Use trigonometric ratios and the Pythagorean Theorem to solve for sides and angles of right triangles in applied problems.
	 I can solve real world problems involving right triangles and angles of elevation and depression. SC
	 I can identify an angle of elevation or depression. I can interpret statements about heights, distances, and angles of elevation and depression.
	Lesson/Activities: students will solve real world application problems involving angles of elevation and depression.
Day 15	Review for TEST