Grade 10   Subject Math - Geometry

Curriculum Map

Week	NY Standard(s)	Concepts (Unit/Theme)	Student Objectives The student will… (TSW)	Essential Questions	Assessments	Vocabulary	Resources
Week 1	**G.CO.A.1** Know precise definitions of angle, circle, perpendicular lines, parallel lines, and line segment, based on the undefined notions of point, line, distance along a line, and distance around a circular arc as these exist within a plane.	1.1 Points, Distances and Segments.	Study the properties of time and space.	What is a math axiom?	homework/exit tickets	Point, Distance	www.emathinstruction.com
Week 1	**G.CO.A.1** Know precise definitions of angle, circle, perpendicular lines, parallel lines, and line segment, based on the undefined notions of point, line, distance along a line, and distance around a circular arc as these exist within a plane.	1.2 Lines Rays and Angles	Study the important ideas of lines, ray and angles	What is the difference between a line and a ray?	homework/exit tickets	Line, Ray	www.emathinstruction.com
Week 2	**G.CO.A.1** Know precise definitions of angle, circle, perpendicular lines, parallel lines, and line segment, based on the undefined notions of point, line, distance along a line, and distance around a circular arc as these exist within a plane.	1.3 Types of Angles	Study the different angle types.	What are the names of the different angle types?	homework/exit tickets	Acute, Obtuse, Right, Straight, Reflex	www.emathinstruction.com
Week 2	**G.CO.A.1** Know precise definitions of angle, circle, perpendicular lines, parallel lines, and line segment, based on the undefined notions of point, line, distance along a line, and distance around a circular arc as these exist within a plane.	1.4 Complements and Supplements	Study the differences between Complementary and Supplementary Angles	What to Complementary and Supplementary angles sum too?	homework/exit tickets	Supplementary, Complementary, Adjacent	www.emathinstruction.com
Week 2	**G.CO.A.1** Know precise definitions of angle, circle, perpendicular lines, parallel lines, and line segment, based on the undefined notions of point, line, distance along a line, and distance around a circular arc as these exist within a plane.	1.5 Circles and Arcs	Construct Triangles	What is a Radius?	homework/exit tickets	Circle, Radius, Arc, Equilateral Triangle.	www.emathinstruction.com

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Week 3	**G.CO.D.12** Make, justify, and apply formal geometric constructions. Notes: Examples of constructions include but are not limited to: Copy segments and angles. Bisect segments and angles. Construct perpendicular lines including through a point on or off a given line. Construct a line parallel to a given line through a point not on the line. Construct a triangle with given lengths. Construct points of concurrency of a triangle (centroid, circumcenter, incenter, and orthocenter). Construct the inscribed circle of a triangle. Construct the circumscribed circle of a triangle. Constructions of transformations. (see G.CO.A.5) This standard is a fluency recommendation for Geometry. Fluency with the use of construction tools, physical and computational, helps students draft a model of a geometric phenomenon and can lead to conjectures and proofs.	1.6 Constructing a Triangle Given Its Sides	Construct a Triangle Given Its Sides	What is a Construction?	homework/exit tickets	Triangle.	www.emathinstruction.com

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Week 3	**G.CO.A.1** Know precise definitions of angle, circle, perpendicular lines, parallel lines, and line segment, based on the undefined notions of point, line, distance along a line, and distance around a circular arc as these exist within a plane.	1.7 Additional Geometric Terminology	Define and apply Midpoint, Segment Bisector, Angle Bisector and Perpendicular	Define Perpendicular	homework/exit tickets	Midpoint, Segment Bisector, Angle Bisector and Perpendicular	www.emathinstruction.com
Week 3	**G.CO.A.1** Know precise definitions of angle, circle, perpendicular lines, parallel lines, and line segment, based on the undefined notions of point, line, distance along a line, and distance around a circular arc as these exist within a plane.	1.8 More Properties of Lines	Define and apply Axiom and Postulates	How are Postulates Applied?	homework/exit tickets	Axiom and Postulates	www.emathinstruction.com
Week 4	**G-CO.A.2** Represent transformations as geometric functions that take points 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 measure to those that do not.	2.1 Transformations Note: Instructional Strategies may include drawing tools, graph paper and software programs	Transform an Image.	What are the different types of Transformations?	homework/exit tickets	Refection, Dilation, Translation and Rotation.	www.emathinstruction.com

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Curriculum Map

Week	NY Standard(s)	Concepts (Unit/Theme)	Student Objectives The student will… (TSW)	Essential Questions	Assessments	Vocabulary	Resources
Week 4	**G-CO.A.4** Develop definitions of rotations, reflections, and translations in terms of points, angles, circles, perpendicular lines, parallel lines, and line segments. **G-CO.A.5** Given a geometric figure and a rotation, reflection, or translation, draw the transformed figure. Specify a sequence of transformations that will carry a given figure onto another. **G-CO.C.9** Prove theorems about lines and angles. Include multi-step proofs and algebraic problems built upon these concepts. Examples of theorems include but are not limited to: Vertical angles are congruent. If two parallel lines are cut by a transversal, then the alternate interior angles are congruent. The points on a perpendicular bisector are equidistant from the endpoints of the line segment.	2.2 Rotations Include point reflections. A **translation** displaces every point in the plane by the same distance (in the same direction) and can be described using a vector. A **rotation** requires knowing the center/point and the measure/direction of the angle of rotation. A **line reflection** requires a line and the knowledge of perpendicular bisectors. Instructional strategies may include graph paper, tracing paper, and geometry software. Singular transformations that are equivalent to a sequence of transformations may be utilized, such as a glide reflection. However, glide reflections are not an expectation of the course.	Rotate an Image.	What are the different types of Transformations?	homework/exit tickets	Refection, Dilation, Translation, Rotation, Parallel, Alternate Interior Angle Pairs	www.emathinstruction.com

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Week 4	**G-CO.A.4** Develop definitions of rotations, reflections, and translations in terms of points, angles, circles, perpendicular lines, parallel lines, and line segments. **G-CO.A.5** Given a geometric figure and a rotation, reflection, or translation, draw the transformed figure. Specify a sequence of transformations that will carry a given figure onto another.	2.3 Reflections Include point reflections. A **translation** displaces every point in the plane by the same distance (in the same direction) and can be described using a vector. A **rotation** requires knowing the center/point and the measure/direction of the angle of rotation. A **line reflection** requires a line and the knowledge of perpendicular bisectors. Instructional strategies may include graph paper, tracing paper, and geometry software. Singular transformations that are equivalent to a sequence of transformations may be utilized, such as a glide reflection. However, glide reflections are not an expectation of the course.	Reflect an Image.	What are the different types of Transformations?	homework/exit tickets	Reflection, Dilation, Translation, Rotation, Parallel, Alternate Interior Angle Pairs, Rigid Motions	www.emathinstruction.com

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Week	NY Standard(s)	Concepts (Unit/Theme)	Student Objectives The student will… (TSW)	Essential Questions	Assessments	Vocabulary	Resources
Week 4	**G-CO.A.5** Given a geometric figure and a rotation, reflection, or translation, draw the transformed figure using, Specify a sequence of transformations that will carry a given figure onto another. **G-CO.C.9** Prove theorems about lines and angles. Include multi-step proofs and algebraic problems built upon these concepts. Examples of theorems include but are not limited to: Vertical angles are congruent. If two parallel lines are cut by a transversal, then the alternate interior angles are congruent. The points on a perpendicular bisector are equidistant from the endpoints of the line segment. **G-CO.C.10** Prove and apply theorems about triangles.	2.4 Isosceles Triangles Include multi-step proofs and algebraic problems built upon these concepts. Examples of theorems include but are not limited to: **Angle Relationships**: The sum of the interior angles of a triangle is 180 degrees. The measure of an exterior angle of a triangle is equal to the sum of the two non-adjacent interior angles of the triangle. **Side Relationships**: The length of one side of a triangle is less than the sum of the lengths of the other two sides. **In a triangle**, the segment joining the midpoints of any two sides will be parallel to the third side and half its length. **Isosceles Triangles**: Base angles of an isosceles triangle are congruent.	Construct an Isosceles Triangle.	What is a Perpendicular Bisector?	homework/exit tickets	Isosceles Triangle, Perpendicular Bisector.	www.emathinstruction.com

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Curriculum Map

Week	NY Standard(s)	Concepts (Unit/Theme)	Student Objectives The student will… (TSW)	Essential Questions	Assessments	Vocabulary	Resources
Week 5	**G-CO.A.4** Develop definitions of rotations, reflections, and translations in terms of points, angles, circles, perpendicular lines, parallel lines, and line segments. **G-CO.A.5** Given a geometric figure and a rotation, reflection, or translation, draw the transformed figure using, Specify a sequence of transformations that will carry a given figure onto another. **G-CO.C.9** Prove theorems about lines and angles. Include multi-step proofs and algebraic problems built upon these concepts. Examples of theorems include but are not limited to: Vertical angles are congruent. If two parallel lines are cut by a transversal, then the alternate interior angles are congruent. The points on a perpendicular bisector are equidistant from the endpoints of the line segment.	2.5 Translations	Translate Shapes.	What is a rigid motion?	homework/exit tickets	Translation, Rigid Motion.	www.emathinstruction.com

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Curriculum Map

Week	NY Standard(s)	Concepts (Unit/Theme)	Student Objectives The student will… (TSW)	Essential Questions	Assessments	Vocabulary	Resources
Week 5	**G-CO.A.5** Given a geometric figure and a rotation, reflection, or translation, draw the transformed figure using, Specify a sequence of transformations that will carry a given figure onto another. **G-CO.B.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. **G-CO.B.7** Use the definition of congruence in terms of rigid motions to show that two triangles are congruent if and only if corresponding pairs of sides and corresponding pairs of angles are congruent.	2.6 Congruence and Rigid Motions A **translation** displaces every point in the plane by the same distance (in the same direction) and can be described using a vector. A **rotation** requires knowing the center/point and the measure/direction of the angle of rotation. A **line reflection** requires a line and the knowledge of perpendicular bisectors. Include multi-step proofs and algebraic problems built upon these concepts.	Determine Congruency	What is the symbol for congruence?	homework/exit tickets	Congruence, Rigid Motion.	www.emathinstruction.com

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Week	NY Standard(s)	Concepts (Unit/Theme)	Student Objectives The student will… (TSW)	Essential Questions	Assessments	Vocabulary	Resources
Week 5	**G-CO.B.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. **G-CO.B.7** Use the definition of congruence in terms of rigid motions to show that two triangles are congruent if and only if corresponding pairs of sides and corresponding pairs of angles are congruent. **G-CO.C.9** Prove theorems about lines and angles. Include multi-step proofs and algebraic problems built upon these concepts. Examples of theorems include but are not limited to: Vertical angles are congruent. If two parallel lines are cut by a transversal, then the alternate interior angles are congruent. The points on a perpendicular bisector are equidistant from the endpoints of the line segment.	2.7 Basic Rigid Motion Proofs	Discover Basic Rigid Motion Proofs	What is a proof?	homework/exit tickets	Congruent, Proof, Rigid Motion.	www.emathinstruction.com

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Week	NY Standard(s)	Concepts (Unit/Theme)	Student Objectives The student will... (TSW)	Essential Questions	Assessments	Vocabulary	Resources
Week 6	**G-CO.B.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. **G-CO.B.7** Use the definition of congruence in terms of rigid motions to show that two triangles are congruent if and only if corresponding pairs of sides and corresponding pairs of angles are congruent. **G-CO.B.8** Explain how the criteria for triangle congruence (ASA, SAS, SSS, AAS and HL (Hypotenuse Leg)) follow from the definition of congruence in terms of rigid motions.	2.8 Congruence Reasoning About Triangles	Use a sequence of Rigid motions to prove congruence	What is Triangle Congruence?	homework/exit tickets	Congruent, Triangle Congruence, Rigid Motion.	www.emathinstruction.com
Week 6	**G-CO.A.3** Given a regular or irregular polygon, describe the rotations and reflections (symmetries) that map the polygon onto itself.	2.9 Symmetries of a Figure The inclusive definition of a trapezoid will be utilized, which defines a trapezoid as "A quadrilateral with *at least* one pair of parallel sides."	How similarity is applied to Triangles	Why must a symmetry transformation be also a rigid motion?	homework/exit tickets	Congruent, Triangle Congruence, Rigid Motion.	www.emathinstruction.com

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Week 7	**G-CO.C.9** Prove theorems about lines and angles. Include multi-step proofs and algebraic problems built upon these concepts. Examples of theorems include but are not limited to: Vertical angles are congruent. If two parallel lines are cut by a transversal, then the alternate interior angles are congruent. The points on a perpendicular bisector are equidistant from the endpoints of the line segment.	3.1 Drawing Inferences from Givens	Demonstrate the properties of equality as measurements in space, time (length and angle).	What does it mean when the whole is sum of its parts?	homework/exit tickets	Axiom, (addition, Subtraction).	www.emathinstruction.com
Week 7	**G-CO.C.9** Prove theorems about lines and angles. Include multi-step proofs and algebraic problems built upon these concepts. Examples of theorems include but are not limited to: Vertical angles are congruent. If two parallel lines are cut by a transversal, then the alternate interior angles are congruent. The points on a perpendicular bisector are equidistant from the endpoints of the line segment.	3.2 Axioms of Equality	Draw logical inferences from known properties of figures in order to prove other properties.	If Point C is the midpoint of line segment AB, what conclusion can you make?	homework/exit tickets	Segment Bisector, Angle Bisector, Perpendicular, Collinear, Mid-Point, Bisector, Median. Altitude.	www.emathinstruction.com
Week 7	**G-CO.C.10** Prove and apply theorems about triangles.	3.3 Triangle Congruence Theorem	Use the Euclidean Proof to show triangles are congruent.	Name the different types of triangle congruence proofs?	homework/exit tickets	SAS, ASA, SSS.	www.emathinstruction.com

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Week 7	**G-CO.C.10** Prove and apply theorems about triangles.	3.4 CPCTC	Prove something that is a consequence of 2 triangles being congruent. (CPCTC)	What does CPCTC stand for?	homework/exit tickets	Corresponding Parts of Congruent Triangles are Congruent.	www.emathinstruction.com
Week 8	**G-CO.C.10** Prove and apply theorems about triangles.	3.5 Proof with Partitioning	Students will add or subtract measures of segments and angles in order to establish equality. (congruence)	What does Substitution mean?	homework/exit tickets	Axioms, Whole is the Sum of its Parts, Substitution.	www.emathinstruction.com
Week 8	**G-CO.C.10** Prove and apply theorems about triangles.	3.6 Parallel Properties Review	Use Rigid Motions to prove lines are Parallel	What are corresponding angle pairs?	homework/exit tickets	Supplementary Angles, Parallel Lines	www.emathinstruction.com
Week 8	**G-CO.C.9** Prove theorems about lines and angles. Include multi-step proofs and algebraic problems built upon these concepts. Examples of theorems include but are not limited to: Vertical angles are congruent. If two parallel lines are cut by a transversal, then the alternate interior angles are congruent. The points on a perpendicular bisector are equidistant from the endpoints of the line segment.	3.7 More Work with Parallel Line	Solve Proofs using Multi-Steps.	Name 2 ways to prove lines are parallel.	homework/exit tickets	Supplementary Angles, Parallel Lines	www.emathinstruction.com

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Week 9	**G-CO.C.10** Prove and apply theorems about triangles.	3.8 A.A.S and Isosceles Triangles	Solve Proofs using AAS	Where does the congruent side pair need to be in AAS?	homework/exit tickets	Angle Bisector, CPCTC	www.emathinstruction.com
Week 9	**G-CO.C.10** Prove and apply theorems about triangles.	3.9 Hypotenuse - Leg	Solve Proofs using HL	What type of triangle must it be when using HL?	homework/exit tickets	Hypotenuse, Leg	www.emathinstruction.com
Week 9	**G-CO.C.9** Prove theorems about lines and angles. Include multi-step proofs and algebraic problems built upon these concepts. Examples of theorems include but are not limited to: Vertical angles are congruent. If two parallel lines are cut by a transversal, then the alternate interior angles are congruent. The points on a perpendicular bisector are equidistant from the endpoints of the line segment. **G-CO.C.10** Prove and apply theorems about triangles.	3.10 Additional Triangle Proofs	Solve Proofs using all learned types	Name all 5 ways congruent triangles can be proven?	homework/exit tickets	Isosceles Triangles	www.emathinstruction.com

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Week 10 Week 11 Week 12 Week 13	**G.CO.D.12** Make, justify, and apply formal geometric constructions. Notes: Examples of constructions include but are not limited to: Copy segments and angles. Bisect segments and angles. Construct perpendicular lines including through a point on or off a given line. Construct a line parallel to a given line through a point not on the line. Construct a triangle with given lengths. Construct points of concurrency of a triangle (centroid, circumcenter, incenter, and orthocenter). Construct the inscribed circle of a triangle. Construct the circumscribed circle of a triangle. Constructions of transformations. (see G.CO.A.5) This standard is a fluency recommendation for Geometry. Fluency with the use of construction tools, physical and computational, helps students draft a model of a geometric phenomenon and can lead to conjectures and proofs.	4.1 Introduction to Constructions 4.2 Constructing Angles and Parallel lines 4.3 Constructing Perpendicular lines 4.4 The Circumscribed Circle 4.5 Bisect an Angle 4.6 The Inscribed Circle of a Triangle 4.7 Inscribing Regular Polygons	Construct an Equilateral Triangle Construct and Angle and Parallel Lines Construct Perpendicular Lines Construct a Circumscribed Circle Bisect an Angle Construct an Inscribed Circle Inscribe Regular Polygons	Name the 3 rules of Constructions? What is an Obtuse Angle? What is a Perpendicular Line? What is a circumscribed Circle? How do you Bisect an Angle? What is an Inscribed Circle? How do you inscribe regular polygons?	homework/exit tickets homework/exit tickets homework/exit tickets homework/exit tickets homework/exit tickets homework/exit tickets homework/exit tickets	Constructions Angle and Parallel Lines Perpendicular Lines Circumscribed Circle Bisect, Angle Inscribed Circle Regular Polygons	www.emathinstruction.com www.emathinstruction.com www.emathinstruction.com www.emathinstruction.com www.emathinstruction.com www.emathinstruction.com www.emathinstruction.com

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Week 14	**G.PE.B.4** On the coordinate plane, algebraically prove geometric theorems and properties. **G.PE.B.5** On the coordinate plane: a) Explore the proof for the relationship between slopes of parallel and perpendicular lines; b) Determine if lines are parallel, perpendicular, or neither, based on their slopes; and c) Apply properties of parallel and perpendicular lines to solve geometric problems.	5.1 Slope and Parallelism 5.2 Slope and Perpendicularity 5.3 Equations of lines 5.4 Point-Slope form of a line	Use the slope formula Use the slope formula to find the slope of perpendicular lines Finding the equation of a line. Finding the equation of a line in point-slope form	Name the 4 ways slope can be identified What is difference between the slopes of parallel and per. Lines? What is needed to label the equation of a line? What is needed for point-slope form?	homework/exit tickets homework/exit tickets homework/exit tickets homework/exit tickets homework/exit tickets homework/exit tickets homework/exit tickets	Slope, parallel Perpendicular Equation Point-Slope Form	www.emathinstruction.com www.emathinstruction.com www.emathinstruction.com www.emathinstruction.com www.emathinstruction.com www.emathinstruction.com www.emathinstruction.com

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Week 15	No specific Standard **G.PE.B.4** On the coordinate plane, algebraically prove geometric theorems and properties.	5.5 Horizontal and Vertical Lines 5.6 The Pythagorean Theorem 5.7 The Distance Formula 5.8 The Midpoint Formula	Finding the equation of a H-line and V-line. Use the Pythagorean Theorem. Use the Distance Formula. Use the Midpoint Formula	What does a Horizontal and Vertical line look like? What is a right Triangle? What is the distance formula used to measure? What is the Midpoint formula used to find?	homework/exit tickets homework/exit tickets homework/exit tickets homework/exit tickets	Horizontal and Vertical $A^2 + B^2 = C^2$ Distance Formula Midpoint Formula	www.emathinstruction.com www.emathinstruction.com www.emathinstruction.com www.emathinstruction.com
Week 16	**G.PE.B.4** On the coordinate plane, algebraically prove geometric theorems and properties. **G.CO.A.5** Given a geometric figure and a rotation, reflection, or translation, draw the transformed figure. Specify a sequence of transformations that will carry a given figure onto another.	5.9 Rotations in the Coordinate Plane 5.10 Reflections in the Coordinate Plane 5.11 Translations in the Coordinate Plane	Rotating Polygons in the Coordinate Plane Reflecting Polygons in the Coordinate Plane Translating Polygons in the Coordinate Plane	How many ways can you rotate a shape? How do you reflect a shape? How do you translate a shape?	homework/exit tickets homework/exit tickets homework/exit tickets	Rotate Reflect Translate	www.emathinstruction.com www.emathinstruction.com www.emathinstruction.com

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Week 17	**G.CO.C.11** Prove and apply theorems about parallelograms	6.1 Trapezoids and Parallelograms	Discover the angle properties of Parallelograms and Trapezoids	What is the main difference between a Parallelogram and Trapezoid?	homework/exit tickets	Parallelogram, Trapezoid	www.emathinstruction.com
		6.2 Properties of Parallelograms	Name the properties of a Parallelogram	What is a Parallelogram?	homework/exit tickets	Parallelogram	www.emathinstruction.com
		6.3 What Makes a Parallelogram	Prove a Parallelogram	What is a Parallelogram?	homework/exit tickets	Parallelogram	www.emathinstruction.com
Week 18 Week 19	**G.CO.C.10** Prove and apply theorems about the properties of triangles. **G.CO.C.11** Prove and apply theorems about parallelograms	6.4 Midpoints of a Triangle	Find the Midpoint of a Triangle.	How do you find the Midpoint of a Triangle?	homework/exit tickets	Triangle	www.emathinstruction.com
		6.5 Rectangles	Name the properties of a Rectangle	What is a Rectangle?	homework/exit tickets	Rectangle	www.emathinstruction.com
		6.6 The Rhombus	Name the properties of a Rhombus	What is a Rhombus?	homework/exit tickets	Rhombus	www.emathinstruction.com
		6.7 Squares	Name the properties of a Square	What is a Square?	homework/exit tickets	Square	www.emathinstruction.com

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Week 20	**G.SRT.A.1** Verify experimentally the properties of dilations given by a center and a scale factor. **G.SRT.A.1a** Verify experimentally that dilation takes a line not passing through the center of the dilation to a parallel line, and leaves a line passing through the center unchanged. **G.SRT.A.1b** Verify experimentally that the dilation of a line segment is longer or shorter in the ratio given by the scale factor.	7.1 Dilations 7.2 Dilations in the Coordinate Plane 7.3 Dilations and Angles	Draw Dilations Draw Dilations on a Graph See Angles are Preserved in a Dilation	What is a Dilation? How do Dilations grow or shrink? How are angles preserved in a dilation?	homework/exit tickets homework/exit tickets homework/exit tickets	Dilation Coordinate Plane Preserved	www.emathinstruction.com www.emathinstruction.com www.emathinstruction.com
Week 21	**G.SRT.A.2** Given two figures, use the definition of similarity in terms of similarity transformations to decide if they are similar. Explain using similarity transformations that similar triangles have equality of all corresponding pairs of angles and the proportionality of all corresponding pairs of sides **G.SRT.A.3** Use the properties of similarity transformations to establish the AA~, SSS~, and SAS~ criterion for two triangles to be similar. **G.SRT.B.5** Use congruence and similarity criteria for triangles to: a. Solve problems algebraically and geometrically. b. Prove relationships in geometric figures	7.4 Similarity 7.5 Similarity Criteria 7.6 Reasoning with Similarity	Draw Similar Triangles Find the properties of Similar Triangles Prove Triangles are Similar	What makes shapes similar? How are triangles Similar in a Dilation? Name the properties of Similar shapes?	homework/exit tickets homework/exit tickets homework/exit tickets	Similar Dilation Similar	www.emathinstruction.com www.emathinstruction.com www.emathinstruction.com

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	G.SRT.B.5 Use congruence and similarity criteria for triangles to: a. Solve problems algebraically and geometrically. b. Prove relationships in geometric figures	7.7 More Similarity Reasoning	Prove Shapes are Similar	What do you look for to prove shapes similar?	homework/exit tickets	Similar	www.emathinstruction.com
Week 22	**G.SRT.B.4** Prove and apply similarity theorems about triangles. **G.SRT.B.5** Use congruence and similarity criteria for triangles to: a. Solve problems algebraically and geometrically. b. Prove relationships in geometric figures	7.8 Side Splitter Theorem	Use the Side Splitter Theorem	What parts of similar triangles do you NOT use the side splitter Theorem?	homework/exit tickets	Proportions	www.emathinstruction.com
	G.SRT.B.5 Use congruence and similarity criteria for triangles to: a. Solve problems algebraically and geometrically. b. Prove relationships in geometric figures **G.SRT.C.6** Understand that by similarity, side ratios in right triangles are properties of the angles in the triangle, leading to definitions of sine, cosine and tangent ratios for acute angles	7.9 Partitioning a Line Segment	Partitioning a Line Segment	What does Partitioning do to a line?	homework/exit tickets	Partitioning	www.emathinstruction.com

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Curriculum Map

Week	NY Standard(s)	Concepts (Unit/Theme)	Student Objectives The student will... (TSW)	Essential Questions	Assessments	Vocabulary	Resources
Week 23	**G.SRT.B.5** Use congruence and similarity criteria for triangles to: a. Solve problems algebraically and geometrically. b. Prove relationships in geometric figures **G.CO.C.10** Prove and apply theorems about the properties of triangles.	7.10 Medians of a Triangle	Find the Median of a Triangle	Where is the Median of a triangle located?	homework/exit tickets	Median	www.emathinstruction.com
Week 24	**G.SRT.B.5** Use congruence and similarity criteria for triangles to: a. Solve problems algebraically and geometrically. b. Prove relationships in geometric figures.	7.11 Right Triangles and Similarity	Proving Right Triangles are Similar	What is a Right Triangle?	homework/exit ticket	Right Triangle	www.emathinstruction.com
Week 25	**G.SRT.C.6** Understand that by similarity, side ratios in right triangles are properties of the angles in the triangle, leading to definitions of sine, cosine and tangent ratios for acute angles **G.SRT.C.7** Explain and use the relationship between the sine and cosine of complementary angles.	8.1 Similar Right Triangles 8.2 The Trig Ratios	Using Trig Ratios Using Trig Ratios	What is SOH-CAH-TOA? What is SOH-CAH-TOA?	homework/exit tickets homework/exit tickets	Trig Ratios Proportions	www.emathinstruction.com www.emathinstruction.com

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Curriculum Map

Week	NY Standard(s)	Concepts (Unit/Theme)	Student Objectives The student will… (TSW)	Essential Questions	Assessments	Vocabulary	Resources
Week 26	**G.SRT.C.6** Understand that by similarity, side ratios in right triangles are properties of the angles in the triangle, leading to definitions of sine, cosine and tangent ratios for acute angles **G.SRT.C.7** Explain and use the relationship between the sine and cosine of complementary angles	8.3 Trig Ratios and the Calculator	Using the Calculator so solve Trig Ratios	What is SOH-CAH-TOA?	homework/exit tickets	Trig Ratios	www.emathinstruction.com
	G.SRT.C.8 Use sine, cosine, tangent, the Pythagorean Theorem and properties of special right triangles to solve right triangles in applied problems.	8.4 Solving for the missing side of Right Triangles	Using Trig Ratios	What is SOH-CAH-TOA?	homework/exit tickets	Proportions	www.emathinstruction.com
Week 27	**G.SRT.C.8** Use sine, cosine, tangent, the Pythagorean Theorem and properties of special right triangles to solve right triangles in applied problems.	8.3 Trig Ratios Applications	Using the Calculator so solve Trig Ratios Word Problems	What is SOH-CAH-TOA?	homework/exit tickets	Trig Ratios	www.emathinstruction.com
		8.4 More Trig Ratios Applications	Using the Calculator so solve Trig Ratios Word Problems (harder)	What is SOH-CAH-TOA?	homework/exit tickets	Proportions	www.emathinstruction.com
Week 28	**G.CO.A.2** Represent transformations as geometric functions that take points in the plane as inputs and give points as outputs. Compare transformations that preserve distance and angle measure to those that do not.	9.1 Circle Terminology	Name the parts of a circle	What are the parts of a circle?	homework/exit tickets	Circle	www.emathinstruction.com
		9.2 Inscribed Angles	Name Inscribed Angles	What is an inscribed angle?	homework/exit tickets	Inscribed Angles	www.emathinstruction.com
		9.3 More work with Inscribed Angles	Working with Transformations	Which angles are not preserved in a Transformation?	homework/exit tickets	Rotation, Reflection, Dilation and Translation	www.emathinstruction.com

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Curriculum Map

Week	NY Standard(s)	Concepts (Unit/Theme)	Student Objectives The student will… (TSW)	Essential Questions	Assessments	Vocabulary	Resources
Week 29	**G.CO.A.2** Represent transformations as geometric functions that take points in the plane as inputs and give points as outputs. Compare transformations that preserve distance and angle measure to those that do not.	9.4 Intersecting Chords	Identify Chords on a circle	What is a Chord?	homework/exit tickets	Chord	www.emathinstruction.com
		9.5 Tangents to a Circle	Draw Tangents on a Circle	What type of angle does a Tangent produce on a circle?	homework/exit tickets	Tangent to a Circle	www.emathinstruction.com
		9.6 Tangents, Secants, and their Angles	Draw Secants on a Circle	What do Secant lines pass through on a circle?	homework/exit tickets	Secant to a Circle	www.emathinstruction.com

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Curriculum Map

Week	NY Standard(s)	Concepts (Unit/Theme)	Student Objectives The student will... (TSW)	Essential Questions	Assessments	Vocabulary	Resources
Week 30	**G.CO.A.2** Represent transformations as geometric functions that take points in the plane as inputs and give points as outputs. Compare transformations that preserve distance and angle measure to those that do not.	9.7 Tangent and Secant Proofs	Prove Tangent and Secant Examples	What does it mean to preserve distance?	homework/exit tickets	Tangent and Secant	www.emathinstruction.com
		9.8 Secant and Tangent Lengths	Properties of Secant and Tangent Lengths	What type of angle does a Tangent produce on a circle?	homework/exit tickets	Tangent to a Circle	www.emathinstruction.com
	G.GPE.A.1 1a. Derive the equation of a circle of given center and radius using the Pythagorean Theorem. Find the center and radius of a circle, given the equation of the circle. 1b. Graph circles given their equation.	9.9 Equations of Circles	Write Equations of Circles	What does an Equation of a Circle show?	homework/exit tickets	Equation of a Circle	www.emathinstruction.com

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Curriculum Map

Week	NY Standard(s)	Concepts (Unit/Theme)	Student Objectives The student will… (TSW)	Essential Questions	Assessments	Vocabulary	Resources
Week 31	**G.GPE.A.1** 1a. Derive the equation of a circle of given center and radius using the Pythagorean Theorem. Find the center and radius of a circle, given the equation of the circle. 1b. Graph circles given their equation.	9.10 Placing Circles in Standard Form	Prove Tangent and Secant Examples	What does it mean to preserve distance?	homework/exit tickets	Tangent and Secant	www.emathinstruction.com
	G.CO.D.12 Make, justify, and apply formal geometric constructions.	9.11 Constructing Tangents	Construct a Tangent Line	What type of angle does a Tangent produce on a circle?	homework/exit tickets	Tangent to a Circle	www.emathinstruction.com
	G.GPE.B.5 On the coordinate plane: a) Explore the proof for the relationship between slopes of parallel and perpendicular lines; b) Determine if lines are parallel, perpendicular, or neither, based on their slopes; and c) Apply properties of parallel and perpendicular lines to solve geometric problems.	9.12 Equations of Tangent Lines	Finding the slopes of Parallel and Perpendicular Lines	What are the properties of Parallel and Perpendicular lines?	homework/exit tickets	Equation of a Circle	www.emathinstruction.com

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Curriculum Map

Week	NY Standard(s)	Concepts (Unit/Theme)	Student Objectives The student will... (TSW)	Essential Questions	Assessments	Vocabulary	Resources
Week 32	**G.GPE.B.7** Use coordinates to compute perimeters of polygons and areas of triangles and rectangles **G.MG.A.2** Apply concepts of density based on area and volume of geometric figures in modeling situations. **G.MG.A.3** Apply geometric methods to solve design problems.	10.1 Perimeter	Find the Perimeter of Shapes	What does Perimeter Mean?	homework/exit tickets	Perimeter	www.emathinstruction.com
	G.GMD.A.1 Provide informal arguments for the formulas for the circumference of a circle, area of a circle, volume of a cylinder, pyramid, and cone. **G.MG.A.1** Use geometric shapes, their measures, and their properties to describe objects. **G.MG.A.3** Apply geometric methods to solve design problems.	10.2 Circumference of a Circle	Find the Circumference of a Circle	What is the Circumference of a Circle?	homework/exit tickets	Circumference	www.emathinstruction.com
	G.GPE.B.7 Use coordinates to compute perimeters of polygons and areas of triangles and rectangles **G.MG.A.1** Use geometric shapes, their measures, and their properties to describe objects. **G.MG.A.2** Apply concepts of density based on area and volume of geometric figures in modeling situations. **G.MG.A.3** Apply geometric methods to solve design problems.	10.3 Area of Polygons	Finding the Area of Polygons	What dimension does Area give?	homework/exit tickets	Area	www.emathinstruction.com

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Curriculum Map

Week	NY Standard(s)	Concepts (Unit/Theme)	Student Objectives The student will… (TSW)	Essential Questions	Assessments	Vocabulary	Resources
Week 33	**G.GMD.A.1** Provide informal arguments for the formulas for the circumference of a circle, area of a circle, volume of a cylinder, pyramid, and cone. **G.MG.A.1** Use geometric shapes, their measures, and their properties to describe objects. **G.MG.A.2** Apply concepts of density based on area and volume of geometric figures in modeling situations. **G.MG.A.3** Apply geometric methods to solve design problems.	10.4 Area of a Circle	Find the Area of a Circle	Name the formula for the area of a circle?	homework/exit tickets	Area of a Circle	www.emathinstruction.com
	G.MG.A.1 Use geometric shapes, their measures, and their properties to describe objects. **G.MG.A.2** Apply concepts of density based on area and volume of geometric figures in modeling situations. **G.MG.A.3** Apply geometric methods to solve design problems.	10.5 Sectors of Circles	Find the Circumference of a Circle	What is the Circumference of a Circle?	homework/exit tickets	Circumference	www.emathinstruction.com
	G.C.A.1 Prove that all circles are similar.	10.6 Radian Measures of Angles	Finding the Radian Measures of Circles	What does a Radian Measure Show?	homework/exit tickets	Radian	www.emathinstruction.com

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Curriculum Map

Week	NY Standard(s)	Concepts (Unit/Theme)	Student Objectives The student will… (TSW)	Essential Questions	Assessments	Vocabulary	Resources
Week 34	**G.GMD.B.4** Identify the shapes of plane sections of 3-dimensional objects, and identify 3-dimensional objects generated by rotations of 2-dimensional objects.	10.7 Solids and their Cross Sections	Find the Cross Sections of Solids	What is a cross section?	homework/exit tickets	Cross Section	www.emathinstruction.com
	G.GMD.A.1 Provide informal arguments for the formulas for the circumference of a circle, area of a circle, volume of a cylinder, pyramid, and cone. **G.GMD.A.3** Use volume formulas for cylinders, pyramids, cones, and spheres to solve problems	10.8 Volume of Prism and Cylinders	Find the Volume of Prisms and Cylinders	What is a Prism and a Cylinder?	homework/exit tickets	Prism, Cylinder	www.emathinstruction.com
	G.MG.A.1 Use geometric shapes, their measures, and their properties to describe objects. **G.MG.A.2** Apply concepts of density based on area and volume of geometric figures in modeling situations. **G.MG.A.3** Apply geometric methods to solve design problems.	10.9 Volume of Pyramids and Cones	Finding the Volume of Pyramids and Cones	What is a Pyramid and a Cone?	homework/exit tickets	Pyramid, Cone	www.emathinstruction.com

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Week	NY Standard(s)	Concepts (Unit/Theme)	Student Objectives The student will... (TSW)	Essential Questions	Assessments	Vocabulary	Resources
Week 35	**G.GMD.A.1** Provide informal arguments for the formulas for the circumference of a circle, area of a circle, volume of a cylinder, pyramid, and cone. **G.GMD.A.3** Use volume formulas for cylinders, pyramids, cones, and spheres to solve problems **G.MG.A.1** Use geometric shapes, their measures, and their properties to describe objects. **G.MG.A.2** Apply concepts of density based on area and volume of geometric figures in modeling situations. **G.MG.A.3** Apply geometric methods to solve design problems.	10.10 Spheres 10.11 Volume of a Truncated Cone	Properties of Spheres Find the Volume of a Truncated Cone	What is a Sphere? What is a Truncated Cone	homework/exit tickets homework/exit tickets	Sphere Truncated Cone	www.emathinstruction.com www.emathinstruction.com
Week 36 Week 37 Week 38 Week 39 Week 40		As Allowed, review for Geometry Regents (3-4 Weeks) Rating Week - Graduation					

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