

**Franklin Special School District
Geometry Syllabus
2021-2022**

1st Quarter Standards/Objectives		
G-CO.A.1	CONGRUENCE	<ul style="list-style-type: none"> • State the undefined terms of geometry. • Define angle, circle, perpendicular line, parallel line, segment, etc. • Draw geometric shapes.
G-CO.A.2	CONGRUENCE	<ul style="list-style-type: none"> • Describe a transformation. • Identify the image and preimage of a transformation. • Transform an object. • Compare transformations. • Distinguish between rigid and non-rigid motions.
G-CO.A.3	CONGRUENCE	<ul style="list-style-type: none"> • Describe the transformation(s) of an object that maps it onto itself. • Identify line, point and rotational symmetry.
G-CO.A.4	CONGRUENCE	<ul style="list-style-type: none"> • Develop definitions of rotations, reflections and translations.
G-CO.A.5	CONGRUENCE	<ul style="list-style-type: none"> • Given a figure and a rigid motion, draw the image. • Identify a sequence of rigid motions that maps one figure onto another.
G-CO.B.6	CONGRUENCE	<ul style="list-style-type: none"> • Identify the effects of a rigid motion in terms of congruence. • Use a series of rigid motions to determine if shapes are congruent.
G-CO.B.7	CONGRUENCE	<ul style="list-style-type: none"> • Use the definition of congruence in terms of rigid motions to show congruence if and only if corresponding parts are congruent
G-CO.B.8	CONGRUENCE	<ul style="list-style-type: none"> • Using rigid motions, prove the criteria for triangle congruence. • Prove that triangles are congruent using SSS, SAS, ASA, AAS, and HL.

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1st Quarter Standards/Objectives		
G-CO.C.9	CONGRUENCE	<ul style="list-style-type: none"> • Prove theorems about lines and angles. • Identify relationships of angles formed by intersecting lines. • Identify relationships of angles formed by lines and a transversal. • Describe bisectors in terms of equidistance.
G-CO.C.10	CONGRUENCE	<ul style="list-style-type: none"> • Prove theorems about triangles. • Use the triangle angle sum theorem. • Use characteristics of isosceles triangles, midsegments and medians to identify missing measurements in a triangle.
G-CO.D.12	CONGRUENCE	<ul style="list-style-type: none"> • Construct congruent segments and angles. • Bisect segments and angles using straight edge and compass. • Construct parallel or perpendicular lines.
G-SRT.B.5	SIMILARITY, RIGHT TRIANGLES, and TRIGONOMETRY	<ul style="list-style-type: none"> • Solve problems using congruent figures.
G-C.A.3	CIRCLES	<ul style="list-style-type: none"> • Using parts of a triangle, locate the incenter, circumcenter, and centroid of a triangle. • Identify characteristics of points of concurrency.
G-GPE.B.3	GEOMETRIC PROPERTIES and EQUATIONS	<ul style="list-style-type: none"> • Prove the slope criteria for parallel and perpendicular lines and use them to solve problems.
G.MG.A.1	MODELING with GEOMETRY	<ul style="list-style-type: none"> • Use geometric shapes, their measurements, and their properties to describe objects.
G.MG.A.2	MODELING with GEOMETRY	<ul style="list-style-type: none"> • Apply geometric methods to solve real-world problems.

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1st Quarter Standards/Objectives

Topics covered: *{bullet topics here}*

Unit 1: Transformations and Congruence

Module 1: Tools of Geometry
Module 2: Transformations and Symmetry
Module 3: Congruent Figures

Unit 2: Lines, Angles, and Triangles

Module 4: Lines and Angles
Module 5: Triangle Congruence Criteria
Module 6: Applications of Triangle Congruence
Module 7: Properties of Triangles
Module 8: Special Segments in Triangles

Major assignments:

1) Unit and Modules Assessments

Notes:

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2nd Quarter Standards/Objectives:		
G- CO.C.11	CONGRUENCE	<ul style="list-style-type: none"> • Prove theorems about parallelograms. • Using characteristics, classify quadrilaterals
G- SRT.A.1	SIMILARITY, RIGHT TRIANGLES, and TRIGONOMETRY	<ul style="list-style-type: none"> • Discover characteristics and properties of dilations. • Identify scale factor and center of a dilation.
G- SRT.A.2	SIMILARITY, RIGHT TRIANGLES, and TRIGONOMETRY	<ul style="list-style-type: none"> • Identify if two objects are similar using proportionality and congruence.
G- SRT.A.3	SIMILARITY, RIGHT TRIANGLES, and TRIGONOMETRY	<ul style="list-style-type: none"> • Use the properties of similarity to establish and use the AA similarity theorem.
G- SRT.B.4	SIMILARITY, RIGHT TRIANGLES, and TRIGONOMETRY	<ul style="list-style-type: none"> • Prove theorems about triangles.
G- SRT.B.5	SIMILARITY, RIGHT TRIANGLES, and TRIGONOMETRY	<ul style="list-style-type: none"> • Solve problems using similar figures.
G- GPE.B.2	GEOMETRIC PROPERTIES and EQUATIONS	<ul style="list-style-type: none"> • Use coordinates to prove geometric theorems algebraically.
G- GPE.B.4	GEOMETRIC PROPERTIES and EQUATIONS	<ul style="list-style-type: none"> • Identify locations on a segment that partition a segment in a given ratio.
G- GPE.B.5	GEOMETRIC PROPERTIES and EQUATIONS	<ul style="list-style-type: none"> • Use coordinates to compute the perimeter of a polygon. • Use coordinates to compute the area of a rectangle or triangle.
G- SRT.B5	SIMILARITY, RIGHT TRIANGLES, and TRIGONOMETRY	<ul style="list-style-type: none"> • Use similarity to solve problems and justify relationships.
G.MG.A1	MODELING with GEOMETRY	<ul style="list-style-type: none"> • Use geometric shapes, their measurements, and their properties to describe objects.
G.MG.A2	MODELING with GEOMETRY	<ul style="list-style-type: none"> • Apply geometric methods to solve real-world problems.

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2nd Quarter Standards/Objectives:

Topics covered: *{bullet topics here}*
Unit 3: Quadrilaterals and Coordinate Proof

Module 9: Properties of Quadrilaterals
Module 10: Coordinate Proof Using Slope and Distance

Unit 4: Similarity

Module 11: Similarity and Transformations
Module 12: Using Similar Triangles

Major assignments:

1) Unit and Modules Assessments

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3rd Quarter Standards/Objectives:		
G-SRT.C.6	SIMILARITY, RIGHT TRIANGLES, and TRIGONOMETRY	<ul style="list-style-type: none"> Understand the connection between side ratios in similar right triangle and angle measures, leading to trigonometric ratios State the three basic trigonometric ratios. (Soh-Cah-Toa).
G-SRT.C.7	SIMILARITY, RIGHT TRIANGLES, and TRIGONOMETRY	<ul style="list-style-type: none"> Explain and use the relationship between the sine and cosine of complementary angles.
G-SRT.C.8	SIMILARITY, RIGHT TRIANGLES, and TRIGONOMETRY	<ul style="list-style-type: none"> Use angle sum theorem to solve triangles.
G-SRT.C.8a	SIMILARITY, RIGHT TRIANGLES, and TRIGONOMETRY	<ul style="list-style-type: none"> Use trigonometry, the Pythagorean Theorem and special right triangles to solve triangles.
G-SRT.C.8b	SIMILARITY, RIGHT TRIANGLES, and TRIGONOMETRY	<ul style="list-style-type: none"> Use Law of Sines and Law of Cosines to solve triangles.
G-C.A.1	CIRCLES	<ul style="list-style-type: none"> Prove that all circles are similar.
G-C.A.2	CIRCLES	<ul style="list-style-type: none"> Identify relationships among parts of a circle. Describe types of angles and types of lines or segments. Measure arcs and angles in degrees and radians.
G-C.B.4	CIRCLES	<ul style="list-style-type: none"> Know the formula for area of a sector of a circle. Compute the Area of the sector of a circle.
G-GPE.A.1	GEOMETRIC PROPERTIES and EQUATIONS	<ul style="list-style-type: none"> Know and write the equation of a circle. $(x - h)^2 + (y - k)^2 = r^2$
G.MG.A1	MODELING with GEOMETRY	<ul style="list-style-type: none"> Use geometric shapes, their measurements, and their properties to describe objects.
G.MG.A2	MODELING with GEOMETRY	<ul style="list-style-type: none"> Apply geometric methods to solve real-world problems.

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3rd Quarter Standards/Objectives:

Topics covered: *{bullet topics here}*

Unit 5: Trigonometry

Module 13: Trigonometry with Right Triangles

Module 14: Trigonometry with All Triangles

Unit 6: Properties of Circles

Module 15: Angles and Segments in Circles

Module 16: Arc Length and Sector Area

Module 17: Equations of Circles and Parabolas

Major assignments:

1) Unit and Modules Assessments

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4th Quarter Standards/Objectives:		
G- GMD.A.1	GEOMETRIC MEASUREMENT and DIMENSION	<ul style="list-style-type: none"> • Give an argument for the formulas for circumference of a circle, area of a circle. • Give an argument for the formulas for volume and surface area of prisms, cylinders, pyramids, cones and spheres.
G- GMD.A.2	GEOMETRIC MEASUREMENT and DIMENSION	<ul style="list-style-type: none"> • Know and use for the formulas for volume and surface area of prisms, cylinders, pyramids, cones and spheres.
G.MG.A1	MODELING with GEOMETRY	<ul style="list-style-type: none"> • Use geometric shapes, their measurements, and their properties to describe objects.
G.MG.A2	MODELING with GEOMETRY	<ul style="list-style-type: none"> • Apply geometric methods to solve real-world problems.
Topics covered: <i>{bullet topics here}</i> Unit 7: Measurement and Modeling in Two and Three Dimensions Module 18: Volume Formulas Module 19: Visualizing Solids Module 20: Modeling and Problem Solving		Major assignments: 1) Unit and Modules Assessments 2) TN EOC for Geometry
Notes:		
Procedures for Parental Access for Instructional Materials: 1) Many instructional materials can be accessed digitally via the FSSD website (fssd.org) using your student’s unique username and password. a. Student Resources : FSSD website > Parents & Students > Parent Information > Online Resources > Student b. Parent Resources: FSSD website > Parents & Students > Parent Information > Online Resources > Parent		

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2) If additional information is needed regarding instructional materials, a written request may be submitted to your child's teacher. Instructional material review is included in Board Policy 4.400.