

Geometry Scope and Sequence 2017-2018

[Unit 1](#) Points, Lines and Planes

[Unit 2](#) Proofs

[Unit 3](#) Lines and Angles

Mid-Quarter 1 Assessment

[Unit 4](#) Equations of Lines

[Unit 5](#) Triangles

Quarter 1 Assessment

[Unit 6](#) Triangles

[Unit 7](#) Polygons

Mid-Quarter 2 Assessment

[Unit 8](#) Right Triangles

Semester Exam

[Unit 9](#) Circles

[Unit 10](#) Solids, Volume

Mid-Quarter 3 Assessment

[Unit 11](#) Circles

[Unit 12](#) Transformations

Quarter 3 Assessment

[Unit 13](#) Patterns

[Unit 14](#) Ratios in polygons

[Unit 15](#) Algebra Review

Quarter 4 Assessment: by grade level

Topics on Assessments:

Mid Qtr 1: Week of September 5th	Points, lines, planes, pythagorean theorem, midpoint, distance, construction of segments and angles, formulas, proofs, lines and angles, parallel lines with transversal
End of Qtr 1: Week of October 9th	Perpendicular lines, slopes, construction of perp and parallel lines, triangle congruence, isosceles and equilateral triangles
Mid Qtr 2: Week of November 6th	Perpendicular and angle bisectors, center, medians, altitudes, inequalities in triangles, polygons, parallelograms, rectangles, rhombi, kites, trapezoids
End of Qtr 2: Week of December 11th	Trigonometric ratios, angles of elevation and depression
Semester Exam: Week of December 18th	*This is only for students that did not receive an A for both the 1st & 2nd Qtr
Mid Qtr 3: Week of February 5th	Formula of circle, composite figures, perimeter and area in coordinate plane, solids, volumes of solids
End of Qtr 3: Week of March 12th	Circles: lines, arcs, chords, sectors, transformations, reflections, rotations, similarity
End of Qtr 4: Week of March 12th	Solving equations, FOIL, factoring, exponents, radicals, etc (Common assessment determined by grade level)

Content Area:	Mathematics	Course:	Geometry	Pacing:	2 weeks
Domain(s): Geometry			Unit: Unit 1		
Florida Math Standards (MAFS)					
Standard (Student Friendly)		Standard:	Standard:		
Lesson 1-1 Understanding Points, lines and Planes Lesson 1-4 Pairs of Angles 3 days		G-CO.1.1	Know precise definitions of angle, circle, perpendicular line, parallel line, and line segment, based on the undefined notions of point, line, distance along a line, and distance around a circular arc.		
Lesson 1-2, 1-3 Measure and construct segments and angles 4 days		G-CO.4.12	Make formal geometric constructions with a variety of tools and methods (compass and straightedge, string, reflective devices, paper folding, dynamic geometric software, etc.). Copying a segment; copying an angle; bisecting a segment; bisecting an angle; constructing perpendicular lines, including the perpendicular bisector of a line segment; and constructing a line parallel to a given line through a point not on the line.		
Lesson 1-5 Use Formulas in Geometry 1-2 days		A-SSE.1.1	Interpret expressions that represent a quantity in terms of its context. A. Interpret parts of an expression, such as terms, factors, and coefficients. B. Interpret complicated expressions by viewing one or more of their parts as a single entity. For example, interpret as the product of $P(1+r)^n$ and a factor not depending on P.		
Lesson 5-7 Pythagorean Theorem 1-2 days		G-SRT.3.8	Use trigonometric ratios and the Pythagorean Theorem to solve right triangles in applied problems.		
Lesson 1-6 Midpoint and Distance in the Coordinate Plane 2 days		G-GPE.2.7	Use coordinates to compute perimeters of polygons and areas of triangles and rectangles, e.g., using the distance formula.		
Essential Question:			Knowledge: Students will....		
<p>What are the differences between points, lines and planes? How are parallel, perpendicular, skew or intersecting lines determined? How are tools used to copy segments and angles and construct segment and angle bisectors? How are formulas used in real world problems? When is Pythagorean Theorem useful in real world contexts? How is Pythagorean Theorem related to the distance formula?</p>			<ul style="list-style-type: none"> -Identify and describe points, lines and planes -Differentiate between parallel, perpendicular, skew and intersecting lines -Apply angle pairs to solve problems -Perform constructions to copy segments and angles and angle bisectors -Apply formulas for perimeter, area and circumference -State and apply the Pythagorean Theorem and its converse to real world problems -Relate distance formula to the Pythagorean Theorem -Use midpoint and distance formula in perimeter problems 		
Resources (with embedded links):			Assessment Resources:		
Math Nation Geometry Workbook			Formative Assessments		

<p>Math Nation Section 1-1, 1-2 Points, lines, planes, definitions Section 1-3,1-4 Midpoint and Distance Section 3-3, 3-4 Angle pairs parts 1 and 2 and proofs Section 2-7, 2-8 Basic Constructions Section 8-1, Pythagorean Theorem Khan Academy: 1.1 Points Lines and Plan 1.2 Measuring and constructing segments 1.3 Measuring and constructing angles 1-4 Pairs of Angles 5-7 Pythagorean Theorem HMH (Holt McDougal) Geometry Textbook And workbook Online textbook resources IXL.com skills practice Kuta Worksheets MathOpenRef interactive website Kahoot interactive website</p>	<p>Teacher observations Exit tickets Examview Schoology My.hrw.com PARCC Practice Test - Answer Key</p>
<p>Essential Vocabulary:</p>	
<p>Parallel, Perpendicular, Skew, Intersecting, Vertical, Complementary, Supplementary, Linear, Pair, Pythagorean Theorem, Midpoint, Distance, Acute, Right, Obtuse, Straight, Compass, Protractor</p>	

Content Area:	Mathematics	Course:	Geometry	Pacing:	3-4 days
Domain(s): Geometry			Unit: 2		
Florida Math Standards (MAFS)					
Standard (Student Friendly):	Standard:	Standard:			
Lessons 2-1, 2-2, 2-3, 2-4: Inductive & Deductive Reasoning 1-2 days	G-CO.3.9	Prove theorems about lines and angles; use theorems about lines and angles to solve problems. Theorems include: vertical angles are congruent; when a transversal crosses parallel lines, alternate interior angles are congruent and corresponding angles are congruent; points on a perpendicular bisector of a line segment are exactly those equidistant from the segment's endpoints.			
Lessons 2-5, 2-6, 2-7: Mathematical Proof 2 days	G-CO.3.9	Prove theorems about lines and angles; use theorems about lines and angles to solve problems. Theorems include: vertical angles are congruent; when a transversal crosses parallel lines, alternate interior angles are congruent and corresponding angles are congruent; points on a perpendicular bisector of a line segment are exactly those equidistant from the segment's endpoints.			
Essential Question:			Knowledge: Students will....		
What are proofs and why are they used? What are the differences between 2 column, flow and paragraph proofs?			-Recognize and complete different styles of proof using deductive reasoning -Utilize definitions, postulates and theorems in proofs		
Resources (with embedded links):			Assessment Resources:		
Math Nation Geometry workbook Math Nation Khan Academy: 2-5 Algebraic Proofs 2-6 Geometric Proofs HMH (Holt-McDougal) Geometry Textbook and workbook Online textbook resources IXL.com skills practice Kuta Worksheets MathOpenRef interactive website Kahoot interactive website Proof Practice website for interactive proof practice			Formative Assessments Teacher observations Exit tickets Examview Schoolology My.hrw.com PARCC Practice Test - Answer Key		
Essential Vocabulary:					
Conditional, 2 Column Proof, Flow Proof, Paragraph Proof					

Content Area:	Mathematics	Course:	Geometry	Pacing	1 week
Domain(s): Geometry			Unit: 3		
Florida Math Standards (MAFS)					
Standard (Student Friendly):		Standard:	Standard:		
Lesson 3-1 Lines and Angles 2 days		G-CO.1.1	Know precise definitions of angle, circle, perpendicular line, parallel line, and line segment, based on the undefined notions of point, line, distance along a line, and distance around a circular arc.		
Lesson 3-2 Angles formed by transversals Lesson 3-3 Proving parallel lines 3 days		G-CO.3.9	<i>Prove theorems about lines and angles; use theorems about lines and angles to solve problems. Theorems include: vertical angles are congruent; when a transversal crosses parallel lines, alternate interior angles are congruent and corresponding angles are congruent; points on a perpendicular bisector of a line segment are exactly those equidistant from the segment's endpoints.</i>		
Essential Question:			Knowledge: Students will....		
How are angles measures determined when parallel lines are intersected by a transversal? How are angle pairs determined when parallel lines are intersected by a transversal? How do you prove lines are parallel using 2 column, flow or paragraph proofs?			-Identify and determine the measures of angles formed by parallel lines and transversals -Classify angle pairs formed by two lines and a transversal -Define and apply parallel lines and parallel planes		
Resources (with embedded links):			Assessment Resources:		
Math Nation Geometry workbook Math Nation Khan Academy: 3-2 Angles formed by transversals 3-3 Proving lines parallel HMH (Holt-McDougal) Geometry Textbook and workbook Online textbook resources IXL.com skills practice Kuta Worksheets MathOpenRef interactive website Kahoot interactive website Proof Practice website for interactive proof practice			Required: Mid Quarter 1 Assessment: <u>Performance Matters</u> Formative Assessments Teacher observations Exit tickets Examview Schoology My.hrw.com PARCC Practice Test - Answer Key		
Essential Vocabulary:					

Content Area:	Mathematics	Course:	Geometry	Pacing:	2 weeks
Domain(s): Geometry			Unit: 4		
Florida Math Standards (MAFS)					
Standard (Student Friendly):	Standard:	Standard:			
Lesson 3-4 Perpendicular lines Lesson 3-5 Slopes of lines Lesson 3-6 Lines in the coordinate plane 5 days	G-GPE.2.5	Prove the slope criteria for parallel and perpendicular lines and use them to solve geometric problems (e.g., find the equation of a line parallel or perpendicular to a given line that passes through a given point).			
Constructions of Parallel and Perpendicular lines Lab pages 170, 179 4 days	G-CO.4.12	Make formal geometric constructions with a variety of tools and methods (compass and straightedge, string, reflective devices, paper folding, dynamic geometric software, etc.). Copying a segment; copying an angle; bisecting a segment; bisecting an angle; constructing perpendicular lines, including the perpendicular bisector of a line segment; and constructing a line parallel to a given line through a point not on the line.			
Essential Question:			Knowledge: Students will....		
How are perpendicular lines applied in proofs? How are tools used to construct perpendicular lines and bisectors? How is the slope of a line determined? What are the differences between slope-intercept and point-slope forms?			-Prove and apply theorems about perpendicular lines -Prove the slope criteria for parallel and perpendicular lines and solve problems. -Construct a line perpendicular to a line at a given point, a line perpendicular from a given point to a line, and the perpendicular bisector of a given segment -Graph lines and write their equations in slope-intercept and point-slope form		
Resources (with embedded links):			Assessment Resources:		
Math Nation Geometry workbook Math Nation Khan Academy: 3-4 Perpendicular lines 3-5 Slope and Lines 3-6 Lines in the Coordinate plane HMH (Holt-McDougal) Geometry Textbook and workbook Online textbook resources IXL.com skills practice Kuta Worksheets MathOpenRef interactive website Kahoot interactive website Proof Practice website for interactive proof practice			Formative Assessments Teacher observations Exit tickets Examview Schoology My.hrw.com PARCC Practice Test - Answer Key		
Essential Vocabulary:					
Transversal, Alternate Interior, Alternate Exterior, Corresponding, Same side interior					

Content Area:	Mathematics	Course:	Geometry	Pacing:	3 weeks
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Domain(s): Geometry		Unit: 5
Florida Math Standards (MAFS)		
Standard (Student Friendly):	Standard:	Standard:
Lesson 4-2, 4-3, 4-4 Triangles and congruence 5 days	G-CO.3.10	Prove theorems about triangles; use theorems about triangles to solve problems. Theorems include: measures of interior angles of a triangle sum to 180° ; triangle inequality theorem; base angles of isosceles triangles are congruent; the segment joining midpoints of two sides of a triangle is parallel to the third side and half the length; the medians of a triangle meet at a point.
	G-SRT.2.5	Use congruence and similarity criteria for triangles to solve problems and to prove relationships in geometric figures.
Lesson 4-5, 4-6, 4-7 Prove Triangle Congruence: SSS, SAS, ASA, AAS, HL and CPCTC 5 days	G-CO.2.8	Explain how the criteria for triangle congruence (ASA, SAS, SSS, and Hypotenuse-Leg) follow from the definition of congruence in terms of rigid motions.
	G-SRT.2.5	Use congruence and similarity criteria for triangles to solve problems and to prove relationships in geometric figures.
Lesson 4-8: Introduction to Coordinate Proof 3 days	G-GPE.2.4	Use coordinates to prove simple geometric theorems algebraically. For example, prove or disprove that a figure defined by four given points in the coordinate plane is a rectangle; prove or disprove that the point $(1, \sqrt{3})$ lies on the circle centered at the origin and containing the point $(0, 2)$.
Lesson 4-9: Isosceles and Equilateral Triangles 3 days	G-CO.3.10	Prove theorems about triangles; use theorems about triangles to solve problems. Theorems include: measures of interior angles of a triangle sum to 180° ; triangle inequality theorem; base angles of isosceles triangles are congruent; the segment joining midpoints of two sides of a triangle is parallel to the third side and half the length; the medians of a triangle meet at a point.
Essential Question:		Knowledge: Students will....
How are triangles classified? What is the Triangle-angle-sum theorem? What are the differences between SAS, SSS, ASA, AAS and HL? How is CPCTC used in proofs? How are isosceles and equilateral triangles proven?		-Classify triangles by their sides and angles -Apply the Triangle-Angle-Sum Theorem, the Isosceles Triangle Theorem and its converse, and the Exterior Angle Theorem -Prove triangles congruent using the SAS, SSS, ASA, AAS, HL theorems -Apply CPCTC to triangle congruence proofs -Classify and use the properties of acute, right, scalene, obtuse, isosceles, equilateral, or equiangular triangles Prove theorems about isosceles and equilateral triangles
Resources (with embedded links):		Assessment Resources:
Math Nation Geometry workbook Math Nation Khan Academy: 4-2 Classify Triangles 4-3 Angle Relationships 4-5 Congruent Triangles 4-6 Congruent Triangles Practice 4-7 Triangle Congruency Proofs		Required: Quarter 1 Assessment: <u>Performance Matters</u> Formative Assessments Teacher observations Exit tickets Examview Schoolology My.hrw.com

<p>4-9 Isosceles and equilateral triangles</p> <p>HMH (Holt-McDougal) Geometry Textbook and workbook Online textbook resources IXL.com skills practice Kuta Worksheets MathOpenRef interactive website Kahoot interactive website Proof Practice website for interactive proof practice</p>	<p>PARCC Practice Test - Answer Key</p>
<p>Essential Vocabulary:</p>	
<p>Acute Triangle, Obtuse Triangle, Right Triangle, Oblique, Scalene Triangle, Isosceles Triangle, Equilateral, Equiangular, ASA, SSS, SAS, AAS, HL, CPCTC</p>	

Content Area:	Mathematics	Course:	Geometry	Pacing:	3 weeks
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Domain(s): Geometry		Unit: 6	
Florida Math Standards (MAFS)			
Standard (Student Friendly):	Standard:	Standard:	
Lesson 5-1: Perpendicular and Angle Bisectors 3 days	G-CO.3.9	Prove theorems about lines and angles; use theorems about lines and angles to solve problems. Theorems include: vertical angles are congruent; when a transversal crosses parallel lines, alternate interior angles are congruent and corresponding angles are congruent; points on a perpendicular bisector of a line segment are exactly those equidistant from the segment's endpoints.	
Lesson 5-2 Centers of Triangles 3 days Lesson 5-3 Medians and Altitudes Lesson 5-4 Triangle Midsegment Theorem Lesson 5-5, 5-6 Indirect Proof and Inequalities in Triangles 5 days	G-C.1.3	Construct the inscribed and circumscribed circles of a triangle, and prove properties of angles for a quadrilateral inscribed in a circle.	
	G-CO.3.10	Prove theorems about triangles; use theorems about triangles to solve problems. Theorems include: measures of interior angles of a triangle sum to 180° ; triangle inequality theorem; base angles of isosceles triangles are congruent; the segment joining midpoints of two sides of a triangle is parallel to the third side and half the length; the medians of a triangle meet at a point.	
Essential Question:		Knowledge: Students will....	
How are perpendicular and angle bisectors used in solving problems? How are medians, altitudes and angle bisectors found? Why are mid-segments of triangles useful? What are circumcenter, incenter, orthocenter and centroid of a triangle?		-Identify medians, altitudes, and angle bisectors of a triangle and the perpendicular bisectors of the sides of a triangle -Identify and apply the properties of mid-segments of triangles -Locate the circumcenter, incenter, orthocenter, and centroid -Identify triangle inequalities	
Resources (with embedded links):		Assessment Resources:	
Math Nation Geometry workbook Math Nation Khan Academy: 5-1 Angle bisectors 5-2 Bisectors of Triangles 5-3 Medians and Altitudes 5-4 Triangle Mid segment Theorem 5-5 Indirect Proof and Inequalities 5-6 Inequalities in two triangles HMH (Holt-McDougal) Geometry Textbook and workbook Online textbook resources IXL.com skills practice Kuta Worksheets MathOpenRef interactive website Kahoot interactive website Proof Practice website for interactive proof practice		Formative Assessments Teacher observations Exit tickets Examview Schoology My.hrw.com PARCC Practice Test - Answer Key	
Essential Vocabulary:			
Median, Altitude, Angle bisector, Perpendicular bisector, Circumcenter, Incenter, Orthocenter, Centroid			

Content Area:	Mathematics	Course:	Geometry	Pacing:	2 weeks
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Domain(s): Geometry		Unit: 7
Florida Math Standards (MAFS)		
Standard (Student Friendly):	Standard:	Standard:
6-1, 6-2, 6-3: Properties and Conditions of Polygons and Par. 5 days 6-4, 6-5 Properties and Conditions of Rectangles and Rhombuses 3 days	G-CO.3.11	Prove theorems about parallelograms; use theorems about parallelograms to solve problems. Theorems include: opposite sides are congruent, opposite angles are congruent, the diagonals of a parallelogram bisect each other, and conversely, rectangles are parallelograms with congruent diagonals.
6-6 Properties and Conditions of Kites and Trapezoids 2 days	G-SRT.2.5	Use congruence and similarity criteria for triangles to solve problems and to prove relationships in geometric figures.
Essential Question:		Knowledge: Students will....
How can a quadrilateral be determined a parallelogram? What is the difference between a rhombus and a square? What is the difference between a polygon and a quadrilateral? How are interior and exterior angles of trapezoids found?		-Develop reasoning skills to classify a quadrilateral as a parallelogram, trapezoid, rectangle, square, rhombus, kite or none of the above. -Identify the properties of polygons and quadrilaterals -Find the measure of interior and exterior angles of trapezoids -Verify the classifications of geometric figures using coordinate geometry to find lengths and slopes
Resources (with embedded links):		Assessment Resources:
Math Nation Geometry workbook Math Nation Khan Academy: 6-1 Properties of regular polygons 6-2 Properties of parallelograms 6-3 Conditions for parallelograms 6-4 Conditions for parallelograms 6-5 Conditions for rhombus 6-6 Properties of Kites and Trapezoids HMH (Holt-McDougal) Geometry Textbook and workbook Online textbook resources IXL.com skills practice Kuta Worksheets MathOpenRef interactive website Kahoot interactive website Proof Practice website for interactive proof practice		Required: Mid Quarter 2 Assessment: Performance Matters Formative Assessments Teacher observations Exit tickets Examview Schoology My.hrw.com PARCC Practice Test - Answer Key
Essential Vocabulary:		
Polygon, Quadrilateral, Parallelogram, Rectangle, Square, Rhombus, Trapezoid, Kite		

Content Area:	Mathematics	Course:	Geometry	Pacing:	3 weeks
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Domain(s): Geometry		Unit: 8	
Florida Math Standards (MAFS)			
Standard (Student Friendly):	Standard:	Standard:	
Lesson 8-1: Similarity in Right Triangles 3 days	<u>G-SRT.3.6</u>	Understand 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.	
Lesson 8-2, 8-3 Trig Ratios 6 days	<u>G-SRT.3.8</u>	Use trigonometric ratios and the Pythagorean Theorem to solve right triangles in applied problems.	
Lesson 8-4: Angles of Elevation and Depression 3 days	<u>G-SRT.3.7</u>	Explain and use the relationship between the sine and cosine of complementary angles.	
Lesson 8-5: Laws of Sine and Cosine 3 days (Honors only)	<u>G-SRT.4.10</u>	Prove the Laws of Sines and Cosines and use them to solve problems.	
	<u>G-SRT.4.11</u>	Understand and apply the Law of Sines and the Law of Cosines to find unknown measurements in right and non-right triangles (e.g., surveying problems, resultant forces).	
4 days: review for Semester Exam		4 days: Semester Exams	
Essential Question:		Knowledge: Students will....	
<p>What are the differences between Sine, Cosine and Tangent?</p> <p>How are Trigonometric ratios used in real world problems?</p> <p>How are angle measures found given side lengths in a right triangle?</p> <p>How are angles of depression and elevation used with trigonometry in real world problems?</p>		<ul style="list-style-type: none"> -Identify trigonometric relationships(sine, cosine, and tangent) using right triangles -Solve problems using the properties of special right triangles -Find the angle measure in degrees given the trigonometric ratio using a calculator -Find the trigonometric ratio given the angle measure in degrees using a calculator. -Find the missing angles of right triangles -Solve real-world problems using trigonometric ratios and properties of congruence and similar figures 	
Resources (with embedded links):		Assessment Resources:	
<p>Math Nation Geometry workbook Math Nation Khan Academy: 8-1 Similarity in Right Triangles 8-2 Trigonometric Ratios 8-3 Solving Right Triangles 8-4 Angles of Elevation and Depression HMH (Holt-McDougal) Geometry Textbook and wkbk Online textbook resources IXL.com skills practice Kuta Worksheets MathOpenRef interactive website Kahoot interactive website Proof Practice website for interactive proof practice</p>		<p>Required: Semester 1 Assessment: Performance Matters</p> <p>Formative Assessments Teacher observations Exit tickets Examview Schoology My.hrw.com PARCC Practice Test - Answer Key</p>	
Essential Vocabulary:			
Sine, Cosine, Tangent, Trigonometry, Angles of Elevation, Angles of Depression			

Content Area:	Mathematics	Course:	Geometry	Pacing:	1-2 weeks
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Domain(s): Geometry		Unit: 9	
Florida Math Standards (MAFS)			
Standard (Student Friendly):	Standard:	Standard:	
Lesson 10-2 Developing Formulas for circles 2 days	G-GMD.1.1	Give an informal argument for the formulas for the circumference of a circle, area of a circle, volume of a cylinder, pyramid, and cone. Use dissection arguments, Cavalieri's principle, and informal limit arguments.	
Lesson 10-3 Composite figures 3 days	G-MG.1.3	Apply geometric methods to solve design problems (e.g., designing an object or structure to satisfy physical constraints or minimize cost; working with typographic grid systems based on ratios)	
Lesson 10-4 Perimeter and Area in the coordinate plane Lesson 10-5 Effects of changing Dimensions 2 days	G-GPE.2.7	Use coordinates to compute perimeters of polygons and areas of triangles and rectangles, e.g., using the distance formula.	
Essential Question:		Knowledge: Students will....	
<ul style="list-style-type: none"> -How are area and circumference used to solve problems? -How area areas of composite figures found? -How are perimeter and area found of a figure when only given coordinates? -What effects are created to area and perimeter when dimensions are changed? 		<ul style="list-style-type: none"> -Develop and apply the formulas for the area and circumference of a circle -Develop and apply the formula for the area of a regular polygon -Use the area addition postulate to find the areas of composite figures -Find the perimeters and areas of figures in a coordinate plane -Describe the effect on perimeter and area when one or more dimensions are changed 	
Resources (with embedded links):		Assessment Resources:	
Math Nation Geometry workbook Math Nation Khan Academy: 10-1 Developing formulas for triangles & quad 10-2 Developing formulas for circles 10-4 Area of shapes on coordinate plane 10-5 Effects of changing dimensions HMH (Holt-McDougal) Geometry Textbook and workbook Online textbook resources IXL.com skills practice Kuta Worksheets MathOpenRef interactive website Kahoot interactive website Proof Practice website for interactive proof practice		Formative Assessments Teacher observations Exit tickets Examview Schoolology My.hrw.com PARCC Practice Test - Answer Key	
Essential Vocabulary:			
Apothem, Central angle, Composite figure			

Content Area:	Mathematics	Course:	Geometry	Pacing	2 weeks
Domain(s): Geometry			Unit: 10		

Florida Math Standards (MAFS)		
Standard (Student Friendly):	Standard:	Standard:
Lesson 11-1 Solid Geometry 2 days	G-GMD.2.4	Identify the shapes of two-dimensional cross-sections of three-dimensional objects, and identify three-dimensional objects generated by rotations of two-dimensional objects.
Lesson 11-2 Volumes of prisms and cylinders Lesson 11-3 Volumes of pyramids and cones Lesson 11-4 Spheres 3 days	G-GMD.1.3	Use volume formulas for cylinders, pyramids, cones, and spheres to solve problems.
Essential Question:		Knowledge: Students will....
How are the volumes found in different geometric figures? What shapes are created when two-dimensional shapes are rotated about an axis?		-Find the volume of prisms, cylinders, pyramids, cones and spheres given the formula -Identify the shape created by a rotation of a two-dimensional shape
Resources (with embedded links):		Assessment Resources
Math Nation Geometry workbook Math Nation Khan Academy: 11-1 solid geometry 11-2 Volume of Cylinder 11-4 Volume of shere HMH (Holt-McDougal) Geometry Textbook and workbook Online textbook resources IXL.com skills practice Kuta Worksheets MathOpenRef interactive website Kahoot interactive website Proof Practice website for interactive proof practice		<u>Required: Mid Quarter 3 Assessment:</u> <u>Performance Matters</u> Formative Assessments Teacher observations Exit tickets Examview Schoology My.hrw.com PARCC Practice Test - Answer Key
Essential Vocabulary:		
Face, Edge, Vertex, Prism, Cylinder, Pyramid, Cone		

Content Area:	Mathematics	Course:	Geometry	Pacing:	2 weeks
Domain(s): Geometry			Unit: 11		
Florida Math Standards (MAFS)					
Standard (Student Friendly):		Standard:	Standard:		
Lesson 12-1 Lines that intersect circles Lesson 12-2 Arcs and Chords 5 days Lesson 12-3 Sector Area Measuring Angles in Radians Pg 816 2 days		G-C.1.2 G-C.2.5	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. Derive using similarity the fact that the length of the arc intercepted by an angle is proportional to the radius, and define the radian measure of the angle as the constant of proportionality; derive the formula for the area of a sector.		
Lesson 12-4 Inscribed Angles Lesson 12-5 Angle relationships and circles Lesson 12-6 Segment relationships in circles Lesson 12-7 Circles in the coordinate plane 5 days		G-C.1.2 C-GPE.1.1	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. Derive the equation of a circle of given center and radius using the Pythagorean Theorem; complete the square to find the center and radius of a circle given by an equation.		
Essential Question:			Knowledge: Students will....		
How is the measure of an arc found? How is the area of a sector found? How is the equation of a circle related to the pythagorean theorem?			Identify and describe relationships among inscribed angles, radii and chords. Apply properties of arcs and chords to solve problems. Derive the formula for the area of a sector Derive the equation of a circle from the pythagorean theorem		
Resources (with embedded links):			Assessment Resources:		
Math Nation Geometry workbook Math Nation Khan Academy: 12-2 Arcs and chords 12-3 Sector Area 12-4 Inscribed Angles HMH (Holt-McDougal) Geometry Textbook and wbk Online textbook resources IXL.com skills practice Kuta Worksheets MathOpenRef interactive website Kahoot interactive website Proof Practice website for interactive proof practice			Formative Assessments Teacher observations Exit tickets Examview Schoology My.hrw.com PARCC Practice Test - Answer Key		
Essential Vocabulary:					
Chord, Secant, Tangent, Point of tangency, Congruent circles, Concentric circles, Arc, Major arc, Minor arc, Semicircle, Sector , Arc length					

Content Area:	Mathematics	Course:	Geometry	Pacing:	3 weeks
Domain(s): Geometry			Unit: 12		
Florida Math Standards (MAFS)					
Standard (Student Friendly):		Standard:	Standard:		
Lesson 1-7 Transformations in the Coordinate Plane 4 days		G-CO.1.4	Develop definitions of rotations, reflections, and translations in terms of angles, circles, perpendicular lines, parallel lines, and line segments.		
Lesson 4-1 Congruence and transformations Lesson 9.1 Reflections Lesson 9.2 Translations Lesson 9.3 Rotations Lesson 9.4 Compositions of transformations Lesson 7.2 Similarity in Transformations 10 days		G-CO.2.6	Use geometric descriptions of rigid motions to transform figures and to predict the effect of a given rigid motion on a given figure; given two figures, use the definition of congruence in terms of rigid motions to decide if they are congruent.		
Essential Question:			Knowledge: Students will...		
What are the differences between rotations, reflections and translations? How can coordinates be found of a figure rotated, reflected or translated?			-Perform and analyze transformations (translations, rotations, reflections, and dilations) using coordinate geometry -Translate, reflect and rotate geometric figures		
Resources (with embedded links):			Assessment Resources:		
Math Nation Geometry workbook Math Nation Khan Academy: 1-7 Transformations 9-1 Reflections 9-2 Translations 9-3 Rotations 9-4 Composition of Transformations HMH (Holt-McDougal) Geometry Textbook and workbook Online textbook resources IXL.com skills practice Kuta Worksheets MathOpenRef interactive website Kahoot interactive website Proof Practice website for interactive proof practice			<u>Required: End Quarter 3 Assessment: Performance Matters</u> Formative Assessments Teacher observations Exit tickets Examview Schoology My.hrw.com PARCC Practice Test - Answer Key		
Essential Vocabulary:					
Transformation, Translation, Rotation, Reflection					

Content Area:	Mathematics	Course:	Geometry	Pacing:	1 week
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Domain(s): Geometry		Unit: 13	
Florida Math Standards (MAFS)			
Standard (Student Friendly):	Standard:	Standard:	
Lesson 9-5 Patterns of Symmetry Lesson 9-6 Tessellations Lesson 7-6 Dilations and similarity in the coordinate plane Lesson 9-7 Congruence transformations 5 days	G-CO.1.2	Represent transformations in the plane using, e.g., transparencies and geometry software; describe transformations as functions that take points in the plane as inputs and give other points as outputs. Compare transformations that preserve distance and angle to those that do not (e.g., translation versus horizontal stretch).	
	G-CO.1.5	Given a geometric figure and a rotation, reflection, or translation, draw the transformed figure using, e.g., graph paper, tracing paper, or geometry software. Specify a sequence of transformations that will carry a given figure onto another.	
	G-CO.1.3	Given a rectangle, parallelogram, trapezoid, or regular polygon, describe the rotations and reflections that carry it onto itself.	
	G-GMD.2.4	Identify the shapes of two-dimensional cross-sections of three-dimensional objects, and identify three-dimensional objects generated by rotations of two-dimensional objects.	
Essential Question:		Knowledge: Students will....	
-How are transformations used to draw tessellations? -What are the differences between translations, reflections, rotations and dilations? -How are dilations determined? -How are dilations used to solve problems?		-Use transformations to draw tessellations -Perform and analyze transformations using coordinate geometry -Translate, reflect and rotate geometric figures -Determine which transformations will carry it onto itself	
Resources (with embedded links):		Assessment Resources:	
Math Nation Geometry workbook Math Nation Khan Academy: 9-5 Symmetry 9-7 Congruence Transformations HMH (Holt-McDougal) Geometry Textbook and workbook Online textbook resources IXL.com skills practice Kuta Worksheets MathOpenRef interactive website Kahoot interactive website Proof Practice website for interactive proof practice		Formative Assessments Teacher observations Exit tickets Examview Schoology My.hrw.com PARCC Practice Test - Answer Key	
Essential Vocabulary:			
Line of symmetry, Translation symmetry, Regular tessellation, Semiregular tessellation, Enlargement, Reduction			

Content Area:	Mathematics	Course:	Geometry	Pacing:	2 weeks
Domain(s): Geometry			Unit: 14		
Florida Math Standards (MAFS)					

Standard (Student Friendly):	Standard:	Standard:
Lesson 7-1 Ratios in similar polygons 3 days	G-SRT.1.2	Given two figures, use the definition of similarity in terms of similarity transformations to decide if they are similar; explain using similarity transformations the meaning of similarity for triangles as the equality of all corresponding pairs of angles and the proportionality of all corresponding pairs of sides.
Lesson 7-3 Triangle similarity: AA, SSS, SAS Lesson 7-4 Applying properties of similar triangles 3 days Lesson 7-5 Using proportional relationships Pg 515: Segment partition 3 days	G-SRT.2.5 G-GPE.2.6	Use congruence and similarity criteria for triangles to solve problems and to prove relationships in geometric figures. Find the point on a directed line segment between two given points that partitions the segment in a given ratio.
Essential Question:		Knowledge: Students will....
<ul style="list-style-type: none"> -How are congruence and similarity used to solve problems? -How is similarity determined? -How are proportions used to determine measurements? -How can a segment be partitioned in a specific ratio? 		<ul style="list-style-type: none"> -Set up ratios and solve proportions for given similar geometric shapes -Determine the similarity of geometric figures by applying appropriate similarity theorems -Apply ratios and proportions to solve problems using the properties of similar figures
Resources (with embedded links):		Assessments:
Math Nation Geometry workbook Math Nation Khan Academy: 7-1 Ratios in similar polygons 7-2 Similarity in Transformations 7-3 Similarity triangle practice 7-4 Triangle congruency proofs HMH (Holt-McDougal) Geometry Textbook and workbook Online textbook resources IXL.com skills practice Kuta Worksheets MathOpenRef interactive website Kahoot interactive website Proof Practice website for interactive proof practice		Formative Assessments Teacher observations Exit tickets Examview Schoology My.hrw.com PARCC Practice Test - Answer Key
Essential Vocabulary:		

Content Area:	Mathematics	Course:	Geometry	Pacing:	4 weeks
Domain(s): Algebra review			Unit: 15		
Florida Math Standards (MAFS)					

Standard (Student Friendly):	Standard:	Standard:
Solving Equations		
Multiplying binomials		
Factoring		
Exponents/Radicals		
Essential Question:		Knowledge: Students will....
		Review topics necessary for next math course (Financial Algebra, MCR or Algebra 2)
Resources (with embedded links):		Assessments:
Math Nation Geometry workbook Math Nation Khan Academy HMH (Holt-McDougal) Geometry Textbook and workbook Online textbook resources IXL.com skills practice Kuta Worksheets MathOpenRef interactive website Kahoot interactive website		<u>Common Quarter 4 Assessment determined by grade level teachers</u> Formative Assessments Teacher observations Exit tickets Examview Schoology my.hrw.com
Essential Vocabulary:		: