Plano ISD Geometry Syllabus 2022-2023
1ˢᵗ semester (84 days)

1ˢᵗ Grading Period (41 days)	2ⁿᵈ Grading Period (43 days)

1ˢᵗ Grading Period (41 days)

Proof, Parallel and Perpendicular

❖ Identify and draw geometric shapes and their notation

❖ Use inductive and deductive reasoning to justify conclusions

❖ Write conditional and bi-conditional statements

❖ Verify a conjecture is false using a counterexample

❖ Use distance, slope, and midpoint formulas to verify geometric relationships

❖ Use segment and angle properties to solve problems

❖ Prove lines are parallel and perpendicular

❖ Write equations of parallel and perpendicular lines

Transformation, Triangles and Quadrilaterals

❖ Explore rigid transformations

❖ Identify and draw reflections, translations, rotations and composite transformations

End of grading period: October 7

2ⁿᵈ Grading Period (43 days)

Continue Transformation, Triangles and Quadrilaterals

❖ Identify reflectional and rotational symmetry

❖ Prove triangle congruence

❖ Verify properties of triangles

❖ Solve triangle problems

❖ Prove angle relationships in triangles

❖ Compare properties of special quadrilaterals

❖ Apply properties of quadrilaterals to find missing information

❖ Prove a quadrilateral is a specific shape

Similarity and Trigonometry

❖ Apply scale factor to create dilations

❖ Prove triangles similar

❖ Apply the Triangle Proportionality Theorem to solve problems

End of grading period: December 16

Semester Exams: December 13 – 16

2nd semester (91 days)

3rd Grading Period (41 days)	4th Grading Period (50 days)
Continue Similarity and Trigonometry	**Continue Extending 2D to 3D**
❖ Solve problems using the Pythagorean Theorem and its converse	❖ Solve for arc length and area of a sector
❖ Apply relationships in special right triangles	❖ Describe radian as a ratio of the length of the arc intercepted by a central angle and the radius
❖ Apply trigonometric functions to solve problems	❖ Solve for surface area of 3-D figures
	❖ Solve for volume of 3-D figures
Circles	❖ Identify cross sections of 3-D figures
❖ Identify parts of a circle	❖ Compare geometric relationships between spherical and Euclidean geometries
❖ Calculate measures of arcs and their corresponding angles	❖ Describe how changes in linear dimensions affects perimeter, surface area, and volume of 3-D shapes
❖ Apply relationships of segments in circles	
❖ Write and apply the equation of a circle	**Probability**
	❖ Use fundamental counting principle, permutations, and combinations to solve problems
Extending 2D to 3D	❖ Determine probabilities based on area to solve problems
❖ Calculate area and perimeter of 2-D shapes	❖ Use permutations/combinations to compute probability
❖ Calculate angles of polygons	❖ Compare independent and dependent events
	❖ Apply conditional probability
End of grading period: March 3	
	End of grading period: May 26
	Semester Exams: May 23 – 26