Conceptual Curriculum Map (CCM)

Content Area: Math
Grade Level: 9-12

Course: Geometry

Grade Level: 9-12				
Unit 1	Long-Term Outcomes/Transfer Goa	als:		
Constructions and	 Analyze and model mathemati 	cal relationships in authentic and varie	d contexts, make informed	
Rigid	decisions, and draw conclusions.			
Transformations	•	 Construct viable arguments, critique the reasoning of others, and communicate ideas precisely using 		
	the language of mathematics.	inique the reasoning or others, and con	minumente lucus precisery using	
	<u> </u>			
		ectives, ask questions, and respectfully	engage with peers while working	
	towards a common goal.			
	 Persevere, think strategically/fl 	lexibly, and reflect and revise thinking i	n order to solve complex	
	problems.			
	Standards	Conceptual Overview	Rationale	
Focus &	Experiment with	In this unit, students first informally	Proving statements in this unit	
Timeframe	transformations in the plane	explore geometric properties using	prepares students for	
	HSG.CO.A.1	straightedge and compass	congruence proofs in the next	
-Constructions	HSG.CO.A.2	constructions.	unit.	
-Rigid	HSG.CO.A.5			
Transformations		Students then begin to use the	Students need to practice	
-Evidence & Proof	Understand congruence in terms	rigorous definitions they developed	using precise mathematical	
211401100 64 1 1001	of rigid motions	to prove statements involving	language and justifying claims	
	HSG.CO.B.6	angles and distances.	mathematically.	
9-10 Days	1130.00.21	angles and distances.	mathematically.	
5 25 24,5	Prove geometric theorems	Students transition to more formal	This allows students to build	
	HSG.CO.C.9	definitions that don't rely on the	conjectures and observations	
	• HSG.CO.D.12	coordinate plane, and the focus	before formally defining	
	1136.66.8.12	shifts from transforming whole	rotations, reflections, and	
		figures towards a more	translations.	
		point-by-point analysis.	translations.	
Unit 2	Long-Term Outcomes/Transfer Goa	-		
Congruency	Analyze and model mathematical relationships in authentic and varied contexts, make informed			
o and a second	decisions, and draw conclusions.			
	• Construct viable arguments, critique the reasoning of others, and communicate ideas precisely using			
	the language of mathematics.			
	 Share diverse ideas and perspectives, ask questions, and respectfully engage with peers while working 			
	towards a common goal.			
 Persevere, think strategically/flexibly, and reflect and revise thinking in 			n order to solve complex	
	problems.			
	Standards	Conceptual Overview	Rationale	
Focus &	Understand congruence in terms	In this unit, students begin by	Students use transformations	
Timeframe	of rigid motions	reasoning about the relationships	as tools for reasoning and	
	HSG.CO.B.6	between congruent parts of figures,	generalizing.	
-Congruent	HSG.CO.B.7	and congruent figures.		
Triangles	HSG.CO.B.8		Students practice reasoning	
		Students use transformations to	abstractly and quantitatively	
	Prove geometric theorems	prove three theorems about	and constructing viable	
12 Days	HSG.CO.C.9	triangle congruence:	arguments.	
,	HSG.CO.C.10	Side-Angle-Side Triangle		
	HSG.CO.C.11	Congruence, Angle-Side-Angle	Applications of fractions are	
	1130.00.0.11	T: L C		

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required for the next unit on

Similarity. Prior knowledge

Triangle Congruence, and

Side-Side-Side Triangle Congruence.

		Throughout this unit, we will re-activate prior knowledge of operations with fractions with spaced practice.	needs to be activated so that students can access the new geometry concepts.
Unit 3 Similarity	 Long-Term Outcomes/Transfer Goals: Analyze and model mathematical relationships in authentic and varied contexts, make informed decisions, and draw conclusions. Construct viable arguments, critique the reasoning of others, and communicate ideas precisely using the language of mathematics. Share diverse ideas and perspectives, ask questions, and respectfully engage with peers while working 		
	 towards a common goal. Persevere, think strategically/flexibly, and reflect and revise thinking in order to solve complex problems. 		
	Standards	Conceptual Overview	Rationale
Focus &	Understand similarity in terms of	In this unit, students use dilations	This unit previews many of the
Timeframe	similarity transformations HSG.SRT.A.1	and rigid transformations to justify triangle similarity theorems	important concepts that students rely on to make sense
Properties of Dilations	HSG.SRT.A.2 HSG.SRT.A.3	including the Angle-Angle Triangle Similarity Theorem.	of trigonometry in later units. The latter part of the unit focuses on similar right
Similarity Transformations and Proportional	Prove theorems involving similarity HSG.SRT.B.4 HSG.SRT.B.5	Students explicitly build on their work with congruence and rigid motions, establishing that triangles are similar by dilating them	triangles. In addition, students are introduced to some of the applications of right triangles that they will explore in more
Reasoning Similarity in Right	1150.51(115.5	strategically. The unit balances a focus on proof	depth in the trigonometry unit, such as finding the heights of objects through indirect
Triangles 9 Days		with a focus on using similar triangles to find unknown side lengths and angle measurements.	measurement.
Unit 4 Right Triangle Trigonometry	 Long-Term Outcomes/Transfer Goals: Analyze and model mathematical relationships in authentic and varied contexts, make informed decisions, and draw conclusions. Construct viable arguments, critique the reasoning of others, and communicate ideas precisely using 		
	 the language of mathematics. Share diverse ideas and perspectives, ask questions, and respectfully engage with peers while working towards a common goal. Persevere, think strategically/flexibly, and reflect and revise thinking in order to solve complex 		
	problems.	iexibiy, and reflect and revise tilliking i	if order to solve complex
	Standards	Conceptual Overview	Rationale
Focus &		In this unit students build an	
Timeframe	Prove theorems involving similarity	understanding of ratios in right	Right Triangle Trigonometry is used in applications across
Timename	HSG.SRT.B.5	triangles which leads to naming	multiple fields including
Angles and		cosine, sine, and tangent as	architecture, construction,
Steepness	Define trigonometric ratios and	trigonometric ratios.	crime scene investigation,
	solve problems involving right		engineering, navigation and
Defining	triangles	Students examine special cases of	physics.
Trigonometric	HSG.SRT.C.6	similar right triangles to solidify the	
Ratios	HSG.SRT.C.7 HSG.SRT.C.8	idea that any right triangles with a single congruent acute angle are similar.	Practicing without naming the ratios allows students to connect similarity, proportional

11 Days		Students practice estimating both side lengths and angle measures using a table, and then they learn the names cosine, sine, and tangent. Students practice looking up the cosine, sine, or tangent of a given angle in a calculator with simple triangles, then they apply trigonometry to several contexts.	reasoning, and scale factors to right triangles with a congruent acute angle before the calculator takes over some of the computation. Students encounter several contexts to both make sense of and apply right triangle measurement. Special right triangles are an opportunity to practice, build on important ideas, and are frequently included on college entrance exams.
Unit 5	Long-Term Outcomes/Transfer Goa		
Solid Geometry	 Analyze and model mathemati decisions, and draw conclusion 	cal relationships in authentic and varie	d contexts, make informed
	•	is. itique the reasoning of others, and con	nmunicate ideas precisely using
	the language of mathematics.	g ,	,
		ectives, ask questions, and respectfully	engage with peers while working
	towards a common goal.		
		lexibly, and reflect and revise thinking i	n order to solve complex
	problems. Standards	Conceptual Overview	Rationale
Focus &	Create equations that describe	In this unit, students practice spatial	Students apply what they
Timeframe	numbers or relationships.	visualization in three dimensions,	know about volume to solve
	HSA-CED.A.2	study the effect of dilation on area,	real world scientific problems.
 Scaling and Area	HSA-CED.A.2	and apply volume formulas to solve	
_	HSA-CED.A.2 Interpret the structure of	and apply volume formulas to solve problems involving surface area to	They calculate densities and
 Scaling and Area Volume	HSA-CED.A.2 Interpret the structure of expressions.	and apply volume formulas to solve	They calculate densities and analyze surface area to volume
_	HSA-CED.A.2 Interpret the structure of expressions. HSA-SSE.A.1.a	and apply volume formulas to solve problems involving surface area to	They calculate densities and analyze surface area to volume ratios in chemistry and biology
Volume	HSA-CED.A.2 Interpret the structure of expressions.	and apply volume formulas to solve problems involving surface area to	They calculate densities and analyze surface area to volume
_	Interpret the structure of expressions. HSA-SSE.A.1.a HSA-SSE.A.1.b	and apply volume formulas to solve problems involving surface area to	They calculate densities and analyze surface area to volume ratios in chemistry and biology
Volume	Interpret the structure of expressions. HSA-SSE.A.1.a	and apply volume formulas to solve problems involving surface area to	They calculate densities and analyze surface area to volume ratios in chemistry and biology
Volume	Interpret the structure of expressions. HSA-SSE.A.1.a HSA-SSE.A.1.b Explain volume formulas and use	and apply volume formulas to solve problems involving surface area to	They calculate densities and analyze surface area to volume ratios in chemistry and biology
Volume	Interpret the structure of expressions. HSA-SSE.A.1.a HSA-SSE.A.1.b Explain volume formulas and use them to solve problems	and apply volume formulas to solve problems involving surface area to	They calculate densities and analyze surface area to volume ratios in chemistry and biology
Volume	Interpret the structure of expressions. HSA-SSE.A.1.a HSA-SSE.A.1.b Explain volume formulas and use them to solve problems HSG.GMD.A.1 HSG.GMD.A.3	and apply volume formulas to solve problems involving surface area to	They calculate densities and analyze surface area to volume ratios in chemistry and biology
Volume	Interpret the structure of expressions. HSA-SSE.A.1.a HSA-SSE.A.1.b Explain volume formulas and use them to solve problems HSG.GMD.A.1 HSG.GMD.A.3 Apply geometric concepts in	and apply volume formulas to solve problems involving surface area to	They calculate densities and analyze surface area to volume ratios in chemistry and biology
Volume	Interpret the structure of expressions. HSA-SSE.A.1.a HSA-SSE.A.1.b Explain volume formulas and use them to solve problems HSG.GMD.A.1 HSG.GMD.A.3 Apply geometric concepts in modeling situations	and apply volume formulas to solve problems involving surface area to	They calculate densities and analyze surface area to volume ratios in chemistry and biology
Volume	Interpret the structure of expressions. HSA-SSE.A.1.a HSA-SSE.A.1.b Explain volume formulas and use them to solve problems HSG.GMD.A.1 HSG.GMD.A.3 Apply geometric concepts in	and apply volume formulas to solve problems involving surface area to	They calculate densities and analyze surface area to volume ratios in chemistry and biology
Volume	Interpret the structure of expressions. HSA-SSE.A.1.a HSA-SSE.A.1.b Explain volume formulas and use them to solve problems HSG.GMD.A.1 HSG.GMD.A.3 Apply geometric concepts in modeling situations HSG-MG.A.1 HSG-MG.A.2 HSG-MG.A.2	and apply volume formulas to solve problems involving surface area to volume ratios, and density.	They calculate densities and analyze surface area to volume ratios in chemistry and biology
Volume 8 Days	Interpret the structure of expressions. HSA-SSE.A.1.a HSA-SSE.A.1.b Explain volume formulas and use them to solve problems HSG.GMD.A.1 HSG.GMD.A.3 Apply geometric concepts in modeling situations HSG-MG.A.1 HSG-MG.A.2 HSG-MG.A.3 Long-Term Outcomes/Transfer Good	and apply volume formulas to solve problems involving surface area to volume ratios, and density.	They calculate densities and analyze surface area to volume ratios in chemistry and biology applications.
Volume 8 Days Unit 6 Coordinate	Interpret the structure of expressions. HSA-SSE.A.1.a HSA-SSE.A.1.b Explain volume formulas and use them to solve problems HSG.GMD.A.1 HSG.GMD.A.3 Apply geometric concepts in modeling situations HSG-MG.A.1 HSG-MG.A.2 HSG-MG.A.3 Long-Term Outcomes/Transfer Goa • Analyze and model mathemati	and apply volume formulas to solve problems involving surface area to volume ratios, and density. als: cal relationships in authentic and varie	They calculate densities and analyze surface area to volume ratios in chemistry and biology applications.
Volume 8 Days	Interpret the structure of expressions. HSA-SSE.A.1.a HSA-SSE.A.1.b Explain volume formulas and use them to solve problems HSG.GMD.A.1 HSG.GMD.A.3 Apply geometric concepts in modeling situations HSG-MG.A.1 HSG-MG.A.2 HSG-MG.A.3 Long-Term Outcomes/Transfer Goa • Analyze and model mathemati decisions, and draw conclusions	and apply volume formulas to solve problems involving surface area to volume ratios, and density. als: cal relationships in authentic and varieus.	They calculate densities and analyze surface area to volume ratios in chemistry and biology applications.
Volume 8 Days Unit 6 Coordinate	Interpret the structure of expressions. HSA-SSE.A.1.a HSA-SSE.A.1.b Explain volume formulas and use them to solve problems HSG.GMD.A.1 HSG.GMD.A.3 Apply geometric concepts in modeling situations HSG-MG.A.1 HSG-MG.A.2 HSG-MG.A.3 Long-Term Outcomes/Transfer God • Analyze and model mathemati decisions, and draw conclusion • Construct viable arguments, cr	and apply volume formulas to solve problems involving surface area to volume ratios, and density. als: cal relationships in authentic and varie	They calculate densities and analyze surface area to volume ratios in chemistry and biology applications.
Volume 8 Days Unit 6 Coordinate	Interpret the structure of expressions. HSA-SSE.A.1.a HSA-SSE.A.1.b Explain volume formulas and use them to solve problems HSG.GMD.A.1 HSG.GMD.A.3 Apply geometric concepts in modeling situations HSG-MG.A.1 HSG-MG.A.2 HSG-MG.A.3 Long-Term Outcomes/Transfer Goz • Analyze and model mathemati decisions, and draw conclusion • Construct viable arguments, cruthe language of mathematics.	and apply volume formulas to solve problems involving surface area to volume ratios, and density. als: cal relationships in authentic and varieus. itique the reasoning of others, and con	They calculate densities and analyze surface area to volume ratios in chemistry and biology applications. d contexts, make informed inmunicate ideas precisely using
Volume 8 Days Unit 6 Coordinate	Interpret the structure of expressions. HSA-SSE.A.1.a HSA-SSE.A.1.b Explain volume formulas and use them to solve problems HSG.GMD.A.1 HSG.GMD.A.3 Apply geometric concepts in modeling situations HSG-MG.A.1 HSG-MG.A.2 HSG-MG.A.3 Long-Term Outcomes/Transfer Goa Analyze and model mathemati decisions, and draw conclusion Construct viable arguments, cr the language of mathematics. Share diverse ideas and perspe	and apply volume formulas to solve problems involving surface area to volume ratios, and density. als: cal relationships in authentic and varieus.	They calculate densities and analyze surface area to volume ratios in chemistry and biology applications. d contexts, make informed inmunicate ideas precisely using
Volume 8 Days Unit 6 Coordinate	Interpret the structure of expressions. HSA-SSE.A.1.a HSA-SSE.A.1.b Explain volume formulas and use them to solve problems HSG.GMD.A.1 HSG.GMD.A.3 Apply geometric concepts in modeling situations HSG-MG.A.1 HSG-MG.A.2 HSG-MG.A.3 Long-Term Outcomes/Transfer Goal Analyze and model mathematic decisions, and draw conclusion Construct viable arguments, cruthe language of mathematics. Share diverse ideas and perspectowards a common goal.	and apply volume formulas to solve problems involving surface area to volume ratios, and density. als: cal relationships in authentic and variens. itique the reasoning of others, and conectives, ask questions, and respectfully	They calculate densities and analyze surface area to volume ratios in chemistry and biology applications. d contexts, make informed numicate ideas precisely using engage with peers while working
Volume 8 Days Unit 6 Coordinate	Interpret the structure of expressions. HSA-SSE.A.1.a HSA-SSE.A.1.b Explain volume formulas and use them to solve problems HSG.GMD.A.1 HSG.GMD.A.3 Apply geometric concepts in modeling situations HSG-MG.A.1 HSG-MG.A.2 HSG-MG.A.3 Long-Term Outcomes/Transfer Goal Analyze and model mathematic decisions, and draw conclusion Construct viable arguments, cruthe language of mathematics. Share diverse ideas and perspectowards a common goal.	and apply volume formulas to solve problems involving surface area to volume ratios, and density. als: cal relationships in authentic and varieus. itique the reasoning of others, and con	They calculate densities and analyze surface area to volume ratios in chemistry and biology applications. d contexts, make informed numicate ideas precisely using engage with peers while working

	Standards	Conceptual Overview	Rationale
Focus &	Experiment with	Students encounter a new	Coordinate Geometry provides
Timeframe	transformations in the plane	coordinate transformation notation	a connection between algebra
	HSG.CO.A.2	such as $(x,7) \to (x+3, y+1)$.	and geometry through graphs of lines and curves.
	Use coordinates to prove simple	Then they use transformations and	
	geometric theorems	the Pythagorean Theorem to build	This unit brings together
Transformations in	algebraically	equations of circles, parabolas,	students' experience from
the Plane	HSG.GPE.B.4	parallel lines, and perpendicular	previous years with their new
Distances, Circles,	HSG.GPE.B.5	lines from definitions.	understanding from this course for an in-depth study of
and Parabolas		Students apply these ideas to	coordinate geometry.
		proofs, such as classifying	
Proving Geometric		quadrilaterals.	The new coordinate
Theorems			transformation notation
Algebraically		Finally, students use weighted	connects transformations to
		averages to partition segments, scale figures, and locate the	functions.
9 Days		intersection point of the medians of	Students apply concepts of
		a triangle.	transformations and construct
			viable arguments in proofs.
Unit 7	Long-Term Outcomes/Transfer Go		
Circles		ical relationships in authentic and varie	d contexts, make informed
	decisions, and draw conclusions.		
	 Construct viable arguments, cr 	ritique the reasoning of others, and con	nmunicate ideas precisely using
	the language of mathematics.		
	 Share diverse ideas and perspension 	ectives, ask questions, and respectfully	engage with peers while working
	towards a common goal.		
	 Persevere, think strategically/f 	lexibly, and reflect and revise thinking i	n order to solve complex
	problems.		
	Standards	Conceptual Overview	Rationale
Focus &		In this unit, students analyze	Students apply properties of
Timeframe	Understand and apply theorems	relationships between segments	circles to real world
	about circles	and angles in circles, which leads to	applications.
Lines, Angles, and	HSG.C.A.2	the construction of inscribed and	
Circles	HSG.C.A.3	circumscribed circles of triangles.	Students learn radian measure
			as it is needed for higher level
I Dolygone and	l		
Polygons and	Find arc lengths and areas of	Students solve problems involving	math courses, and it is
Circles	sectors of circles	arc length and sector area, and they	math courses, and it is important for the transition
Circles	_	arc length and sector area, and they use the similarity of all circles and	math courses, and it is important for the transition towards trigonometric
	sectors of circles	arc length and sector area, and they use the similarity of all circles and ideas of arc length to develop the	math courses, and it is important for the transition
Circles Measuring Circles	sectors of circles	arc length and sector area, and they use the similarity of all circles and ideas of arc length to develop the concept of radian measure for	math courses, and it is important for the transition towards trigonometric
Circles Measuring Circles 9 Days	sectors of circles HSG.C.C.5	arc length and sector area, and they use the similarity of all circles and ideas of arc length to develop the concept of radian measure for angles.	math courses, and it is important for the transition towards trigonometric
Circles Measuring Circles 9 Days Unit 8	sectors of circles	arc length and sector area, and they use the similarity of all circles and ideas of arc length to develop the concept of radian measure for angles.	math courses, and it is important for the transition towards trigonometric
Circles Measuring Circles 9 Days	sectors of circles HSG.C.C.5 Long-Term Outcomes/Transfer Go	arc length and sector area, and they use the similarity of all circles and ideas of arc length to develop the concept of radian measure for angles.	math courses, and it is important for the transition towards trigonometric functions.
Circles Measuring Circles 9 Days Unit 8 Trigonometric	sectors of circles HSG.C.C.5 Long-Term Outcomes/Transfer Go	arc length and sector area, and they use the similarity of all circles and ideas of arc length to develop the concept of radian measure for angles. als: ical relationships in authentic and varies	math courses, and it is important for the transition towards trigonometric functions.
Circles Measuring Circles 9 Days Unit 8 Trigonometric	sectors of circles HSG.C.C.5 Long-Term Outcomes/Transfer Go • Analyze and model mathematic decisions, and draw conclusions	arc length and sector area, and they use the similarity of all circles and ideas of arc length to develop the concept of radian measure for angles. als: ical relationships in authentic and varies	math courses, and it is important for the transition towards trigonometric functions.
Circles Measuring Circles 9 Days Unit 8 Trigonometric	Long-Term Outcomes/Transfer Go Analyze and model mathemati decisions, and draw conclusion Construct viable arguments, cr	arc length and sector area, and they use the similarity of all circles and ideas of arc length to develop the concept of radian measure for angles. als: ical relationships in authentic and varience.	math courses, and it is important for the transition towards trigonometric functions.
Circles Measuring Circles 9 Days Unit 8 Trigonometric	Long-Term Outcomes/Transfer Go Analyze and model mathematidecisions, and draw conclusion Construct viable arguments, conthe language of mathematics.	arc length and sector area, and they use the similarity of all circles and ideas of arc length to develop the concept of radian measure for angles. als: ical relationships in authentic and varieurs. ritique the reasoning of others, and con	math courses, and it is important for the transition towards trigonometric functions.
Circles Measuring Circles 9 Days Unit 8 Trigonometric	Long-Term Outcomes/Transfer Go Analyze and model mathemati decisions, and draw conclusion Construct viable arguments, cruthe language of mathematics. Share diverse ideas and perspectives.	arc length and sector area, and they use the similarity of all circles and ideas of arc length to develop the concept of radian measure for angles. als: ical relationships in authentic and varience.	math courses, and it is important for the transition towards trigonometric functions.
Circles Measuring Circles 9 Days Unit 8 Trigonometric	Long-Term Outcomes/Transfer Go Analyze and model mathemati decisions, and draw conclusion Construct viable arguments, or the language of mathematics. Share diverse ideas and perspet towards a common goal.	arc length and sector area, and they use the similarity of all circles and ideas of arc length to develop the concept of radian measure for angles. als: ical relationships in authentic and varieurs. ritique the reasoning of others, and concectives, ask questions, and respectfully	math courses, and it is important for the transition towards trigonometric functions. d contexts, make informed inmunicate ideas precisely using engage with peers while working
Circles Measuring Circles 9 Days Unit 8 Trigonometric	Long-Term Outcomes/Transfer Go Analyze and model mathemati decisions, and draw conclusion Construct viable arguments, or the language of mathematics. Share diverse ideas and perspet towards a common goal.	arc length and sector area, and they use the similarity of all circles and ideas of arc length to develop the concept of radian measure for angles. als: ical relationships in authentic and varieurs. ritique the reasoning of others, and con	math courses, and it is important for the transition towards trigonometric functions. d contexts, make informed inmunicate ideas precisely using engage with peers while working

	Standards	Conceptual Overview	Rationale
Focus &	Analyze functions using different	In this unit, students are introduced	Students apply their
Timeframe	representations.	to trigonometric functions. While	knowledge of transformations
· · · · · · · · · · · · · · · · · · ·	HSF.IF.C.7	they have studied a variety of	to trigonometric functions and
Unit Circle	HSF.IF.C.7.E	function types with different key	use these functions to model
Offic Circle	1131.11.6.7.2	features previously, this is the first	periodic situations.
Periodic Functions	Extend the domain of	time students are asked to consider	periodic situations.
renould rundions	trigonometric functions using	periodic functions, that is, functions	
Trigonomotry	the unit circle.	whose output values repeat at	
Trigonometry		•	
Transformations	HSF.TF.A.2	regular intervals.	
12 days	Model periodic phenomena with	Students first consider circular	
	trigonometric functions.	motion and learn to use right	
	HSETE.B.5	triangle trigonometry to identify	
	1131.11.8.3	the coordinates of a point on a	
	Drave and apply trigonometric	circle.	
	Prove and apply trigonometric identities.	circle.	
		The west simple is introduced and	
	HSF.TF.C.8	The unit circle is introduced, and	
		students study the symmetry of its	
		coordinates and reason about	
		radian angles knowing a full circle	
		has an angle of 2π .	
		Form the west simple the demands of	
		From the unit circle, the domain of	
		cosine, sine, and tangent are	
		expanded and students begin to	
		think about them as functions.	
		Charles to a second the second second second	
		Students graph these functions	
		using their knowledge of the unit	
		circle and expand the domain of the	
		functions a second time to angles	
		beyond 2π and less than 0.	
Unit 9	Long-Term Outcomes/Transfer Go		
Trigonometric	•	cal relationships in authentic and varie	a contexts, make informed
Extensions	decisions, and draw conclusion		
		itique the reasoning of others, and con	nmunicate ideas precisely using
	the language of mathematics.		
		ectives, ask questions, and respectfully	engage with peers while working
	towards a common goal.		
	•		
	Persevere, think strategically/f	lexibly, and reflect and revise thinking i	n order to solve complex
	problems.		
	Standards	Conceptual Overview	Rationale
Focus &	Extend the domain of	In this unit students will apply their	Reciprocal trigonometric
Timeframe	trigonometric functions using	knowledge of sine, cosine and	functions are used to simplify
	the unit circle.	tangent to the reciprocal functions,	equations.
	HSF.TF.A.2	secant, cosecant and cotangent.	
Reciprocal			Students need to understand
Functions	Apply trigonometry to general	Students will solve for missing sides	that the methods for solving
	triangles	and angles of non-right triangles	right triangles are not
Law of	HSG.SRT.D.10	with the law of sines and law of	appropriate for non-right
Sines/Cosines	HSG.SRT.D.11	cosines.	triangles and that the law of
			sines and law of cosines must
	1	I .	1 5C5 and law of cosmics must

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4 days		be used for those situations.
Midterm	Performance task: NASA task	